A STUDY FRAMEWORK TO MEASURE PERSONALIZATION OF POLITICAL ADVERTISEMENTS ON FACEBOOK

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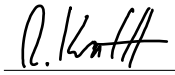
Roman Krafft: *A study framework to measure personalization of political advertisements on Facebook,* , March 31, 2021

DECLARATION

Hereby I declare that I have self-dependently composed the Master of Science thesis at hand. The sources and additives used have been marked in the text and are exhaustively given in the bibliography.

Ich erkläre hiermit, die vorliegende Master of Science Abschlussarbeit selbstständig verfasst zu haben. Die verwendeten Quellen und Hilfsmittel sind im Text kenntlich gemacht und im Literaturverzeichnis vollständig aufgeführt.

Kaiserslautern, March 31, 2021



Roman Krafft

ABSTRACT

Personalized advertisements have become the norm on internet-based media. Who sees which ad is determined automatically based on information about the user gathered by their behavior online and their preferences and distastes known to the ad distributor. These advertisement targeting methods can easily lead to discrimination if the targeting uses sensitive information, directly or indirectly. This kind of information can easily be found directly or via proxy-attributes on most peoples social media accounts like Facebook. This potential danger to society must be investigated in order to protect the rights of the users online, just like in the analog world. But currently this is done not nearly enough, even though there is a societal interest in this topic and the possibilities of misuse of personalized advertisements in politics have become a topic during most elections. This thesis gives a framework on how to create a study about personalized advertisements with a clearly defined goal. It is supposed to empower institutions and journalists to work on this topic more by minimizing the technical knowledge necessary and by showcasing the most common problems and their solutions.

ZUSAMMENFASSUNG

Personalisierte Werbung ist in internetbasierten Medien zur Norm geworden. Wer welche Werbung sieht, wird automatisch anhand von Informationen über den Benutzer bestimmt, die von seinem Online-Verhalten sowie seinen Vorlieben und Abneigungen, die vom Werbeverteiler aus bekannten Informationen abgeleitet wurden. Diese Targeting-Methoden für Werbung können leicht diskriminierend wirken, wenn sie eine Ungleichbehandlung erzeugen durch den direkten oder indirekten Gebrauch von sensiblen Eigenschaften. Diese Eigenschaften sind auf den meisten Social-Media-Konten wie Facebook leicht verfügbar oder können abgeleitet werden. Dieses Gefahrenpotential für die Gesellschaft muss untersucht werden, um die Rechte der Nutzer Online genau wie in der analogen Welt zu schützen. Eine Überwachung dieser Problematik bleibt aktuell aus, obwohl das Gesamtgesellschaftliche Interesse an diesem Thema existiert und die Möglichkeiten des Missbrauchs von personalisierter Werbung in der Politik bei den meisten Wahlen ein Thema geworden ist. Im Rahmen dieser Arbeit wird ein Framework vorgestellt mit dem Fragen rund um personalisierte Werbung auf Facebook wissenschaftlich untersucht werden können. Sie soll Institutionen und Journalisten dazu befähigen, sich mit diesem Thema intensiver zu beschäftigen, indem sie das notwendige technische Wissen minimiert und die häufigsten Probleme und deren Lösungen aufzeigt.

CONTENTS

LIST OF FIGURES

LIST OF TABLES

Part I

A STUDY CONCEPT FOR PERSONALIZATION ON FACEBOOK ADS

1 INTRODUCTION

Advertisements have become a constant in the everyday live of people. They are everywhere, from billboards on many house facades during a walk around town to the irritating popup ads and banners on websites. We have become accustomed to the fact that constantly someone will advertise something to us. As the sociologist and journalist Kucklick described in his book "Die granulare Gesellschaft – wie das Digitale unsere Gesellschaft auflöst [1]", the growing digitization of many aspects of society brings forth new problem areas. First the "difference-revolution", where the sheer mass of information allows users to be targeted personally, since all information about them conglomerates to a seemingly perfect picture of themselves to the online world, if wanted or not. This allows the targeting of extremely small and specific groups. The easiest way to gather information about users is by providing them a way to connect to others based on this very information, like social media providers do. This mass of information can be as large as it needs to be, since in accordance with Kucklicks "intelligence-revolution" the data will not be processed by humans but rather by automated algorithms, which are so complex only specialists can try understand them [Kucklick, 2014, p.65]. These algorithms then know enough about each user to a degree where they have a very clear picture of their preferences and interests, often because people are happy to share these with their friends on social media sites [Syn and Oh, 2015] and can then offer advertisements to them specifically. This is reinforced by Zuckerberg's testimony in front of the US-Congress where, when asked how Facebook generates revenue with a free service, he replied: "We run ads" [Watson, 2018]. To run them most efficiently, every bit of information about a user that can be gathered is used to make the experience as relevant to the individual user as possible. At first glance, showing what is more relevant to a user is a very positive thing, as it limits the number of random advertisements they will see. But given the power and sheer number of advertisements, this can have a bigger impact than one might think. It has to be kept in mind that there are no real hurdles to suddenly start an enormous advertising campaign on Facebook, for any product imaginable. The only prerequisite is to be the owner of a business page, which can be opened by anyone [Andreou et al., 2019].
Facebooks targeting can be very precise, independently of whether the target population lives in a certain city, owns a house or is of Asian origin, if an information is in any way derivable from the Facebook

1 The granular society - how the digital is dissolving our society

account and connected media, it will be used for advertising [Facebook, 2006a,b; Vaidhyanathan, 2017]. These possibilities are widely used by advertisers, changing the content of their ads either between users (79%), across targeting attributes (65%), or across time (86%). According to a study which gathered advertisements from 622 Facebook users and compared them [Andreou et al., 2019], many of the created advertisements are not visible for a long time, since a user cannot return to a previous page and see the same advertisement again. After their respective campaign has ended, which can be only a few hours long, it is not possible for society in general to revisit this specific ad to investigate it thoroughly [Vaidhyanathan, 2017]. Finally the importance Facebook gives this topic can be seen in the fact that even after five civil rights lawsuits about the topic. The direct charges were exclusion of elder people from the job market [2] and minorities from certain residential areas by exclusively not targeting them with the corresponding ads. Even though the settlements of these cases included a commitment to stop the discrimination of those groups, Facebook still targets advertisements for jobs based on gender stereotypes [Kofman and Tobin, 2019]. Showing that Facebook is either not willing or able to prevent this kind of discrimination at the current point of time.

In general, there is currently no governance system in place, that is explicitly targeting Facebook's advertisement system and that has any real power to enforce sanctions or to force changes in the algorithms themselves. The problem seems to lie deeper, since most regulations for online advertisements are only adaptions of traditional ones, and those mostly deal with the content of advertisements, not targeting [Jaursch, 2020; Neudert, 2020]. Many people still rely on the internet to self-regulate [Ginosar, 2014], which is a noble but naive thought. This field of regulating targeting methods is very new and was only partly addressed in regulations of television advertising, where the target audience was clearly seen and only divided broadly corresponding to the content of the different channels. Therefore, the field is currently mostly unregulated and politicians are hunting and fixing problems as they arise.
A good example for the impact personalized advertising can have is political campaigning. Given enough information about the user, a political party will know exactly what would drive them to the polling places, and which constituents are still on the edge about who they will vote for. Add to this, that social media has become one of the prime news sources for many people, with 62% in the USA overall, and even 84% for the 18-29 years old according to a Pew Research Center evaluation in 2016 [Mitchell, 2016]. The impact advertisement

2 see https://www.onlineagediscrimination.com/sites/default/files/documents/eeoc-determinations.pdf

can have on social media has become a topic of public discussion for basically every close election in the last few years, especially of the 2016 United States presidency election. It is widely believed that there was at least an attempt by Russian entities to influence this election via Facebook ads. There have been over 3000 advertisements now released by the US Government [3], which were linked to Russia. The content was very often extreme and touching sensitive subjects like race and sexuality [Entous, Timberg, and Dwoskin, 2017]. The advertisements in general dealt with highly sensitive themes, which is why they were rolled out to only a very small number of people, who were very likely to agree with the statements. Another thing to keep in mind, is that personal advertisements are attributed a higher credibility by the user, which translates into believing the ad more, and becoming less suspicious of them, regardless of what they tell you [Tran, 2017]. Of course this does not mean the viewer will believe everything, but this effect in addition to a constant exposure to a certain political statement, which is proven to impact the political belief of individuals, especially young voters [Ohme, Vreese, and Albaek, 2018], can have a tremendous effect. In part this can be seen in the campaigning of many populist parties, where they strategically and continuously attack the established media and always hold alternative outlets in high regards, with no regard to the quality of the actual journalistic work behind them [Haller and Holt, 2019]. This is done due to the often negative articles about them, which they want to discredit, but also since many people have lost their trust in big media outlets.

For many Europeans, these problems might seem far distant, but these kind of campaigns have been used during European elections as well, and even before the 2016 US-election. The referendum about the UK remaining in the European Union in 2016 was seen by the Guardian, a UK-based newspaper, as a sort of test for the same operations that were used in the US [Cadwalladr, 2017]. The outcome of this referendum seems to have damaged the British believe in their own political system. After the last parliamentary election in 2019 48% were doubtful about how the electoral campaigns were run, and feared that they were filled with many misinformation and outright lies according to the Electoral Commission of the UK Government [The Electoral Commission, 2020]. It has changed how many Britons perceive the influence political advertising in social media can have on the final outcome of the election. The Electoral Commission found that this led to nearly 10% losing confidence in the election at all, since they believed political activity on social media has a massive influence on the outcome and is completely out of control [The Electoral Commission, 2020].

The influence advertisements on social media can have on elections,

3 can be seen under https://intelligence.house.gov/social-media-content/default.aspx

and even their perceived legitimacy, has started to attract lawmakers in several countries. In the UK, the Electoral Commission made strong calls for guidelines and regulations to limit the damage done [The Electoral Commission, 2020]. But also in Germany, people have recognized the potential harm it can do to a political system by furthering the divide in society and that the current regulations are not capable of doing anything against it [Jaursch, 2020].

Facebook has become an everyday item in the lives of many people, and the amount of information that people are willing to share with the site is immense. The motivation to do so is not to be advertised based on it, but to communicate with people, to gather social support and to find like-minded people [Syn and Oh, 2015]. With this freely shared information, alongside much more that is gathered indirectly by using browsing profiles and the visited sites, Facebook can then target users based on their location, gender or their interests [Facebook, 2006b]. In 2019, Facebook first tried to make their advertising operation more transparent by launching their Ad Library [Facebook, 2021b]. But this tool is once more provided and operated by Facebook themselves. There have already been claims that this Library is not complete and that Facebook is hiding the more problematic cases, or removes them very quickly upon complaints [Edelson, Lauinger, and McCoy, 2020]. In addition to this, the fact that problems with this transparency tool are not made public, but left for researchers and journalists to find even shortly before elections, makes this tool seem like nothing more than a publicity effort [Scott, 2021]. This makes it clear that there needs to be some kind of outside regulation for personalized ads.

With all this said, governing bodies need to rely on hard proof, that these personalization attempts have a negative impact, in order to have a basis for any regulatory approach. This hard proof is missing today, but we as a society need this, not only for regulation, but also because we need to address the worries of many people that this effect has a manipulative character and is used to influence the political discourse and even the outcome of elections. This is why we need studies about the dimension, political impact and also the potential discriminatory effects of personalized advertisements. This could be the first step for communication scientists to gather data for any reliable proof of a direct effect of personalized advertisement on the outcome of political elections. But these studies should not be limited to the political sector. Even if the targeting methods are currently not used for discriminatory behavior, we as a society need to watch out for them, and ideally act before they are used for undesired targeting, not after. given that targeting is currently mostly self-regulated [Ginosar, 2014], we need to act as quickly as possible, since there is no guarantee that every profit-oriented company will hold social values over a maximized revenue. But the number of these studies is rather small, with many

of them only focusing on the efficiency of personalized advertising for the advertiser, so whether this tactic increases the brand awareness and whether the customer remembers this ad more. Given the societal interest in the matter and the potentially dangerous long-term effect of this practice, there should be a variety of journalists and institutes waiting for the option to conduct these kinds of studies, but the willingness to actually do these studies seems to be limited.
One reason could be that people do not know how to do this kind of studies, or are discouraged by the possible problems that can occur during performance. This is an understandable fear, as any study that relies on the internet in some way needs to be monitored constantly to ensure that no seemingly unrelated update made the initial setup impossible. Nonetheless there is a dire need to investigate personalized advertising on social media platforms, as they too will not stand still, but are constantly evolving and becoming better at targeting ever smaller population groups, which can be easily used in discriminatory ways, as we have seen in the past [Kofman and Tobin, 2019]. In general, there is a multitude of potential problems and obstacles for these studies, which would make a guide for them very helpful, to ensure that any entity with a founded interest can execute a study about personalized advertising in social media, given that the society is currently lacking them.

1.1 RESEARCH QUESTION

The goal of this work is to provide a framework, which helps people to conduct their own studies about personalized advertising on Facebook. It is supposed to help with the many problems one can encounter during the design and should provide a good start and lift the technical burden. This is done with the objective in mind to allow as many people as possible to do these studies, helping in enriching the entire field with much needed data.
To empower as many people as possible to do this, the technical part of the study will be completed in a basic model, explained and documented to a point where the final adaptions necessary will be easy to do, minimizing the technical knowledge necessary. For the non-technical problems regarding the recruitment process, the way to a well defined research goal and other things, this framework will try to outline them as detailed as possible, following with possible solutions, as well as the trade-offs that need to be kept in mind when deciding for one of them. These studies can have very different objectives, therefore this work will try to keep everything as open as possible, to allow a multitude of people to use it.
A sub goal of this framework, is to give all the created studies a common credibility and transparency. The transparency will be achieved by making the coding part accessible for everyone and it is also highly

recommended to everyone using this framework to do the same with the final version that is going to be used. There should be no security by obscurity, especially since the plugin will be publicly available, and technically inclined people are able to access the code anyway. The credibility for every single study using this framework can be seen as the sum of the achievements and outcomes of the ones that came before. So after enough investigators have used it in hopefully impactful studies, more people will know about the framework, and will hopefully be more inclined to participate. This would increase the sample size, which often is a problem with voluntary studies, especially in online studies.
In order to achieve the goal to be as usable by people with no or limited computer science background, multiple interviews with people in adjacent fields were conducted. This should broaden the horizon of the framework, to cover as many potential problems as possible and to make it as easy as possible.
This work will start off with clarifying some terminology used throughout the work in chapter 2 followed by some related work and distinctions from those in chapter 3. Next, in chapter 4, the interviews that were conducted during the development will be evaluated and the gathered goals outlines and modeled. During the interviews application scenarios for this framework were described, which will be presented in chapter 5. Then the study design itself will be explained in chapter 6 and technical and non-technical problems that need to be addressed while preparing a study are depicted alongside possible solutions and their trade-offs. Afterwards, in chapter 7, comes a discussion of problems, for which no good solutions were found, along with general limitations of this setup and additional work, that could increase the possibilities even further. Lastly, a conclusion for all the work will be drawn in chapter 8.

2 FUNDAMENTALS

Firstly, technical terms from both social studies and computer science that will be used in this work should be cleared up, since this work is an overlap of these two field and often there are multiple interpretations for the same terms. The chapter starts with terms related to computer science, moves over to the field of advertisements and ends with fundamentals related to social studies.

2.1 REQUIREMENTS ENGINEERING

In a software development process a requirement is broadly defined, as the answer to the question "what is going to be built?" [Darimont and Lamsweerde, 1996; Westfall, 2005]. This is a very general definition, which is why there are several sub-categories, in which the resulting requirements can be divided into, mostly based on the aspects of the software they define. The most basic ones are functional ones, which dictate *what* the resulting software must do and non-functional requirements, which decide *how* these functions must be implemented. Additionally there should be limitations, to make clear what the product should not look like, to further narrow the target down [Westfall, 2005]. The source of the specification can help to categorize it even more precisely into brackets, as user or developer requirements, or business rules [Westfall, 2005]. Since not all requirements can be found by a small group of people, and the fact that end-users of a product are rarely involved in its development, one should try to gather information from as many stakeholder groups as possible, to minimize the risk of overlooking an important functionality [Sharp, Finkelstein, and Galal, 1999; Westfall, 2005]. This is by far not an extensive list, as the importance of each category is not set in stone, but is always seen in relation to the exact kind of software product it describes.
A good requirements engineering process is therefore key to building good software, that actually does what the customer wants and what the end-user needs. This can be seen by the fact that in 2015, according to the Standish chaos report, still, over 60% of all software projects were not delivered within the set time or cost frame, or the buyer was unsatisfied with the final product [Standish Group International, 2015]. That the cause may lie in many parts of the development process is undeniable, but the dissatisfaction of the customer can be directly correlated to a unsuccessful requirements elicitation of this group [Westfall, 2005]. It can also greatly reduce the costs of the entire project, as the cost to change a requirement will multiply, the later the

mistake is discovered. And this is even worse if the mistake is closely related to functionality that is important to the customer [McGee and Greer, 2012].

2.1.1 *Goal-based approach*

Goals can be defined as objectives, which the to-be designed system should achieve [van Lamsweerde, 2001]. For this, goals can and should be defined at different levels of abstractions, and moreover be connected by refining them into sub-goals and find similar goals or even conflicting ones. Using these, one involves every stakeholder on their respective level of expertise, without demanding an in-depth code knowledge of an end-user. Additionally, more abstract goals tend to be more stable than concrete requirements since there are multiple ways to implement them in the system [Regev and Wegmann, 2005]. To achieve this, one should categorize the goals in similar means to the requirements one will most likely derive from them in the end [van Lamsweerde, 2001]. One of the best practices is to handle abnormal agent behavior early on, without avoiding over-ideal goals, because trying to meet them will often result in more costs and man-hours to achieve sometimes minimal improvements [van Lamsweerde and Letier, 2000]. That said, if there are clear restrictions or behavior that could endanger lives, then this should definitely be reflected in the goals. It is also important to not get sidetracked with impossible restrictions, which are contradicting the very domain the system will be working in [van Lamsweerde and Letier, 2000].
There are many ways to extract information to base goals on, most of them depending on the stakeholders they represent. The most obvious would be an interview with, or scenarios written by stakeholders, if the use-case the goal represents can be described easily or represented with a scenario [Regev and Wegmann, 2005]. More abstract goals can be found by trying to incorporate enterprise goals and policies, to make the created system on par with the entire portfolio. An example for this would be to be easily connected to other products from the same company.
After the initial specification of the goals, one can start to refine them, by splitting them up into sub-goals, based on questions like "Why should this behavior happen?" or abstracting them further with ones like "Why is this important?", depending on the completeness of the respective abstraction levels [Regev and Wegmann, 2005].

2.2 PERSONALIZED ADVERTISEMENTS

Social media and the internet itself is much more customizable than traditional media. Something all traditional media outlets have in common is a so called gatekeeper, who has a final decision over whether

something will be included in the outlet or not. In modern social media the user has a more active role in this gatekeeping, by basically building their own gatekeeper by themselves [Lazer, 2015]. The curating algorithms learn which of the followed accounts and what content in general is read and clicked on by the user, and therefore tries to cater to these tastes. A noteworthy side-effect of this behavior is the reinforcement of these preferences and opinions that are imbued in the posts and articles shown to a user [Lazer, 2015]. Since they see these things more prominently, they become an important thing in their world view, even if they make up only a small part of the entire news world. Additionally, social media tends to create an echo chamber for a user. Since conforming views are more often shared and liked which is the kind of engagement these kind of sites aim for [Flaxman, Goel, and Rao, 2016]. Even if much of the segregation is actively pursued by the user, social media with their personalized content curating tends to increase this effect strongly. This can lead to an effect called a filter bubble, where discourse does not happen anymore, because people are only surrounded by like-minded people limiting any opposing viewpoint until it becomes non-existent in their minds [Pariser, 2011]. Personalization in a web-based context basically means to deliver information to an interested user in a fitting moment, where they can use it the most, therefore it can be implemented via tailoring the content in an algorithmic way, or also just letting a user customize the interface to their needs [Sundar and Marathe, 2010]. Since the basic premise of the study is that personalized ads have an increased rate of success in their endeavor to convince people of their point of view, the process of how and why people are giving more credit to personalized advertisements will be explained here.

2.2.1 *Effect of personalized Advertisement*

The best way to describe the effect of personalized ads is that people are more inclined to believe stories that align with their current believes [Allcott and Gentzkow, 2017]. For advertising, this transfers to a change in the viewers believes about the advertised object by combining known attributes about the users with the capabilities or promises of the object [Sundar and Marathe, 2010]. For example, a user, who is known to go tracking a lot, is more likely to buy equipment built for this activities, than one who does not. Another example, which is more related to the modern media landscape would be new functionality implemented specifically for a certain demographic, or more easily, a special sorting of articles based on the interests of a person [Kalyanaraman and Sundar, 2006]. After all, something as simple as a personal selection of news stories on a homepage can incite an increased perception of usefulness in a user, since they do not have to

actively search for an interesting article [Sundar and Marathe, 2010]. A big difference between online advertisements and traditional ones is the fact, that while traditional advertisements are mostly consumed actively e.g. in the form of ad breaks in television, online ads are almost entirely perceived passively while doing something different in the web [Bourliataux-Lajoinie, 2000]. This leads to a different approach of advertisement by building a brand and trying to be remembered by the user, instead of leading to a direct purchase. The chosen way to achieve this increased memorability is to address the user personally and to include personal information about them in the ad design [Bourliataux-Lajoinie, 2000]. As always, these effects must be measurable, to be able to be advertised themselves, while online, the number of clicks on an advertisement is an easy to gather measurements, that show user engagement. Of course, not everyone who might have read or watched the ad actively will have clicked on it, but even then a click is a very good indicator whether the user will remember the advertised product in the future, so this is still a main goal of the advertiser [Chan Yun, 2009]. This click-through rate does increase with a more personalized advertisement [Bourliataux-Lajoinie, 2000]. To put the effect personalized efforts have on people in more relatable terms, in a test to compare recruitment rates for a study between different outlets, it was confirmed that the more tailored it was to a single person, the more likely it was for this person to participate in the study. While the most successful way, a telephone call, is not viable to scale, this effect also translated into web advertisements, where it was twice as likely for a user who saw a personalized ad to participate compared to one who saw a generic offer [Sinclair et al., 2012].

2.2.2 *Personalization and Privacy*

An increased amount of personalization is only possible by an equally increasing amount of personal information about the user known to the algorithm. This can result in an adverse effect, where people start to mistrust a website, if it is *too* well tailored to them. Privacy concerns of users can be summarized as an unwillingness to be profiled, may it be fear of misclassification or the possibility of losing anonymity in the internet [Awad and Krishnan, 2006]. This is increasingly true for excessive users, who have a high usage time of internet based media. These users tend to feel like they lost control of their own information, something which many users hold in high regards and will react adversely to if infringed [Goodwin, 1991; Stone et al., 1983]. If these concerns are not addressed, they can lead to a loss in publicity, in extreme cases even active sabotage by agitated users [Stone and Stone, 1990]. However to some users this effect can be mitigated by a declaration of confidentiality and a promise to not scrape too much information [Dolin et al., 2018; Kalyanaraman and Sundar, 2006; Xu

et al., 2011].
People in general tend to appreciate the increased value of a personalized experience, and also the added relevance it can have on advertisements shown to them [Awad and Krishnan, 2006; Xu et al., 2011], but they also feel that every personalization chips away at their feeling of anonymity in the internet and their privacy [Dolin et al., 2018]. This is even more true if the effects of targeting become very apparent, as in a flashy and very intrusive advertisement [Dolin et al., 2018]. Interestingly, although being intrusive and personalized both have a positive effect on the efficiency of advertisements on their own, combined they have a negative one. This is most likely due to the direct confrontation of the user with their loss of privacy to this advertiser, and the uneasy feeling that comes with it [Goldfarb and Tucker, 2011b].
This said, users do not oppose personalization and the use of information about them in general. Many realize, that companies will use this to improve their experience, and also feel that some data is fair play to use in these optimizations [Dolin et al., 2018]. But the information on which they are personalized, and how it was obtained is a different problem. They tend to accept a targeting of all users of a certain website, no matter how narrow it is, as long as it is uniform. With this a forum with a very narrow audience can still target their users very well, a general news provider on the other hand has a much too broad audience to still make use of any personalization [Dolin et al., 2018]. The topics which people are uneasy being personalized on are rather obvious, with it being very personal matters, like sexual preferences and possible addictions, such as gambling [Dolin et al., 2018].

2.2.3 *Personalization in Politic Advertisement*

Emphasizing a specific stance to win an audience has been used as a tool for election campaigning in the US since Nixon changed his stance on the civil rights movement specifically to win the south for his presidency in 1960 after he lost in 1956 with a more pro stance [Bunting, 2015]. This very basic customization of political motives increased slowly, until 1996 when Clinton first bought data from a firm specifically to better understand the voters mindset and to create smaller, much more like-minded targeting groups. This is known as the first time that this kind of data was successfully used in a US-election [Bunting, 2015]. The first time microtargeting was used in the US was in 2004, where the parties started to create huge data vaults for every voter, based on a voter-registration act in addition to the sometimes hundreds of data points they acquired via questionnaires and data companies. This was also the moment in time when TV advertisements lost their monopoly as a way to reach everyone with the same message and they started being replaced by more and more

personalized targeting methods, like mail, e-mail and social media advertisements and posts. This was mostly done to use the resources during a campaign in the most effective way possible and to win over voters who are not deeply connected to a certain party.
This led to the election of 2008, where Obama's victory over McCain was often attributed to how well his team handled the internet presence during the election campaign. Not only could they now reach much more people directly, but since many people retweet or share such posts, they could use the range of the voters indirectly to reach people who might not search for this candidate directly. This led to an increasing number of people who interact with political events, as more than 20 million tweets were sent during the election day, and over 12 million during the presidential debate, proving their engagement in these kind of events [Bunting, 2015]. Additionally the voter turnout can be increased by sending direct incentives over Facebook or e-mail to an eligible voter to increase the chance he will actually cast his vote [Bunting, 2015].
This trend continues till today, as for the 2016 election Trump allegedly invested half of his budget into Facebook advertisements and payed Cambridge Analytica for massive data about US voters [Persily, 2017]. And this seems to have worked, since he was retweeted three times as often as his rival and was shared five times as often [Persily, 2017]. This trend is also noticeable outside the US, for example about 43% of the spending budget for the 2017 UK election was spent on digital media, and this is only counting the biggest platforms [Dommett and Power, 2019]. But one has to keep in mind, that success in social media does not guarantee success during the final election, as was shown during the Singaporean election in 2011, where the most "liked" political party on Facebook did not win a single seat. This is due to the fact that, while social media can help in engaging new people and rally them to vote, there is no way to make sure that the population is actually present at the polls. E.g. during this particular election the demographic was very young on Facebook, leading to an absence of the opinions of the elder part of the population [Keat, 2012]. A trend that is still going strong with over 40% of users on Facebook being in the bracket between 18 and 34 years and a significant portion of 5 percent being too young to even vote in most countries (see fig. 2.1). Another important side note that can be drawn from this graphic is the overhead of male representation on Facebook today.

2.2.4 *Targeting methods of personalized Advertisement*

Targeting online users based on their past behavior has become a common practice for advertisers [Carrascosa et al., 2015]. This is due to the massively increased click-through rates associated with this and the increase in sales that come with it [Bleier and Eisenbeiss, 2015;

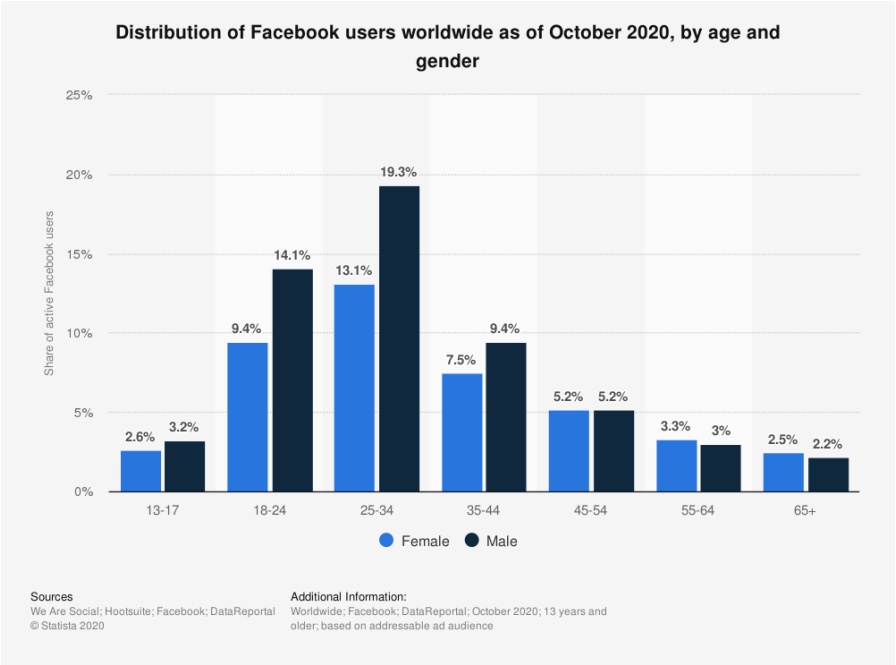


Figure 2.1: Distribution of Facebook users by age [H. Tankovska, 2020a]

Goldfarb and Tucker, 2011b; Yan et al., 2009]. There are many ways an individual can be profiled and then targeted using their online behavior. Noteworthy is property targeting based on the sites someone visited, group based targeting, which tries to separate users in groups based on demographic information gathered about them, and behavioral targeting, which uses the entire behavior, like the degree of usage of certain applications [Pandey et al., 2011]. The success of this method also shows as its inverse can also be observed, that is that people who click on similar ads overall show a more homogeneous behavior online than the overall group [Yan et al., 2009].
The technical ways to track people to create these profiles are equally diverse. It can be done via scripts embedded into the site one is visiting, or a forced popup of the trackers own website [Lerner et al., 2016]. It can also be done via sharing of cookies, which act as temporarily stored data on the user's browser [Lerner et al., 2016]. A rather direct method is the incorporation of a usable button, such as a "like" or "share" option, which gives the site direct input, that the user found the content engaging [Lerner et al., 2016].
All these methods have found a new obstacle in the European "Privacy Directive", which conflicted with their goal of data mining [Goldfarb and Tucker, 2011a]. This, together with the laws it gave way for, led to a massive decrease of effectiveness of the advertisement campaigns using personalization. To get the same effect as before, advertisers would have to roll out 2.85 times as many ads, since they lost on average 65% of their effect. As expected, sites which have a more narrow audience, such as a forum, did not report the same loss [Goldfarb and

Tucker, 2011a]. This showcases the importance of the subject, as well as the impact any regulation will have on the sector. That is why such regulation should be based on a multitude of proofs, which show that the aspect to be regulated is harmful.

2.2.5 *Targeting methods of Facebook Advertisement*

After discussing online targeting in general, this section will deal with Facebook's targeting methods explicitly. Facebook does not need to hide *how* it gathers personal information, as it is their main purpose as a social media platform to provide people with the means to recreate their personality online and to find like-minded people to discuss things they are interested in. All this leads to Facebook knowing very much about us, without much reliance on third-party data suppliers like most other website creators. Rather they themselves are the provider of information to many, as can be seen by Facebook's revenue being almost entirely advertisement based (see fig. 2.3). To use this well of personal information for advertisement purposes, one only has to create a business page. From there basically anything is possible, solely depending on the budget [Facebook, 2006c]. This is no big hurdle, as can be seen by the ever growing number of advertisers that are present on Facebook, see fig. 2.2. From there, one only has to decide on which details known to Facebook one wants to rely on, when the advertisement is rolled out. The possible ways to target people contain: location, age, education, interests, clicked ads, pages they interacted with, devices, and usage times of those devices. Another way to use already established connections can be the option to target specifically known customers, by usage of their name or phone number that is known to the advertiser. Additionally there is the option to target "lookalike audiences", where Facebook tries to target people similar to established customers [Facebook, 2006a,b]. All these options are available in a very simple manner, allowing the creation of very targeted advertisement without the need to gather any data or deeper know-how.

2.3 TERMS RELATED TO THE SOCIAL STUDIES

In order to fit the overall study design into a category from the social studies, we start by clearly defining what a study in this context means and which categories exist. Even though most of these categories are more closely related to real-life studies, and not remote ones conducted via the internet, we can still find parallels in the basic design and get an idea, how this design might fit in and which insights can be drawn from the literature concerning these fields.

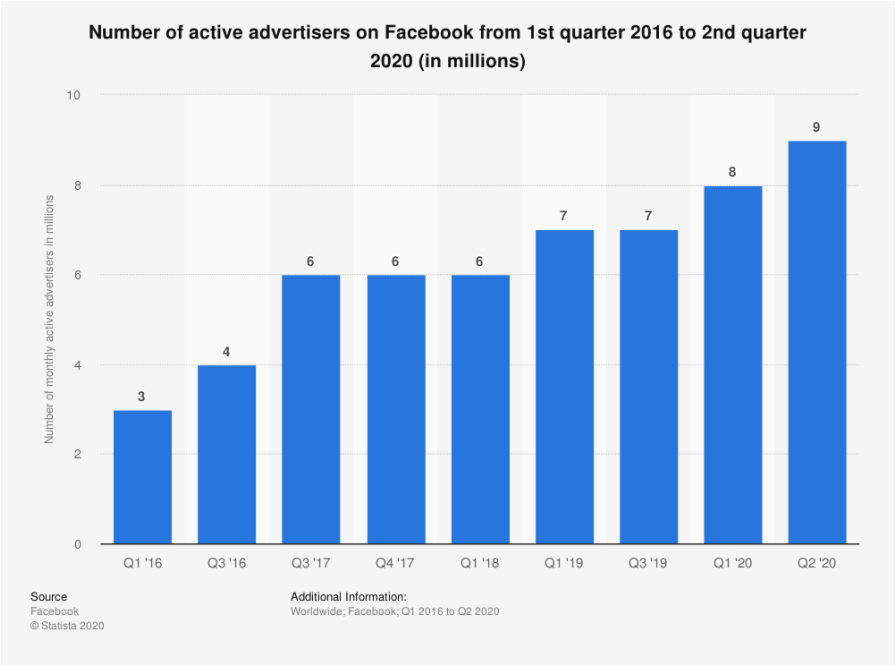


Figure 2.2: Number of active advertisers on Facebook over the years [H. Tankovska, 2021b]

2.3.1 *Survey*

Survey research is defined, in regard to the social sciences, as a research design which includes some kind of survey [Weisberg and Bowen, 1977]. To be more precise, such a survey would be a method to collect standardized information by interviewing a sample group [McGaw and Watson, 1976]. Following from this definition, the setup of the questionnaire, the way to conduct it and the selection of a representative sample are some of the most important factors in this design.
The conduction method can be roughly divided into three separate types: personal, via telephone and via mail [Hackett, 1981]. Although many more setups can be thought of, they all can be categorized into one of the three overarching ones, as they share many important characteristics. For example, while a mailed questionnaire has many differences compared to one filled out on a website, they share the complete absence of an administrator, and therefore lack the possibility for the interviewee to ask any follow up questions [Hackett, 1981]. That said, there is a pretty clear trend for people to refuse more answers as the survey gets more impersonal, as the direct conversation partner is missing [Lamnek and Schäfer, 1998]. Additionally, participants seem to be more prone to lying, when they do not have to see the one they are lying to, which makes it much easier to do it on paper, via telephone or in similar setups, than in person. These are general trends, which are closely tied to culture and can be reversed

at times, which means a researcher has to keep the customs of the target population in mind when designing the survey [Lamnek and Schäfer, 1998]. The questionnaires themselves are mostly dependent on the type of survey conducted. In a telephone call, the ways to give information to and get them from a participant are heavily limited, while in an online survey on the other hand the questions are static, but apart from this almost limitless with the option to include pictures and videos in both the questions and answers [Evans and Mathur, 2005; Jamsen and Corley, 2007; Zerback et al., 2009]. During this, one has to keep in mind that the exact phrasing is very important, since more open questions can lead to the gathering of additional information, and they could lead people astray and divert their focus from the main point of the survey [Hackett, 1981]. The last way to differentiate surveys is by the times a single participant is questioned. This can be done one time to capture a single point in time, or multiple times to track a possible development of some sorts [Hackett, 1981]. Most problems of surveys stem from biases that are introduced to the data during the questioning phase. Many biases are hard to detect, and they tend to still influence people, even if they are aware of them. A prime example would be a fundamental attribution error, which describes the under-estimation of the impact situational factors can have on behavior. This should be considered, e.g., when deciding for a certain setting. Also the confirmation bias can influence the whole study design, since there is a clear goal in mind, and the people working on it want to see it fulfilled. This could also lead to an error in the framing of certain problems, since the surveyors want to guide the participants to a desired answer. During the survey itself biases like affinity bias and unconscious bias [Hammer, Prel, and Blettner, 2009], which describe the better or worse treatment of people based on their affiliation to certain groups. The fact that people may have to reveal personal and even embarrassing information about themselves makes them prone to lying or slightly tweaking their answers to appear better. This behavior can be unknowingly reinforced by the interviewer by their reaction to certain answers, but also by the questions themselves. This can happen when a question for example allows a selection between 3 ranges, where the middle one gives a sense of normality to the user, which makes it more likely for them to choose it. This effect is called social desirability [Mortel et al., 2008]. Another problem can come from the interviewer bias, which is introduced by the interviewer directly. It describes the tendency of people to converse more with people they sympathize with. This can lead to biased data, since more information will be available about these cases, which gives them more significance. During a study about people afflicted with illnesses compared to healthy ones, this can make an especially large impact, since the interviewer might gather way more information about the afflicted people as opposed to the reference group [Hammer, Prel, and

Blettner, 2009].
Surveys are traditionally separated into 4 different categories, based on the amount of contact with another human being, whereas the first two can be combined. This has an impact, because the involvement of a human conversation partner changes how people give their answers and how much they tend to be willing to open up [Van Selm and Jankowski, 2006]. All categories can be related to some kind of online survey, given the exact execution. A postal survey has no interaction point whatsoever, and can be closely related to an email based survey. A personal interview can nowadays also be conducted via a video conferencing tool and allows almost the same level of personal interaction, apart from physical closeness. These transitions can be seen in fig. 2.4, and illustrate that many known implications of these research fields can be applied to the new internet-based ones, although it should be done with caution [Van Selm and Jankowski, 2006]. One of the biggest advantage of online surveys is their nearly endless capability to scale to and reach an arbitrary large sample as opposed to a normal survey, where the questionnaires have to at least be printed out and somehow reach the participants [Evans and Mathur, 2005, 2018; Healey, Baron, and Ilieva, 2002; Jamsen and Corley, 2007; Van Selm and Jankowski, 2006]. An additional convenience for study authors that online surveys bring is the possibility of an automatic transfer of the data into a usable and comparable format [Evans and Mathur, 2005; Van Selm and Jankowski, 2006]. A midpoint would be the way to contact the participant after the survey. Although there are ways to make sure the study contains contact information about each interviewee, this will again bring up privacy concerns, which may turn away participants [Zerback et al., 2009]. Lastly, doing the participant acquisition for these online studies is a blessing and a curse. On the one hand, people with very particular interests can be found and contacted all around the globe, on the other hand all of these people have another attribute that separates them clearly from those not found: they bring their interest in the online world [Jamsen and Corley, 2007; Van Selm and Jankowski, 2006; Zerback et al., 2009]. This means that although an online presence becomes increasingly normalized, many people are still not reachable via this channel. This mostly includes digital immigrants, who did not grow up with these types of media, but can also include poorer people. This trend seems to continue with the possibilities growing with more and more people getting accustomed to the internet and new forms of media being introduced. Still, this fact could lead to a selection bias, where the result is skewed by the sample, since they are all members of the same cohort of avid internet users.
All of these arguments lead to online conducted surveys dominating the survey market, e.g. in Germany almost half of all surveys were conducted online, with the rest splitting into face to face and

telephone surveys according to the annual report from 2019 of the "Arbeitskreis Deutscher Markt- und Sozialforschungsinstitute" [Arbeitskreis Deutscher Markt- und Sozialforschungsinstitute e.V., 2020].

2.3.2 *Observation*

An Observation is a planned methodology, that tries to find an answer to a specific question. Although it is sometimes defined as a deliberate and focused selective form to perceive something [Graumann, 1966]. Before an experiment can be designed, the research question and its boundaries must be set to make sure that the study itself has a focus. For a traditional observational experiment there are also factors like the organization of field trips and the rules of behavior for the conductors of the experiment, which are irrelevant in an online setting. These considerations contribute to the building of the research design [Thierbach and Petschick, 2019].
This design incorporates things like the differentiation of the role of the observer during the experiment, such as hidden, non-participatory and participatory. The observation can also be done by the observed themselves, and the level of structure during these experiments can differ drastically as well. All these decisions have to be made before starting the first experiment, as all of them should be as similar as possible to mitigate the effects of unwanted variable changes. A very important factor to consider is the way participants are contacted, and how much they are informed about the experiment. In an online scenario this would mostly relate to privacy concerns, since many experiments need sensible data to be able to make meaningful statements. It still fits the criteria that the way of data collection is closely related to an interview or a questionnaire [Mey and Mruck, 2010].
Since observation is an often used methodology, its shortcomings are also known. One of them is the selection bias. It describes the fact that a key requirement for a good observation is a good representation of the target demographic. This means that not only a high participation rate is needed, it also needs to be documented if people are actively excluded from the experiment for one reason or another. Something that can always occur is the misinterpretation of a factor to have a causal relationship with the observed outcome, when it is really only a supporting factor, and the really important one is overlooked. Lastly the observer plays a big role in the interpretation, as it can occur that sympathies or dislikes are reflected in the protocols an observer might write, resulting in more or less detailed answers [Hammer, Prel, and Blettner, 2009]. All these things must be kept in mind to ensure the integrity of the study.

2.3.3 *Case Study*

A case study is a detailed examination of a case of a certain phenomenon, by that it is mostly concerned with trying to explain how, what and why a certain event is happening, and not with a general verification of a hypothesis [Baxter, Jack, et al., 2008; Crowe et al., 2011]. It is most useful in the investigation stages of a problem, since its whole focus is a single occasion instead of a series over time, so it is prone to miss possibly important side effects and prerequisites. Hence it is often used as a way to explore a hypothesis before starting a large study series [Abercrombie, Hill, and Turner, 1994; Flyvbjerg, 2006]. In that, it can be used to explain and explore events, without having the claim to know everything about them and their preconditions [Crowe et al., 2011]. Alas, if the goal is to show a simple existence of something, or the falsification of a general assumption, the case study can be very helpful [Flyvbjerg, 2006].
When applying a case study methodology, there are many things one has to consider to be sure to have the right preconditions and to be able to investigate the exact, right subject. Most importantly, the decision has to be made what the studied case will be, and where the borders of it will be. Only by defining exactly what the focus will be it can be ensured that the data that will be collected can be used for that purpose [Baxter, Jack, et al., 2008]. Even if the name lightly implies otherwise, a case study can be conducted over multiple cases. If this is the setup one chooses, these cases should be as strongly connected as possible to reduce the possible reasons for differences in the data down to the investigated principle. That said, the contextual variables that occur should still be part of the recorded data, since they could include the key variable to why a certain phenomenon occurred [Baxter, Jack, et al., 2008].

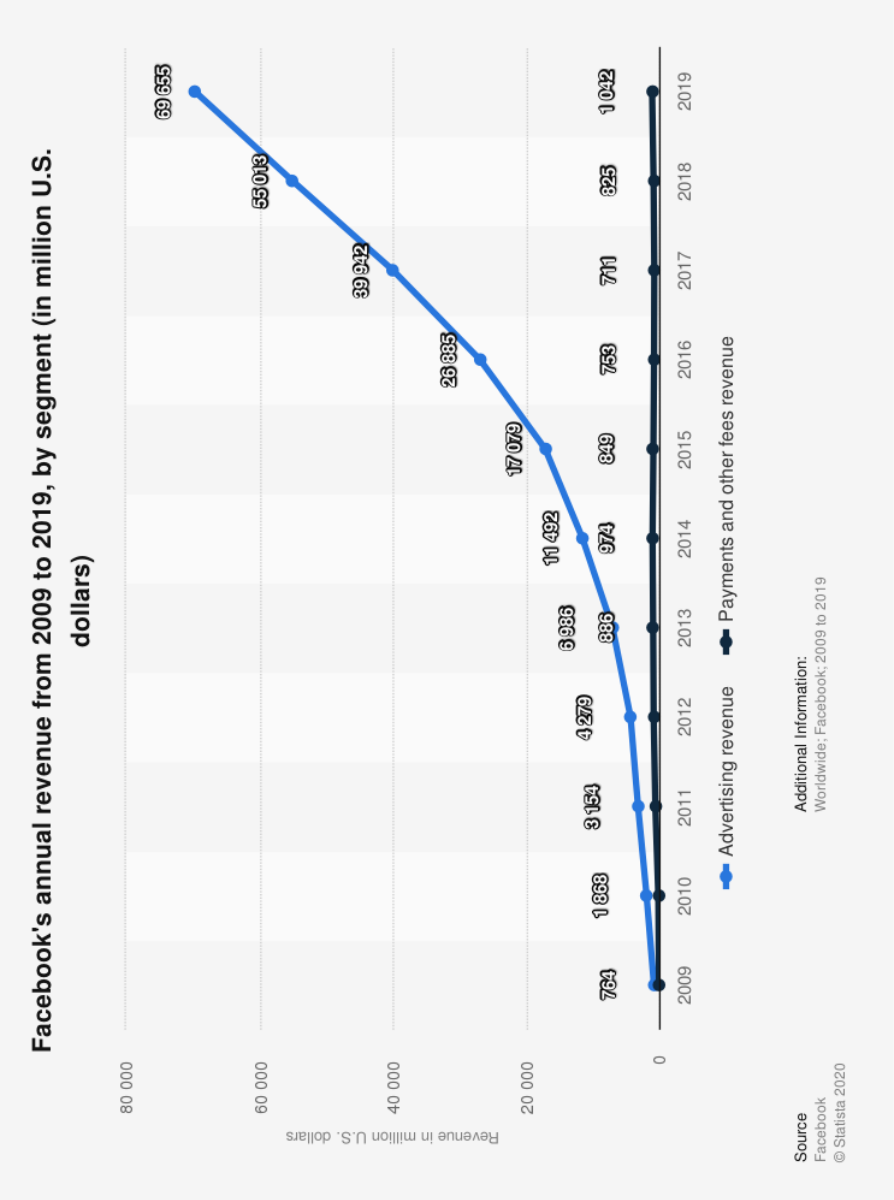


Figure 2.3: Annual revenue of Facebook from 2009 up to 2019, divided by segment [H. Tankovska, 2021a]

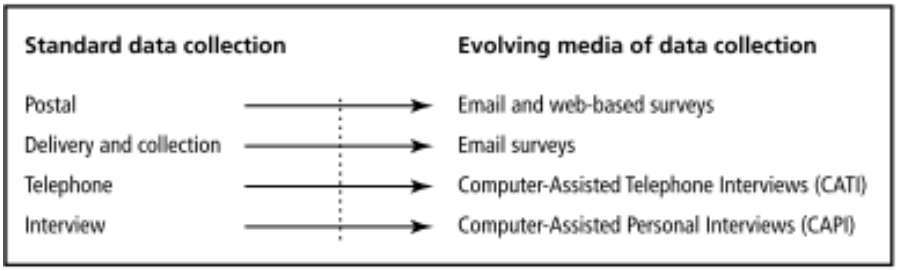


Figure 2.4: Evolution of traditional surveys in the modern media landscape after Ilieva et al [Healey, Baron, and Ilieva, 2002]

3

RELATED WORK

This chapter will summarize studies and projects, that have the goal to investigate the degree of personalization in political and economical advertisements. There are works, which look into the personalization of political ads in the US and the UK, and the implications that come with it. Others try to make data donations easier for the user and study creators by combining the studies into one great software. Also a study looking into targeted Facebook ads will be discussed, to see how some of them are conducted at this point. They will be ordered starting with the least similar to the most similar to this project.
The projects will be compared based on 5 attributes. First off is the availability of the code of the project. Transparency is a very important aspect, if it is necessary to gather the trust of non-technical people, since even if they will not look into the code themselves, the possibility to do so demonstrates that the project has nothing to hide. Second, it will be compared whether some kind of payment was involved from inside the study to an outsider. While often this will improve the possibilities for the project, not every interested actor will be able to muster enough funds to pay people to conduct a study *and* participants or someone else. Making it a necessity and not an option will cut off many important studies. After that it will be pointed out whether there was a regional focus, intended or not. Many studies focus on a certain region, to limit the problems that come out of language differences or differences in the law. While it is a understandable action, it can lead to small countries being left behind, if they are "too different" from others. Next it will be mentioned whether the data gathered by the project is publicly available. To allow others to investigate the same data and to reproduce the results strengthens the trust people will have in said results. Lastly, the adaptability of the project design will be examined, and whether it is meant to be changed and built with this goal in mind. This comparison will can be seen summarized in table 3.1.

3.1 CASE STUDY BY ALI ET AL.

A comparable study was conducted by Ali et al. [Ali et al., 2019], where they tried to find out whether the placement of advertisements

1 Since the project is still in development, all statements were made according to the information available at the time of writing
2 no mention found
3 up to the final user, not enforced
4 maybe too much, see section 3.4

Project	Open Code	Paid	Regional focus	Open Data	Adaptable
Case study by Ali et al.	n.a.	yes	US	no	no
Citizen Browser	no	yes	US	no	no
Who Targets Me?	yes	no	UK	Partly	no
Ad Observatory	yes	no	US	After Registration	no
DataSkop [1]	?[2]	no	none	no [3]	yes[4]

Table 3.1: This table compares similar projects with each other based on 5 attributes: Is the Code public? Was someone paid for participation? Is there a regional focus? Is the gathered data available? Is the project designed to be adapted?

on Facebook can be attributed to biases, based on the targeted sub-audience. For this they created a quasi-randomized sample, by using randomized phone numbers in North America. They then filtered them down to existing ones and then targeted the profiles associated with these numbers. They categorized these profiles based on the voter register and the dominating demographics in their area. Their gathered data was based on the feedback Facebook gives their advertisers, to inform them which people have actually been reached by their advertisements. Based on this data, they could show that the automated system, that distributes the advertisements to the profiles, subjects itself to the prevailing biases. They were able to show it for gender (bodybuilding for men, cosmetics for women) and racial (stereotypical musical preferences) biases. Even more concerning is, that the racial bias also extends into other sectors, such as the housing market, where almost all possible housing options were predominantly shown to Caucasians.
This study has found a great way to use Facebook's own system to investigate itself. They could show an alarming bias in a system, which should be a cause for Facebook to at least rework that part of the system. However, this kind of study is not easily done as they had to release many advertisements, which they had to pay $8,500 for. A sum which could easily avert people from this kind of study, out of fear they may not find anything worth publishing. Additionally, this kind of study has clear limitations. It can only find biases in the delivering system, as problems that can be constructed actively by

using Facebook's options to find similar people are not reconstructable with this approach. It can only ascertain the distribution of people the ads have been delivered to, based on the information Facebook provides about them.

3.2 CITIZEN BROWSER

Citizen Browser is a project by *The Markup*[5], a newsroom trying to investigate the use of technology by powerful institutions and the implications it has for the society. The project is built around a custom browser, which is used by a paid sample of 1200 people representative for the United States. The goal is to get a clear view of what the population is seeing during their use of Facebook and YouTube. These two sites were chosen due to the fact that many people tend to get their news at least partly from sources present in these networks [Hermida et al., 2012; Peer and Ksiazek, 2011]. Therefore, any misconduct there could influence how people are getting informed about current events. Information, that could be used to identify the panel is removed before any investigation begins, to minimize the risk of de-anonymization.
With a representative sample, many possible problems can be investigated, and announcements on the part of Facebook can be verified. This is important work, as it allows an independent analysis of changes to the algorithms used by Facebook, at least as far as Facebook announces them. The concept of removal of all personal identifiable information is commendable, but it makes many investigations impossible, as the targeting methods can not be deconstructed, since the relevant information is most likely missing. This makes any wrongdoing in the area of discrimination very hard to find and nearly impossible to prove. Also, the code is not publicly available, neither is the data gathered with the project, which might be due to the investment that was made with the paid, representative panel.
Aside from these restrictions, this is a very important project and a good example of the implementation of the watchdog investigation approach in the modern media landscape. The Markup mostly uses the data themselves in their articles, which were dominated by the US election [Ng and Yin, 2021].

3.3 WHO TARGETS ME?

During the 2017 UK election, this project was founded by Sam Jeffers and Louis Knight Webb to keep an eye on political ads and to try to analyze their impact in real-time[6]. The basic functionality is a plugin, which scrapes all political advertisements on Facebook and sends them to a centralized server. Additionally, a user can look into the mass of

5 https://themarkup.org/citizen-browser
6 https://whotargets.me/en/about-who-targets-me/

advertisements they have seen and can find out who targeted them and based on which attributes. This functionality however makes the creation of an anonymized profile necessary, as well as the addition of demographic information like age and political leaning. It can also give feedback whether a user saw more ads than comparable users, or whether the amount increased over time. The project also allows others to look into the gathered data as a whole, as well as different processed versions, like a tool which notifies you once a new advertisement from a certain campaign was seen for the first time. The code for this project, alongside with more tools, is available online[7]. This could help journalists to keep an eye on campaigns easily. They are working closely with other entities with similar goals, such as DiCED[8], an EU-funded project in collaboration with the University of Manchester[9] as well as multiple media outlets.
This project aims to be applicable on a global scale, but most of the current users are from the UK, due to it originating there and having more outlets set in this community. A central world-wide project, while seeming like a great opportunity, would be an incredible amount of data, which would make it very hard to find out if some small populace is being targeted by bad advertisements. More smaller projects could help achieving more directed goals, as they keep the data at a more manageable quantity. This train of thought, as well as the more open approach to include economic goals of this work, are the biggest divisions between it. The data is publicly available[10], but they call it "impressions of ads", which seems to imply that they only share a part of the overall data.

3.4 ADOBSERVATORY

The AdObservatory is one half of an ongoing project called the *onlinepoliticaltransparencyproject*[11] by the New York University [12], that tries to get an overview over the mass of political ads in American elections. The main focus is to gather all advertisements that favor a certain candidate and also to gather the amount of advertisement, that is directly traceable to the candidates campaign, in order to get an impression of how much money is being invested into it. Additionally, it is tracked why a certain advertisement was chosen for a person, while trying to reverse engineer the criteria used by the advertiser. All their gathered advertisements are publicly available and can even be filtered to get an impression what a certain demographic has seen, based on the information gathered in the project. The data is available

7 https://github.com/WhoTargetsMe/
8 https://cordis.europa.eu/project/id/833177
9 https://www.research.manchester.ac.uk/portal/rachel.gibson.html
10 https://data.whotargets.me/
11 https://onlinepoliticaltransparencyproject.org/
12 https://www.nyu.edu/

under https://adobserver.org/ad-database/. It was used in multiple news articles, often centered around misinformation and extremist content on Facebook [Cybersecurity for Democracy, 2021; Martin and Jarvis, 2021].
The other half of the project is a browser extension called the Ad Observer[13], which people can add to their own browser. It will automatically scrape all advertisements and send the data to the database of the project. Additionally, one can enter basic demographic information about oneself, to help the reverse engineering of the targeting attributes.
The project does not seem to be more involved in the protection of vulnerable groups. At this point, it could be easily adapted to additionally allow the self categorization of the user in a set of groups worthy of protection to make this kind of analysis at least theoretically possible. Also, the content of the advertisements does not seem to get a deeper analysis. At this point it is only stored to allow users a comparison of their own experience against a chosen demographic. Other than these points, it is a big step in the right direction, as it represents a watchdog over political advertisement, which could allow institutions and political bodies to hold online advertisers to the same standards as traditional ones. Although its code is open to the public[14], it was designed with a direct use-case in mind, and is therefore not designed to be adapted to different ones.

3.5 DATASKOP

The DataSkop[15] is a project by the non-profit research and advocacy organization AlgorithmWatch, which aims to make data donations easier, to enable more parties to participate and to gain some way to analyze large algorithmic systems. AlgorithmWatch is a non-profit organization, with the goal to keep watch over algorithmic decision makers and to ensure they benefit society as a whole. It is planned to build a desktop app, in which all possible studies are visible and the user can decide in which ones they want to participate. Then, they will open the corresponding website in the desktop app and the scraper will automatically strip the wanted information from it. The plan is to encompass not only multiple social media platforms, but also commercial sites, like marketplace sites and pages giving financial information. To increase the willingness of the user to participate, a study creator will be required to explain why they want to gather certain data and what they think will be interesting about it.
Although the platform is not publicly available yet, the goal it set for itself is very high. Past experiences with data scraping have shown,

13 https://adobserver.org/
14 https://github.com/CybersecurityForDemocracy/social-media-collector
15 https://algorithmwatch.org/project/dataskop/

that there is no clear pattern between sites one can rely on and to use to make some kind of generic scraper. On the contrary, sites tend to actively obfuscate their sites to make scraping as hard as possible for multiple reasons. Web based shops might do it in order to avoid price comparison websites and social media sites have an interest in not being scraped to not lose the gathered data to someone else. Additionally these obfuscations are changing with a high frequency to shake off this kind of software. That being said, the project is pretty similar to this thesis, in that it saw the technical problems many NGOs and journalists might have in conducting these kinds of studies, and the need in some way to make it easier. It will be a much more complete package, to which the studies must fit exactly, otherwise the concept can not be used. This framework on the other side will require some technical work before it can be used by the study creator, but it is designed to be adapted to their needs. The option to select the target site out of multiple possibilities is a big plus for the DataSkop, but it will require immense effort to be created and to keep the data scraper functional for all these different sites, whereas the focus of this software allows a specialization.

4 INTERVIEW EVALUATION

During the creation of this framework, interviews with four experts were conducted to gather different perspectives from people whose main field is not computer science, but fields interested in personalized advertisement, like costumer advocates. Some of the interviewees did not want to be named, and will therefore go under the pseudonym *anonymous interviewee* with a number, or AI-X for short. The objective of those interviews was to gain new insights and to find some of the problems, which might hinder interested parties in creating a study investigating personalized advertisement. For this, a legal scholar, a journalist and costumer advocates were interviewed, to incorporate their knowledge into this framework.
Based on these interviews, the following goals were derived to support the creation process of the plugin as it currently stands and were also crucial in giving an oversight over all the potential non-technical problems. These goals will be illustrated in detail in this chapter. Another objective of the interviews was to find different basic scenarios, which might help to categorize studies into sub-groups. These groups could then help finding the right approach to a problem when this framework is used. The scenarios are part of the study design and can be found in chapter 5.
The interviews were constructed alongside main questions, which should help to gather a broad overview of how the interviewee approached the field in the past and how this framework could profit from it. They can be found at appendix A. Each interview was designed as an open conversation, so the questions were mostly used as reminders for the interviewer, to cover all important topics. They were planned to last 30-60 minutes and were conducted via video conference, due to the 2020 Covid-19 situation.

4.1 GOALS GATHERED

The experts interviewed here were chosen based on their expertise in the sector of political messaging via the internet or the general costumer rights field, but also data journalists were estimated as good sources for requirements of this framework, as they will hopefully use it in the future. Combined with people working in the field of algorithmic accountability it allows for a broad field of perspectives and inputs into the created framework.
For this work, a goal-based approach as described in section 2.1.1 was chosen, due to the differentiated views the interviewed people

have on the subject. Also this framework has the claim of being highly adaptable, which makes this high-level method well suited to gather all opinions. While a very detailed, low-level gathering of requirements would be more thorough and complete than this, it would also be very vast and would make it very difficult for the technician who will make the final adaptions for the study designer to get an overview over the gathered specifications and their implications.

4.1.1 *Concept Model*

To demonstrate the influence the goals have on each other, this section will contain a concept model to illustrate them. As a basis the i*-model was chosen, since it focuses on the relations between actors and also includes social aspects, which can have a big impact [Eric et al., 2011; Yu, 2009], although it was adapted to this use case. It has the basic structure of a graph with vertices and edges. This section will begin with a description of the symbols shown in fig. 4.1 and fig. 4.2 with an example of how they are intended to be interpreted. Afterwards the complete model follows in fig. 4.6 with a detailed description. The model was based on the principles presented by [Yu, 2009].

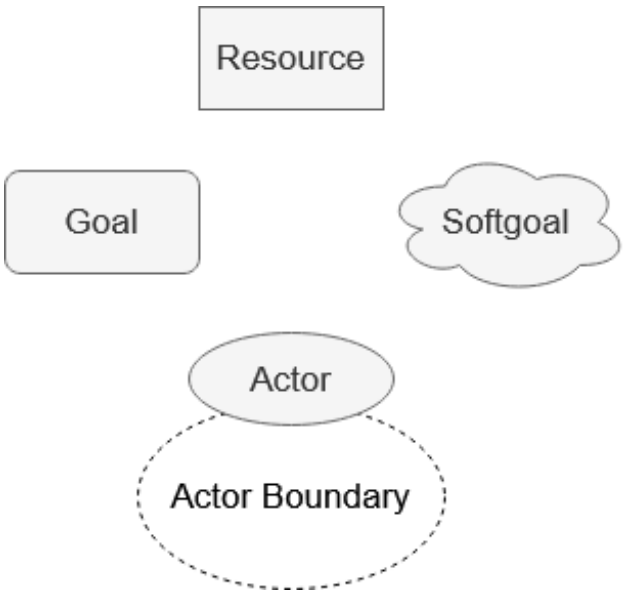


Figure 4.1: The symbols used in the adaption of the I*-model in fig. 4.6, based on [Yu, 2009]

The symbols in fig. 4.1 are divided into five categories: actors, actor boundaries, goals, softgoals and resources. An actor is an entity, most often a person, that has an interest in the functions of the product to be developed, in this case the study. An example would be the end-user of a software, since they have no direct influence in how it is developed, but they have a very high interest in which functions are included and how they are implemented. An actor boundary surrounds everything

that concerns an actor, and acts as a border between their domain and others. A goal is described as the intention an actor has, which drives certain behavior. Since the actual behavior can only hardly be influenced, the decision process for it needs to be taken into account. To give an example, in the context of a railway costumer, a goal of a costumer would be to arrive on time, which will drive their behavior and expectancy on it. A softgoal is a goal associated with the quality of something, which often relates to a "How"-question. It does not connect directly to a new functionality, but rather is an indirect request, which does not make it less important. The demand of a costumer to be met with kindness and respect is not included in any direct workflow, but is rather a underlying principle, and is therefore a softgoal of them. Lastly, resources are objects or information that are in possession of one actor, and have an impact on the goals of them or other actors. A resource for a study often translates to some kind of data, which is in possession of some actor and another actor who has a need for them, like the personal information of a participant.

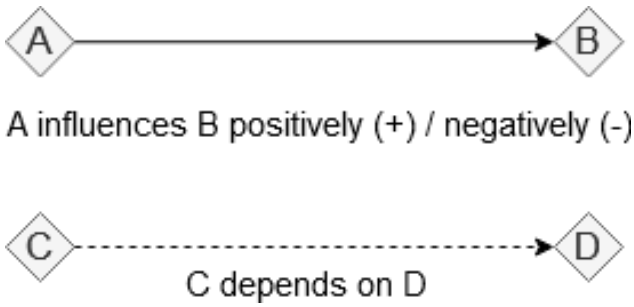


Figure 4.2: Explanation of the relations used in the adaption of the I*-model in fig. 4.6

The relations of this adaption of the I*-model are reduced to two kinds of, as can be seen in fig. 4.2. First there is the influencing relationship, which is used to show that a goal has a positive, strengthening effect or a negative, obstructive relation to another goal. A positive relationship between goals can often be seen in sub-goals, which split a broad goal (A) up into more manageable goals (B). These highlight single aspects of a goal and thus have a strengthening relationship with their parent. A good example of a negative relationship is privacy and the need of data. The more information of a person is needed, the more their privacy is infringed, and their willingness to give this data is lessened. In this aspect A would be the need for data and B is the privacy of the person.
The dependency relation is included to highlight that some goals highly depend on something different. It could be that the degree of what is offered is limited in the technical aspects of a system. That means that what can be "offered" in regard to a goal is limited by the requirements of a different goal or resource.

4.1.2 *Goals*

In the following the gathered goals will be presented based on an adapted template from the work of Antón [Antón, 1996]. First comes a tabular presentation of them, along with the corresponding interviewee who addressed it and the scenario, where it will have the most impact. Then follows a paragraph which will put the goals into perspective and to showcase their intention and proposed impact.

Participant

Goal	Ref	Interviewee	Scenario	Obstacles
Security	P-01	AI-1 (appendix A)	All	Increased workload
Privacy	P-02	AI-1 (appendix A)	All, especially impactful for section 5.2	Increased workload, limits data about participants
Usability	P-03	AI-1 (appendix A)	All	Might limit options
Easy to update	P-04	AAL (appendix B)	All long-term studies	
Not interruptive	P-05	AAL (appendix B)	All	
Quick & easy Installation	P-06	AAL (appendix B)	All	

Table 4.1: Table of all Goals concerning the Participant

The participant is mostly concerned with his own experience of the internet, while the study is running, as can be seen by the meta goal of"normal browsing experience" in fig. 4.3. It is not mentioned in the goal table, as it was not mentioned directly in an interview. As there is no way to influence it apart from the mentioned sub-goals, it is only used as a visualizing help. This means that any and all interruptions of the usual flow should be minimized, if not removed. This can be seen in the goals "Usability" (*P-03*), "Updates" (*P-04*), "Not interruptive" (*P-05*), and "easy installation" (*P-06*), as they are all connected to the meta goal of "browsing like usual", and any increase in them (relations *1* to *4*) helps with this overarching goal. Be it an easy installation process to not demand too much time (*P-06*) or *P-05*, which summarizes the minimization of run-time interactions after the initialization process). Together they represent two large parts of the overall usability of the study, summarized in *P-03*, which is the most

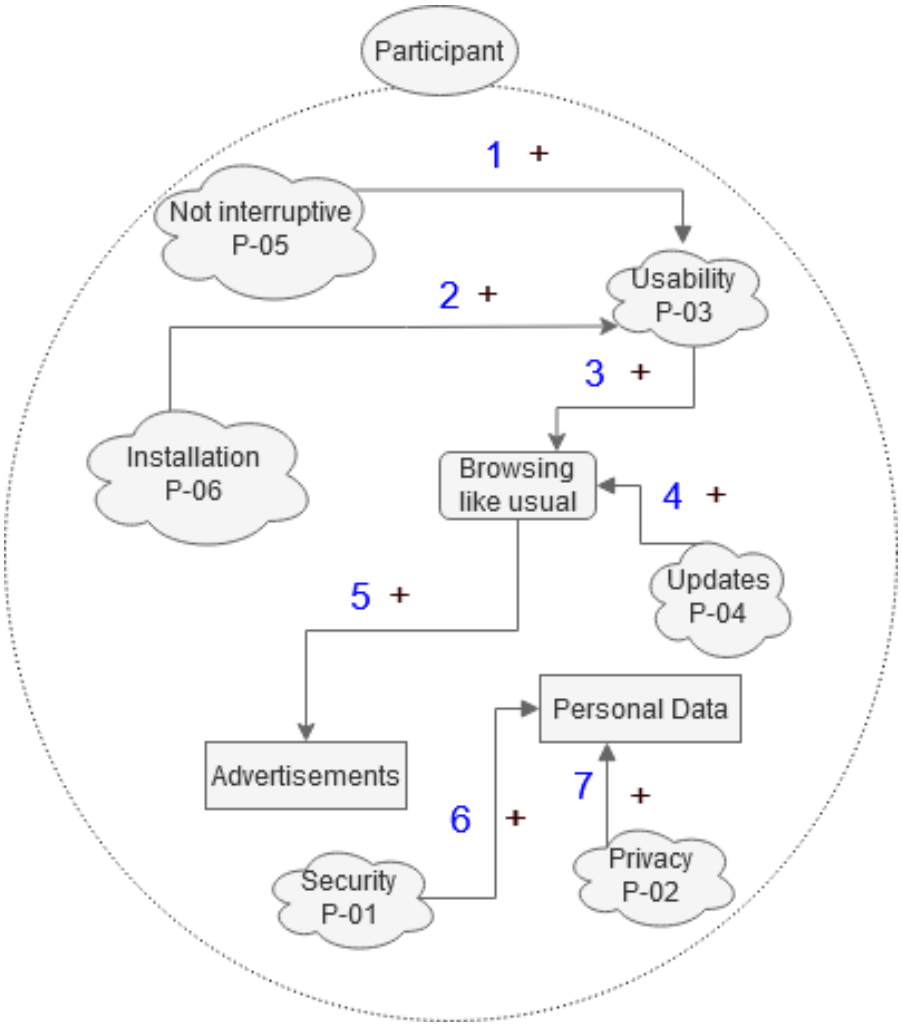


Figure 4.3: I*-model of the goals concerning the Participant, related to table 4.1

important influence for the browsing experience. *P-04* describes the demand of the participant to not often be bothered by updates, which could agitate them and they may even decline the update without much thought. All these goals are applicable in every possible study based on this concept, since most of them will feel very similar for the participant. All this will result in one of the two resources of the participant, the advertisements they see and that are scraped during their participation. Most of the goals try to increase their readiness to be a part of these studies and to give their data to be analyzed. The last two goals of the participant relate to their second resource they can offer to the study: their personal data. This is integral for any analysis, but they are protected so to speak with the demand for security (*P-01*) and privacy (*P-02*). Without guarantees in these sectors, many people will not be willing to give up this information about themselves, and will limit the effectiveness of the study severely [Goodwin, 1991; Stone and Stone, 1990].

All of the relationships in this sector are positive, so on this level there is no real obstacles, which would hinder the optimization in any way besides the workload. The only possible problems are related to the workload and restrictions for the plugin, which result from the demands, but the plugin is considered a resource of the study designer, and the resulting restrictions will be included in the complete overview in fig. 4.6.

Study Creator

Goal	Ref	Interviewee	Scenario	Obstacles
Transparency	S-01	AI-1 (appendix A)	All	P-01, P-02
Gathering a Representative Sample	S-02	AI-2 (appendix A)	Section 5.3, Section 5.6	Reality of voluntary studies
Gather a large Sample	S-03	AI-2 (appendix A)	Section 5.6, Section 5.1	Reality of voluntary studies
Versatility	S-04	AI-2 (appendix A)	All	Increases workload for the final adaptions
Engage people to participate	S-05	Puntschuh (appendix A)	All	Many ways to achieve this could as easily have a negative impact
Easy to update	S-06	AAL (appendix B)	All long-term studies	

Table 4.2: Table of all Goals concerning the Study Creator

In fig. 4.4 the relations of the goals of the study creator listed in table 4.2 can be seen more detailed. The two first goals “gathering a representative (*S-02*) and large sample (*S-03*)” both relate to the properties of the sample, which needs to have a certain size and to represent the population to be investigated well enough. The size is largely related to *S-05*, the “engagement of people”, which is a unstable goal, since many actions for it can have mixed results. Possible ways to engage people to stay in the study include some kind of measurement how "different" the advertisements shown to the participant are, or which kind of attributes seem to be associated with them. As

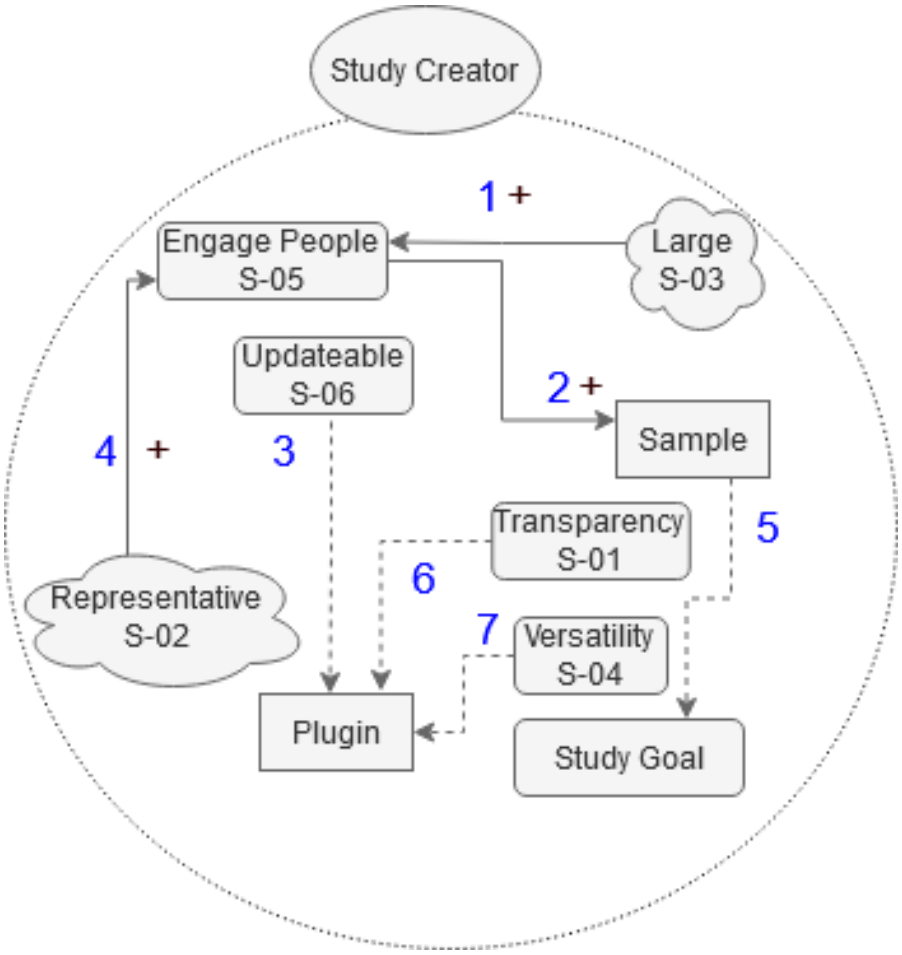


Figure 4.4: I*-model of the goals concerning the Study Creator, related to table 4.2

mentioned these information could also lead to some people leaving the study, as the level of information about them that can be gathered becomes more apparent for them, and they might be scared off by it. The relations 1 and 4 describe the demand *S-02* and *S-01* have on *S-05*, since the larger and more representative the sample needs to be, the more effort must be invested in the engagement of participants. The influencing relation 2 represents that more investment in the engagement process will lead to a better sample. How the sample needs to look like is highly dependent on the actual objective of the study, highlighted by the relation 5. The sample for different studies needs to be a good fit for them, since an investigation into the targeting of older people needs a different distribution of participants when compared to a general watchdog about political targeting. Lastly, the goals related to the plugin, "versatility" (*S-04*) and "Updateable" (*S-06*) which deal with an easy updating and a high versatility will depend on the implementation of that plugin (relation 3 and 7). *S-06* is not only concerned with a good process to distribute updates, but also with the minimization of them all together. The more versions are distributed

the more the data will have to be prepared to be comparable across those versions, apart from the fact that every update increases the risks of some old version still running at some participants, since they may not update at all. This problem is highlighted by the data donation for the German federal election in 2017, where the first version of the plugin had an error and even though the update was released only a few days later, the error can be seen over the whole duration of the donation [Krafft, Tobias D., Gamer, Michael, and Zweig, Katharina A., 2019]. That means that some participants did not update their plugins over the entire donation.
While the objective is created from the needs of the study creator, the degree it can be fulfilled is limited by the technical properties and the details of the implementation. The last goal *S-01* is related to the transparency of the plugin (relation 6). To guarantee that the plugin will not misuse the privileges it needs to function well, it is advised to make the code publicly available [Laine et al., 2007]. This will allow any interested party to investigate the correctness of the plugin. This is important to remember during the creation and documentation of the code, to make it as easy to read as possible.

Data Scientist

Goal	Ref	Interviewee	scenario	obstacles
Verify the personal Information	A-01	AI-2 (appendix A)	All	P-02
Useful groupable Attributes	A-02	Puntschuh (appendix A)	Section 5.6	P-02
Gather as many potentially targeted attributes as possible	A-03	AAL (appendix B)	All	P-02
Get complete data sets of each participant	A-04	AAL (appendix B)	All	

Table 4.3: Table of all Goals concerning the Data Scientist

The goals of the data scientist presented in fig. 4.5 are simple and few, but they have wide reaching implications for the other areas. The goals are obviously all related to the analysis process. They divide into the quality related goals “verification of personal information”

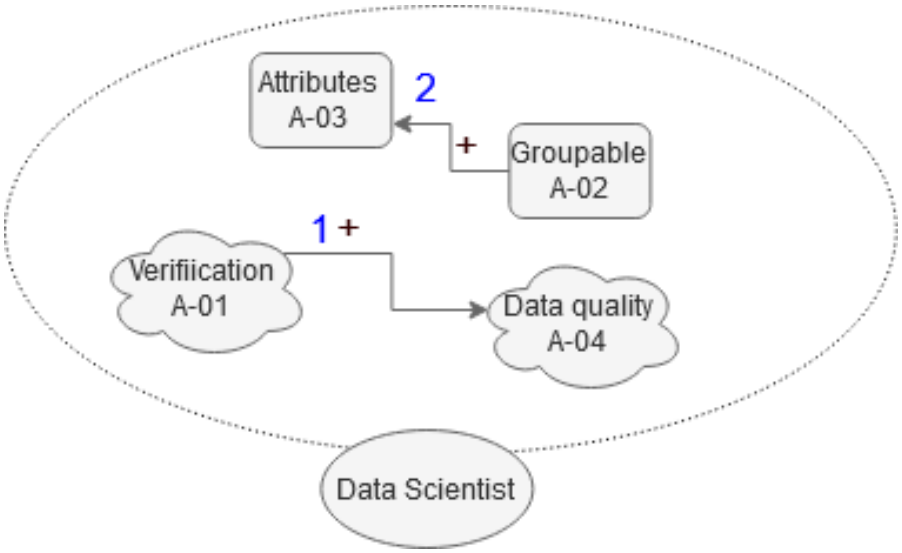


Figure 4.5: I*-model of the goals concerning the Data scientist, related to table 4.3

(*A-01*) and "complete data sets of each participant" (*A-04*), as well as the quantity related goals "groupable attributes "(*A-02*) and "gathering as many potentially targeted attributes as possible"(*A-03*). The quantity related ones are mostly concerned with getting as much data as possible, while covering as much potentially targeted aspects as possible. The groupable goal relates to the need of data representing the membership of a group, that could be targetable, since without a meaningful analysis about the targeting methods and prioritization cannot be made. In the ideal case this would include an in-depth report about each participant, with likes and dislikes, hobbies and everything else. The quality is concerned with a homogeneity of the data, which makes it easier to analyze a bulk of it, as well as a certain level of verification, to give the resulting analysis a reliable basis to stand on. The verification part can be very hard to achieve, since the nature of the data required for many studies is very personal. The inner relations are again only strengthening, since verified data is of better quality and to be able to group the participants in a meaningful manner requires more attributes.

Relations between Stakeholders

In fig. 4.6 the relations between the different stakeholders are included, and it can be seen that many goals have an influence on the goals of other stakeholders, or are outright dependent on something from the domain of another. Relation 1, for example, highlights the fact that engaging more people will in theory lead to more advertisements being offered to the study in return. This is the desired outcome of the goal *S-05*, which is an increase of the resource of the participants. The dependency relation 2 and 7 highlight that the usability and security

that can be offered to the participants depends on the implementation of the plugin. 3 is unique in the regard that it is a positive relation in both ways, since it is a similar goal, for different reasons. A participant wants to remain largely unbothered, and does not want to update regularly, while the study creator is more concerned with rolling out as few updates as possible to reduce differences in the data, which would hinder the analysis. Relation 4 displays that the degree of population representation in the sample, that can be reached and proven is highly dependent on the amount of personal data that is gathered. If a certain attribute, like age, is not gathered, it can simply not be used in the following analysis. Everything would have to be derived from other attributes or information, which makes it highly unreliable. Following relation 5, a negative influence of the privacy goal *P-02* on the representative goal *S-01* can be seen, which makes it clear that an increase in privacy given to the participant translates into less known personal information about them. This decreases the measurable representativeness, even if no people are removed from the sample directly. The next relation is a dependency one, it shows that the minimal amount of personal data necessary is determined by the study objective. If the objective of the study is to investigate whether african-american people are targeted with different political advertisements, it must be known which participants are african-american and which are not. Otherwise no meaningful analysis can be conducted. The last connection of the participant and the study creator is the dependency of the security to the plugin implementation in relation 7. This connection is very similar to 2, since it also describes that the final implementation determines which security guarantees can be offered to the participants.

The relations 8 and 9 are both negative influences to the privacy goal *P-02* of the participant from the perspective of the data scientist. First, because they would prefer as much knowledge as possible about the participant *A-01*, and second, because it would be very helpful to have this knowledge to be verified (*A-04*), in order to make a stronger case using the results. Both aspects raise privacy concerns, since they will include sensitive data, which many will not be easy to agree with to share. Therefore this will need careful considerations, how much personal information is necessary, and how verified this needs to be, otherwise, possibly a lot of people will not partake in the resulting study, making the whole endeavor useless. The last two connections between different actors are 10 and 11, which are both dependencies, defining the possibilities of the data scientist from the view of the study creator. 10 declares that the attributes the data scientist will have to and should focus on always being related to the study objective the creator has in mind. The best analysis is worthless, if it does not contribute to the overall objective, it will at best become a side note. Lastly, 11 shows that the quality of the data will in the end always

depend on the plugin and how well it is implemented and can deliver said data. If there are major problems, even the best data cleaning strategies will not save it, and it may hinder many analyses.
Overall there are many limitations and dependencies between the actors, which makes it a necessity to make certain priorities in the final design. A possible question that needs to be asked would be: Is it really unavoidable to know about a certain characteristic of the participant, if they will feel it is a very sensitive topic? This and similar considerations need to be made to ensure the study will be a success in the end.

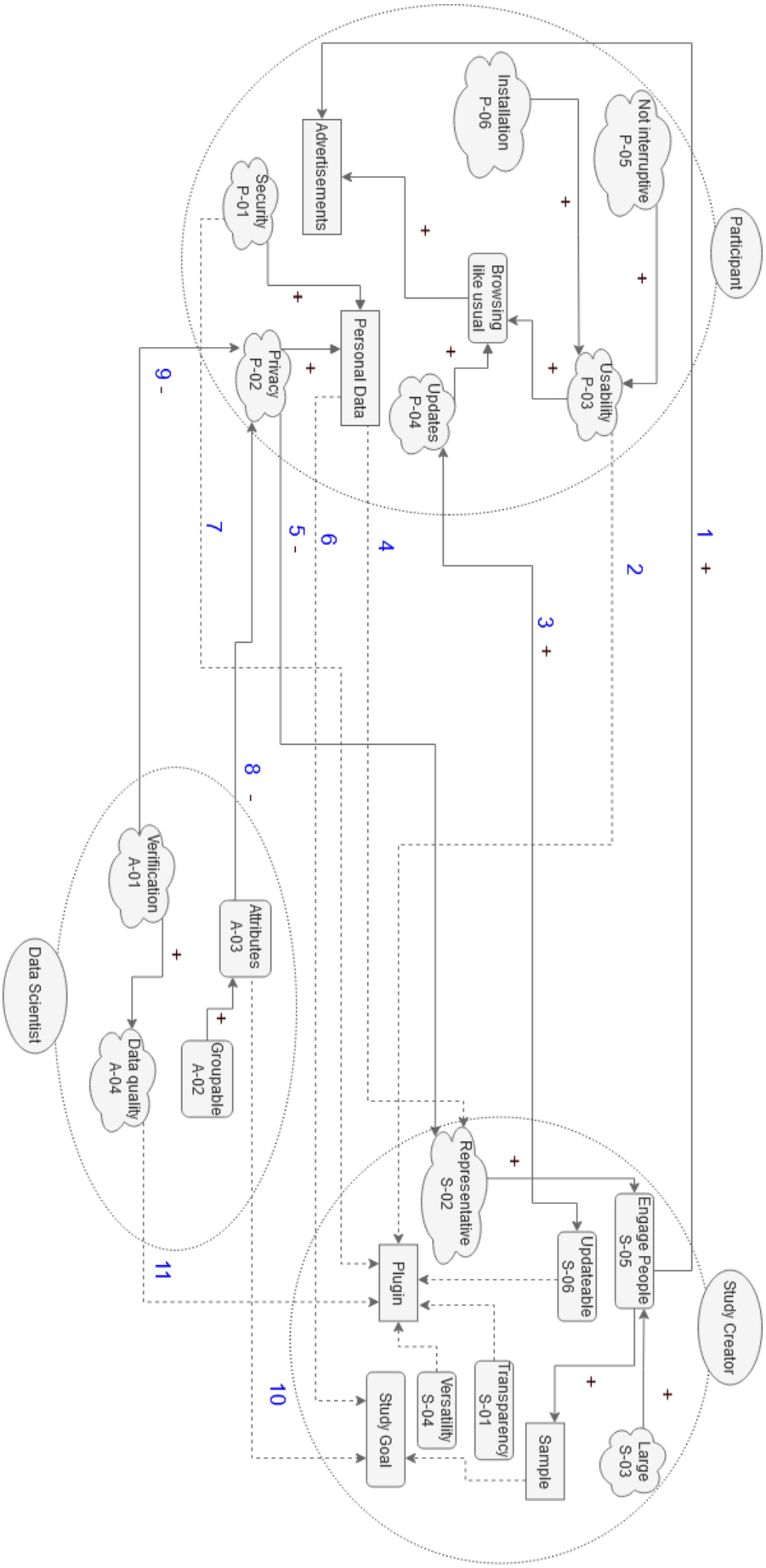


Figure 4.6: I*-model of the Relationships between all Stakeholder

5 APPLICATION SCENARIOS

There are many possible goals studies about advertising on Facebook might have, and to write them all down, is neither feasible, nor sensible. Nonetheless in the the following chapter there will be some scenarios laid out, in order to give some idea, what answer to what question might be the most fitting later on. The scenarios will be held very general, to make sure that many use cases can be related to one of them, and be used as a basis to make the necessary decision when adapting for this design to the case at hand. They were constructed with the help of the interviewees and also during a workshop with the Algorithm Accountability Lab (see fig. B.1).
The problem should first be described in a way, that makes it clear how it can actually be investigated and proven by a study of this kind. For this a falsifiable statement is best suited, since with it it is easier to describe what must be found to verify or falsify it. After the problem is clearly laid out, it should be verified to some degree. Since they often come from anecdotal evidence, one could try to survey possibly afflicted people and get more diversified perspectives on the matter.
The scenarios will be categorized into different subsets, to better show how they are connected, and what they have in common. The subsets can be seen in fig. 5.1. The first difference is whether it is an Ex-Ante or an Ex-Post analysis, so whether the problem should be prevented from occurring, or should be proven to already exist. The Ex-Ante analyses will then be further separated, to differentiate between ones that are supposed to target a specific problem, and those who will gather data rather indiscriminately, to give a general impression how advertising is done currently. The basic differences between these are that an Ex-Post analysis has a set time frame, since it wants to investigate a given problem, which may or may not already exist. An Ex-Ante analysis on the other hand will try to monitor for the situation for a long time, since it wants to prevent a problem from surfacing in the first place.
In the following the developed application scenarios are explained. It will start with the case that started the development of this framework: Contradictory advertisements. After that another proof oriented group will be discribed, which is more concerned with the people targeted by the advertisements and those that did not see them. After that it will get broader and more abstract with study objectives that deal with the inner workings of Facebook. It ends in two watchdog approaches, designed to keep an eye on the overall situation, without being bound to a direct concern.

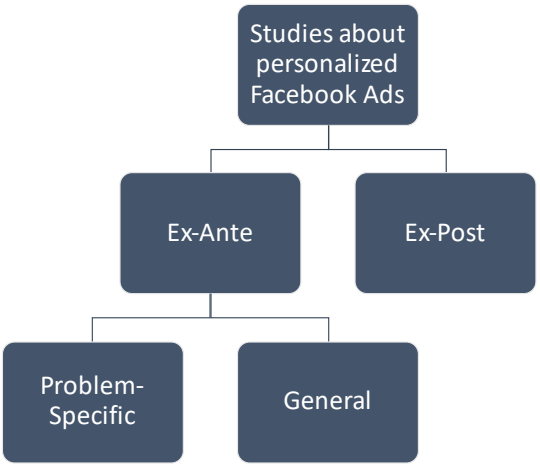


Figure 5.1: Categorization of studies. First based on whether it is a monitoring (Ex-Ante) approach, or investigating an existing problem (Ex-Pos). The monitoring approaches are then divided based on whether it is a general or a problem-based one.

5.1 PROOF OF TARGETED, CONTRADICTORY ADVERTISEMENTS

Something that drove the creation of this framework directly was the realization, that it would be on a technical level very easy to create advertisements with completely different content to disjoint audiences, without them even noticing that they are seeing completely different images of the same problem. This also came up during the interview with Michael Puntschuh (see appendix A), where he mentioned further that this scenario could be extended to include not only contradictory contents, but also measure whether the campaign is presented in a different framing, or is highlighting different promises. This practice was noted in a journalistic article by "Quartz" and "Time", which investigated the personalization of political advertising by Cambridge Analytica [Ghosh and Scott, March 19, 2018; Merrill and Goldhill, January 10, 2020]. To analyze the advertisements on this level, they would have to be processed by hand, and ideally by a communications scientist, to ensure that any contradiction, event if it is only implied, can be detected.
While not directly illegal, this usage of micro-targeting is highly immoral and not something we as a society should accept as a given. Additionally a proof could allow other research fields to look more closely into the impact this can have on the decision making process and may even result in some kind of regulation.
Could be seen as a problem-specific Ex-Ante analysis, which would be best set up shortly before an election, since then is the time when political advertising will be highest.

5.2 PROOF OF TARGETING OF CERTAIN GROUPS

Targeting can be useful, to increase the relevancy of the shown ads, but it can be abused to target an audience, that is susceptible to manipulation by the ads they see. A current example would be the targeted delivery of advertisements for cheap products in the health sector surrounding the current SARS-CoV-19 pandemic as mentioned by the FDA in an article warning of problematic products and treatments [anonymous, 2021]. Since this pandemic concerns many people in their daily life, more people than usual could be manipulated into buying unreliable or untested products, that promise some kind of protection against Covid-19. It can also happen in an economic sense, where people struggling with finances are seeing an increased amount of advertisement for bad credits or new accounts with high management fees (see appendix A). This could constitute a case of fraudulent competition under the german law [1], but still needs to be proven.
This scenario can be conducted slightly different but with a completely different outcome, if it is seen in a political way. If a study would investigate all advertisements, that people who are prone to manipulation see, it could give an insight whether this is a practice applied today. If the property of being easy manipulated can be detected via a relay property or a combination of them, this could give political entities an easy target for manipulative advertisement, which would undermine the political discourse for an election. And this is not only true for political entities directly, also other organizations could have an interest in skewing an election in a certain direction.
In any configuration, this scenario is built as an answer to a direct discrimination suspicion. This makes it a prime example of a Post-Ante form of a study.

5.3 WHAT IS DEEMED POLITICAL BY FACEBOOK

This case was brought up during the interview with AI-2 (see appendix A), they brought to attention that the classification of political advertisement. Facebook demands of all politcial advertisers to add the paying entity as a disclaimer to the ad, otherwise it will be taken down until this requirement is met [Facebook, 2021a]. But can Facebook find advertisements with political background, if they are not actively marked as such by the advertiser? This can be also be a problem for the reverse case, since in a study from the non-profit research and advocacy organization "AlgorithmWatch" to replicate the work of Ali et al. [Ali et al., 2019] (see section 3.1) a few of the advertisements were wrongfully taken down for being classified as political in nature [Kayser-Bril, 2020].
What is classified as political and therefore sensitive is of big public

1 Gesetz gegen den unlauteren Wettbewerb (UWG), §5a

concern, because it can validate the denial of advertisement space, and also allows not as political classified ads to be run without the entity behind them having to expose themselves.
While this seems like an Ex-Post analysis, this would only give a short impression on what the situations is *now*. These algorithms are constantly changing and from a societal standpoint it would be advisable to conduct this analysis constantly in a problem-specific constant monitoring, much like an Ex-Ante analysis. However, this would be a huge endeavor and may be too large for the setup planned and to get an overview on how the situation is has its own value.

5.4 REVERSE ENGINEERING OF TARGETING PROFILE

Another interesting approach could be to investigate whether the created targeting profile is even a good fit for the person that is targeted based on it. While this application has not the same societal or political impact as some of the other scenarios, this could still be an interesting study object, in order to investigate the quality of the targeting profile. This can lead to insights relating to the targeting algorithm itself, and could be used as a foundation for other disciplines to base their recommendations off of, as said by Puntschuh (see appendix A). It could also allow interested parties to verify the promises made by Facebook, to not use sensitive features for their targeting.
Given that these profiles are different for every user that participates, it can be seen as an Ex-Ante analysis, as everyone already has a profile. This study would thus only find out how these profiles are structured and how well they represent the users.

5.5 MEASURING THE OVERALL DEGREE OF PERSONALIZATION OF ADVERTISEMENTS

Another scenario presented by Mr. Puntschuh (see appendix A), which could help to form the debate about personal pricing would be a study which measures the overall personalizaiton of the advertisements, opposed to the targeting the focus is on in the rest of the presented scenarios. It could bring light into the question, where the current level of personalization even is. Does it stop at the targeting of the group an advertisement is shown, or is it used to adapt the content of advertisements to a more personal level. It could show whether a company is running multiple advertisement campaigns simultaneously for the same product, each catered to a different audience in the aspects of the product they highlight. Given that this option is already implemented in Facebook based on location [Facebook, 2021c], the step to broaden these options is small. This could help to bring awareness to the might the targeting profiles could potentially have, if misused, without the need of the strong proof required if one wants

to publicly attack a large company for misbehavior.
This scenario may seem like it is designed to monitor the situation, but its purpose is to create a snapshot on the degree of personalization at a current time. Therefore it is an Ex-Post analysis having a clear goal and should have a set time frame.

5.6 WATCHDOG

Watchdogging is considered an important part of journalistic work. Where in the traditional sense it describes fact-checking work and interviewing with the end goal of ensuring accountability of public figures and companies [Norris, 2014], in the internet it is evolving more into the probing of algorithms. Be it the way search engines sort their results or how social media networks decide which posts will be most interesting to an user, these algorithms have much sway over the information that is available online. Therefore these algorithms need to be watched constantly and not only when a misbehavior is suspected, but more so that this misbehavior will be found as soon as it occurs [Diakopoulos, 2015].
Every watchdog approach would be inherently an Ex-Ante approach, since it wants to monitor the current situation. Whether it is problem-specific or general depends on the concrete use of it. A general one does not need to monitor literally everything, but is rather meant to represent broader sections, like one that would monitor the complete political landscape opposed to one that monitors the actions of a certain party.

5.6.1 *Political Watchdog*

During the conversation with Puntschuh (see appendix A) and the elaboration of the contradictory advertisement scenario (see section 5.1), Puntschuh mentioned that a watchdog approach during the campaigning time before an election could be very helpful in acting as a precautionary defense mechanism, to increase the risk of exposure to anyone who might plan to try this tactic. It would help to defend the basic prerequisites for the process of political opinion forming of the population. Once the advertisements of a political party are gathered, with this approach it could also be compared to the traditionally rolled out campaign information, that is visible for everyone. Because it could also be that since the internet heavy users are themselves a subgroup of the total population, that they already are targeted with different information.

5.6.2 *Economic Watchdog*

The basic approach could also be helpful in an economic environment, as explained by AI-1 (see appendix A). He stated that a continuous effort could help to ensure the protection of susceptible people against a narrow case of predatory financial behavior. He mentioned the cases of showing financially struggling people an increased amount amount of bad finance products, to ensnare them in the prospect of quick monetary relief. This could also be used to ensure that there is no gender bias in the distribution of advertisements, as it is currently done [Ali et al., 2019; Kayser-Bril, 2020]. This approach would be most interesting for consumer rights advocates and governmental institute, as this can be used to make sure Facebook keeps in check with their own promises, as well as the legal specifications.

6

STUDY DESIGN

In this chapter the study design will be explained in detail. First off, the potential application scenarios will be presented, then an insight will be given into how the idea of a study can be narrowed down and defined into a measurable objective consisting of at least one falsifiable statement, although limiting to one is advised as it allows for more focus. Afterwards, the technical details of the software necessary to conduct these studies will be discussed. It begins with a description of the plugin created for this framework and how it can satisfy the needs of the presented scenarios. The section afterwards deals with the aspects of the software, that will be adapted to the individual use cases, based on the needs of the study on hand. However, this thesis will give suggestions on how these missing pieces could look like for the given scenarios. Lastly, an impression will be presented of what a study could result in, what problems regarding the data may occur, and how the results could be interpreted, depending on the defined falsifiable statement. The overall process is presented in fig. 6.1, which illustrates the main steps and their most important components. Additionally, during the chapter there will be an example case put through this process. The chosen example is a study about political advertisements on Facebook. The individual steps of this process are described in more detail below.

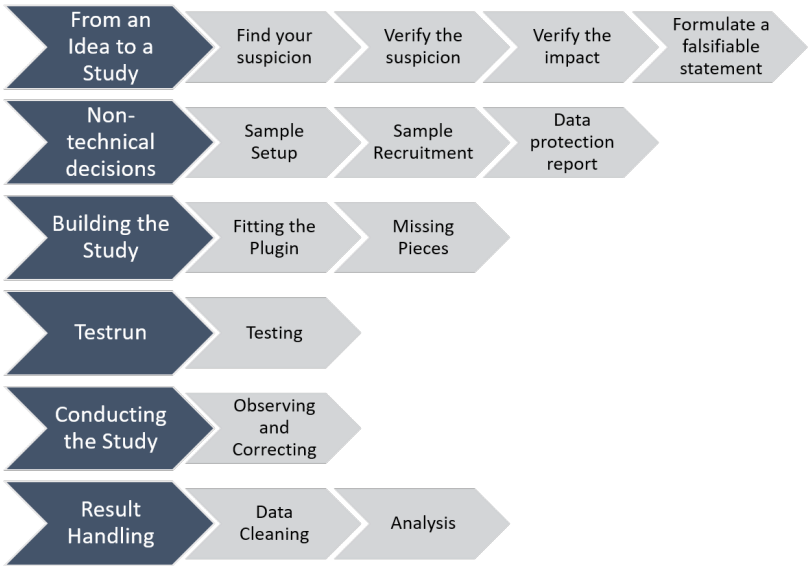


Figure 6.1: Overview of the Process of this Framework to create a study about personalized advertisements on Facebook

6.1 FROM AN IDEA TO A STUDY

First of all, there are many things that could be worthy of investigation in the environment of personalized advertisements on Facebook. Most of these start with a raised concern, that some kind of group is targeted with, or actively excluded from certain offers. This targeting does not have to be direct. It is possible to find groups of people based on seemingly arbitrary attributes or the absence thereof [Speicher et al., 2018]. Given the massive amount of data social media platforms gather about their costumers, advertisers can also find very small groups [Speicher et al., 2018]. This targeting could enact a racial bias in the online housing market [Julia Angwin and Varner, 2017] or gender bias in the job market [Ali et al., 2019]. Most of these start with a proposed line of action that is not wanted in the society, but before a large scale study starts, this should be further refined into a usable structure.

First off, the importance of this proposed investigation is verified. Two things are necessary in this verification process: the suspicion of misconduct must be well founded and the impact should be significant. If a suspicion of harmful use of personalized advertisement is not well founded, the study will most likely not produce any meaningful results. Therefore, any suspicion should include a logical reasoning why some kind of harmful targeting is happening and ideally affected people should agree with the sentiment, that they are currently being mistreated to show the significance of a behavior. The social impact assessment research can be used as a basis [The Interorganizational Committee on Guidelines and Principles for Social Impact Assessment, 1995]. This research field gives guidelines on how to measure the impact of a decision. Most importantly, the impact has to be assessed for each social group individually, and contains different phases of the action like the impact of starting/continuing an action, operating it and abandoning it [The Interorganizational Committee on Guidelines and Principles for Social Impact Assessment, 1995]. In order to substantiate the suspicion, people who are afflicted by this targeting can be interviewed or surveyed to get an impression of how the community that would be affected the most perceives the situation. This can be expanded to include questions about how this impacts their life and online experience. Additionally, talking with communication scientists can help to gather more nuanced views on the subject of unconscious interference, that might not be visible to the affected people. Lastly, lawmakers could have a reason to verify certain behavior of online advertisers and Facebook itself, to create the basis to new guidelines.

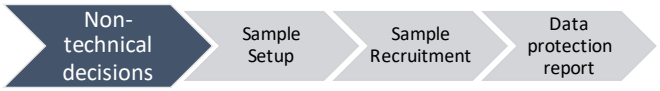
However, one should keep in mind that different studies might weigh these two parts differently. A watchdog approach, as described in section 5.6 can by its nature be planned to keep an eye on a kind of behavior that was never observed, since it wants to make sure that it stays this way. With these accounts, the final decision whether a certain study objective should be followed can be made and many following choices will be derived from these preparations.
After that, it must be clear whether the goal of the study is to show the existence of some behavior, or if it should prove the widespread use of personalized ads in an unwanted manner, like a watchdog approach in section 5.6. An example for a proof of existence can be seen in one of the presented application scenarios, the "proof of contradictory ads" mentioned in section 5.1. This changes the study design drastically, as a proof of existence can be achieved in a smaller environment. This effects how the study has to be distributed to the people and in which size the server and other infrastructure must be planned. Overall, it should be clear *what* the study should proof, and what the implications are, if it was conducted correctly. In other words, a clear falsifiable statement is needed. Having this statement as a foundation for the study helps immensely to narrow down the sights on an achievable goal with a clear context. It avoids blindly gathering data in the hope that something can be found.
The next consideration should go to the personal information that will be necessary for the analysis of said phenomenon. Since it will most likely be the kind of information that is considered sensitive, one must act with caution not to be too greedy. Although, it is easy to try to think of ways to analyze the data in the concept, an increased amount of personal information needed from the participants could easily scare people away from participating, as they fear to be de-anonymized. This conflict can be seen in the model in the relations of the participants goal of "Privacy" (*P-02*) and the data scientists desire to "Gather as many potentially targeted attributes as possible" (*A-03*). Therefore, it should be clear from the beginning, which kind of analysis is necessary to achieve the goal of the study. This should not discourage journalists and alike from big studies with lofty goals, but only to point out that more information, while beneficial for analysis, might reduce the overall amount of data that can be gathered.

Example Case: From an Idea to a Study

The following example shows the way from an idea for a study to a well founded falsifiable statement. Starting with the media coverage of the political advertisement situation on Facebook, which might be more emotional than fact-based, depending on the media [Alterman, 2020]. No one seems to be happy with it at this point, Facebook even

said to allow lies in political ads [Isaac and Kang, 2021]. A study about the political ad situation on Facebook seems overdue. One possible approach is to conduct a large-scale watchdog study, which tries to gather all political ads and to find problematic ones in the heap. This demands a very large sample, distributed all over the targeted area. It would take an enormous effort to even start to build a sample and if this is successful, it will create an immense amount of data, which needs to be to swept for something as vague as "problematic". Limiting the scope to something more manageable, which still proves a targeting system misuse, is therefore very advisable. To expose lies by political advertisements from a credited source, which can be achieved in a much smaller setting, is still a big event in a given election.Since it is possible to lie in ads and Facebook allows it for political advertising, it is logical to assume that this opportunity is used. [Isaac and Kang, 2021]. The suspicion that this is done by at least some actors in the political sector is well founded, which imposes dangerous implications for society. In the current age of fake news people tend to believe their chosen party much more than others, giving their potential lies a big impact in creating or furthering divisions in society. If this is applied to the federal election in Germany in 2021 the falsifiable statement for this study would be: "In the 2021 German election, political parties are lying on Facebook". This statement is easier to verify or falsify given enough data about the advertisements, which can now be gathered with a clear goal in mind.

6.2 NON-TECHNICAL DECISIONS



Every study that is reliant on voluntary participation has common problems: the sample size and the distribution (see goal S-03 "Gather a large sample"). There is a good chance that people will not participate in studies as they are perceived as inconvenient, even if those studies investigate problems that affect the person directly. If it is perceived as a bother, even a good project will not be accepted by the populace and will lack the necessary sample size. Therefore, one of the main goals of the plugin development was the minimization of user interaction according to *P-05* in table 4.1.
First of all, the necessary sample details need to be defined: What kind of people need to be represented? Which attributes are most important? Which groups need to participate? The idea of using automated profiles might come up, but the effort necessary to build them up to the point where they are usable is immense and not worth it [Krafft, Hauer, and Zweig, 2020]. Especially, since these profiles could be iden-

tified as bots and deleted at any point [Krafft, Hauer, and Zweig, 2020]. This sample has to be designed with the previously made statement in mind, as the objective dictates which groups are most important. This problem is connected to the goals "Gathering a Representative Sample" (*S-02*) and "Gather a large Sample" (*S-03*) in table 4.3. The process to create this sample can be roughly derived from field of medical trials like [Devane, Begley, and Clarke, 2004; Israel, 1992; Palinkas et al., 2015], as the field has a very long experience in terms of studies with real people. The basic principles can be transferred, e. g., people afflicted with a sickness can be replaced with the people affected by the misuse of the advertising and so on. This will not only dictate which information is needed to represent these characteristics in the data, but also how the study must be advertised, and which partners might be useful to reach these groups. The easiest way to gather this information, alongside other socio-demographic data points needed for the study, is via a questionnaire the participants have to answer when they register. This includes the request for an informed consent of the participant for processing their personal information in the scope of the study.
Afterwards, enough participants must be gathered. This can be challenging, and even bring an early end to the study, especially if the study relies on volunteers instead of paid participants. During the interviews and also during past experiences, it became clear that the easiest way to reach a large population and hopefully convince them to participate, is by partnering up with news outlets, since they have a large audience by nature and are often interested in contributing to a good cause. Another potential partner are thematically related institutions and support groups, as they have a connection to engaged people, who are also likely to heed the advice of the outlet and are willing to help. Examples from experience would be the cooperation with patient groups during the investigation of targeting methods of unproven stem cell applications on google [Reber et al., 2020], or a call for support from "Der Spiegel"[1] to support the donation of Google data during the federal election in Germany in 2017 [Krafft, Tobias D., Gamer, Michael, and Zweig, Katharina A., 2019].

To get these partnerships, it is important to be open about the objectives to be achieved and methods that will be used, since everyone who distributes the study will be associated with it. To quickly covey this information it is advisable to create a short paragraph, that could also be used as a basis for the measures used to reach the people. The shortness is important, to not lose potential participants to the unwillingness to read a long text.
Something all these recruitment options have in common is that there is a need to build trust between the study and the partners and partic-

1 https://www.spiegel.de/netzwelt/web/datenspende-forschungsprojekt-ueber-google-sucht-freiwillige-helfer-a-1156060.html

ipants. The partners need to trust the motives and security standards of the study enough to be willing to put their credibility on the line by advertising it, which can only be achieved by being transparent, as mentioned in *S-01*. This will only happen, if they have some kind of tangible proof, that everything was done according to high standards and that the legal requirements were met as well. A professional data protection report verifying that all necessary steps were taken to protect the data of future participants would most likely be helpful in this endeavor. This report should be requested from an external source, to ensure its quality and independence. In addition to a data protection report, the opinion of an ethics committee could validate the good intentions and their proper implementation, as is common practice in medical studies.
Another option that came up was redistribution by participants. Recommendation by a peer has a stronger impact than a call for action by a large institute or media outlet. To achieve this, there could be a pop-up window with a request to tell a friend about it, maybe even related to some kind of reward. Whether that is done in the end, is another question, but a small, non-intrusive pop-up could be helpful.

Example Case: Non-Technical decisions

For the example goal at hand of contesting the claim that "In the 2021 German election, political parties are lying on Facebook", the sample setup needs to include people of diverse political background. Many political perspectives should be represented and this needs to be measurable in the resulting data. Knowledge of the political views of the participants is definitely necessary. The party a participant will most likely elect could help as well, but it could avert more extreme people from participating, so in this example it would not be included. In our example we will assume the means are not sufficient for a paid sample, so even if this could help in gathering a diverse sample, it is not the best choice. Additionally, socio-demographic information will help to find the exact sub-group potential misinformation targets and will be added to a questionnaire every participant will have to fill out prior to being accepted for the study. As explained above, the help of big news agencies could help in this case, as they have an own interest in the potential results. Other political institutions could also help in this endeavor, as technically every political party should have an interest in finding adversaries stating false information. To get the support of a fitting partner, a data protection report is essential and will be high on the priority list during the development process. Since part of the objective is to get some of the more extreme viewpoints in the sample, redistribution by participants could be very helpful, since a call from peers is often more successful in reaching very tight

groups, so a pop-up will be added. To increase the likelihood of people recommending the plugin, each new participant will be able to enter a special ID from another existing participant, if they were invited. After the study is over, these IDs can be used in a raffle. Prizes would include digital newspaper subscription.

6.3 BUILDING THE TECHNICAL PARTS

This section will deal with the technical details, both of the provided plugin, and of the decisions that have to be made on the way to create a complete study design from this template. It will start with a summary of the functionality of the created prototype for the plugin, called the "AdHamsterer" and will then deal with the missing pieces, and the suggested ways to implement them according to the aforementioned use cases.

6.3.1 *Plugin: AdHamsterer*

The prototype at its current state provides the vital functionality of scraping all sponsored posts (advertisements) and storing them temporarily and locally on the user storage. The main focus of the plugin was to make it possible to be used in basically any study that can be thought of about advertisements on Facebook, which makes it a necessity to keep all possibilities open, and not focus on one kind of study as requested in *S-04*. The usability demanded in *P-03* was the main focus, which is why it was chosen to be a browser plugin for Mozilla Firefox and Google Chrome, as they are very similar and together cover a majority of the users (see fig. 6.3). Additionally, a plugin that is approved into the respective browser store can be installed easily and updates can be applied to it rather reliably in accordance with a "Quick & easy Installation" (*P-06*) and "easy to update" (*P-04*). If nothing completely unexpected happens, no updates should be necessary, as they always pose a high risk of interrupting the user. Another plus to bringing the finalized plugin into the store is an increase in perceived authenticity for the user, as especially technologically unsophisticated participants might be hesitant to directly install a plugin, as every browser will advice them against it. In addition, the trust already generated by the browser will positively influence the perception of the plugin [Stewart, 2003].
The current functionality includes the options to send all the scraped ads to the server or to let the participant choose which ads should be sent, to adhere to the goal of versatility in *P-04*. The pro to the

send-all-approach is that no data is lost, and there is no possibility that a user withholds relevant ads or maybe outright forgets to send anything. It also removes the possibility for malicious entities to modify the gathered advertisements. The decision to let the user decide which ads they want to send in can improve the users willingness to participate at all in the study, as they see that their privacy (P-02) is valued and protected (P-01), which could be a positive factor for their engagement, but as easily against it, since it demands increased interaction, which is a common problem for "Not interruptive" *P-05*. This is one of the places a decision must be made by the study designer and the framework was designed to offer at least some options.
Another important functionality is an automated request of the plugin that it will make to the server, to verify its current configuration of the scraper. This heartbeat is sent upon every start up of the plugin. This allows minor adaptions to changes in Facebook's layout, as the scraper is very susceptible to it, since it relies on labels, which mark the post as an ad. At the time of its creation, it tracks down any post, that is labeled as "sponsored" (or "Gesponsert" in German) and uses some seemingly random but stable labels to only scrape the most relevant parts of the ad, as personal information is sometimes deeply embedded in the advertisement. An example can be seen in fig. 6.2 and the resulting search expressions could in this case look like this: label_likes: 'span[class="pcp91wgn"]'. This showcases the amount

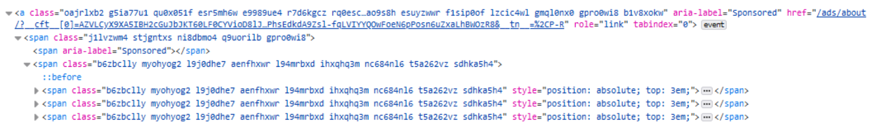


Figure 6.2: Example for the HTML structure on Facebook

of trial and error work that was necessary to complete the scrapper. There was no visible structure to rely on and the labels had few sensible labels to work with. There were enough unique markers at every important location to find them, but the structure of the website is not designed readable by a human.
By actively checking the configuration, these parts can be adapted to changes without an update of the whole plugin. This option is incredibly important, since changes are made constantly to improve the customer experience, but also in an active attempt to thwart any bot activity on a site as was experienced during the data donation for the federal election in 2017 [Krafft, Tobias D., Gamer, Michael, and Zweig, Katharina A., 2019]. This part actively works towards easy updates demanded in *P-06*, but also is a key factor to ensure the usability demanded in *P-03*.
The plugin was built in a manner that clearly divides the functionality into different parts, and keeps their areas of responsibility disjoint. As a result, all communication processes for example are gathered

in the COMMUNICATIONS.JS file, and could technically be exchanged completely, if it is wanted by the designer. With this, parts of the plugin can be used in an even wider manner outside of this framework (*P-04*). The communications are designed to all be transmitted over HTTPS[2] to ensure that the gathered personal data and advertisements are protected, as required in *P-01*. Also the personal information is not meant to be stored locally, but will rather be sent to a server, which will in turn send an ID to later reconnect the advertisements to this profile.
The complete project is publicly available at `https://github.com/RomKra/AdHamsterer` for further information. It is appropriately documented to allow a computer scientist to retrace any step.

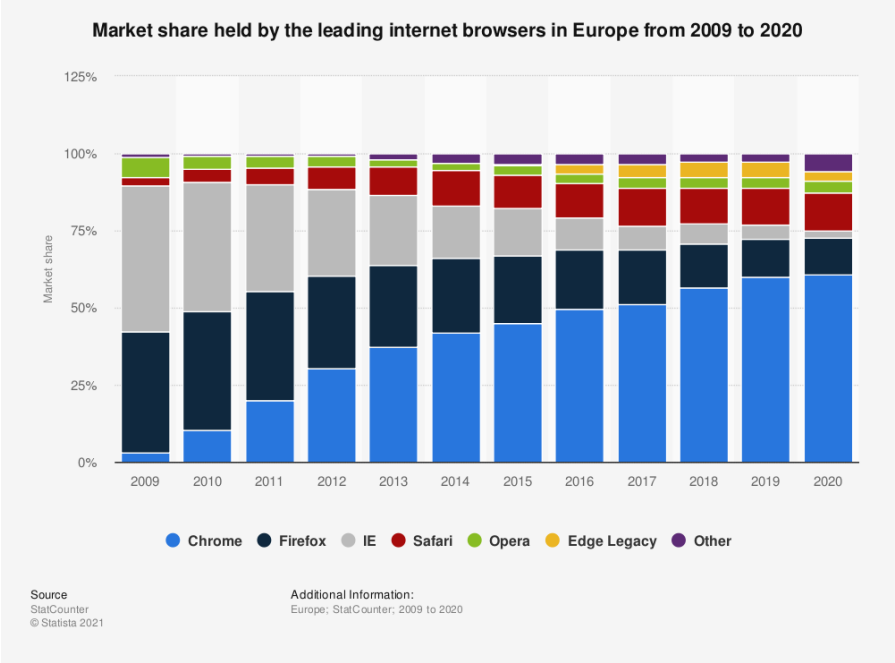


Figure 6.3: Market share held by internet browsers in Europe 2009-2020 [Shanhong Liu, 2021]

6.3.2 *Missing pieces*

This section handles all the decisions that still need to be made about the software. There is no one size fits all solution, due to the different goals a study can pursue, which is why the absence of parts that are left open is always explained, as well as possible solutions and their respective advantages and disadvantages.
The server is left open to allow everyone to run the kind they are most familiar with, and to leave options open, to further customize

2 Hypertext Transfer Protocol Secure (HTTPS) is an extension of the Hypertext Transfer Protocol (HTTP). It is used for secure communication over a computer network, and is widely used on the Internet.

the security parameters there to the direct needs, as proposed in the goal "Security" (*P-01*) and "Easy to update" (*P-04*). The server needs to have three mandatory functions: The registration of a new user, the plugin update handling and the storage of the sent in data. The user should be registered at the start-up, to not have any personal information stored in the plugin, as well as to not have to send it with every data entry, to know who it is coming from. During the registration, it could be useful to add timestamp to the created profile, to get an impression when the user started handing in his advertisements. This can help during the analysis phase, as depending on the point in time someone started sending data in, they might not qualify at all for some method. It is also possible to handle the sensitive data at a different, even more secure server, to ensure maximum protection of the privacy of the participants, as intended by the goal "privacy" (*P-02*). If this is done, the server handling the actual data entries will only have an ID pointing to some entry in the user data base, which makes de-anonymization attempts harder. The data storage is very straight forward, in that it will send the entries one by one, all containing a single advertisement together with a timestamp from the scrapping, the ID of the plugin, and its version. The transmission is done separate to ensure uniformity across the data entries, and to make sure any transmission problems will have a minimal impact. The version is added to make any problems related to a certain version directly visible, even if the plugin might not be up to date, for whatever reason. The timestamp is essential for any analysis, since it lets the analyst compare ads of the same time range, and gives an impression on how advertisements might have changed over the course of the study, which is important for the goal "Gather as many potentially targeted attributes as possible" *A-03*. Depending on the chosen data base, the entry can basically be stored directly after receiving it. Lastly the plugin update handling should get sent the current plugin version with the request, to allow a quick check whether the plugin even requires an updated configuration. Then it can be decided to send the newest version as an answer to that, otherwise an empty message will suffice.

The implementation of the questionnaire regarding the personal information will be left to the designer to allow different strategies for it. Apart from the storage as explained above, it could also be useful to have an interview with the participants, either in person or with camera assistance. As a side effect, this allows the confirmation of some of the socio-demographic answers as it will increase the credibility of the study as stated in goal "Get complete datasets of each participant" (*A-04*), but the main advantage is the increased openness and willingness to answer personal questions, delivering more information for the verification of the personal data (*A-01*). This is a big part of the decision about the amount of personal information that should

be gathered from the participants. If too little is gathered, it is easy to miss some crucial connection in the data, and if too much is asked, it could avert people from participating. By keeping the questionnaire for everyone rather general and only ask the standard questions and going into depth during an interview only if it is apparent that the participant is comfortable sharing these insights into their personal life. This leads to more reliable information about them, which could be useful during the analysis. Additionally, a personal contact is able to increase the willingness to finally participate in the study and could improve the view the participants have of the study and the impact their contribution could make.

As explained in table 4.2 the sample is one of the biggest problems of the overall study course, and can easily prevent it from happening all together and this is not limited to the representativeness mentioned in *S-02* but also to the overall size in *S-03*. This is why a paid sample could be useful, if the size of the study allows for the costs. With a paid sample one could guarantee a certain size and certain attributes the sample will have, which could still be strengthened with a normally gathered sample. If this is chosen, it is of interest to ensure that the paid participants are actually doing their job to surf on Facebook, which is normally of no interest and is normally classified as a harsh attack on the privacy of the user and thereby infringe against *P-02*. So if the contract fulfillment is not left to good faith, there needs to be a component installed, which tracks the time spent on Facebook, since there is no guarantee how many advertisements one will see in a set amount of time, it could even be none. The mechanism proposed here therefore tracks the time when paid participants open Facebook and the time when they close it. With this mechanism it could at least track the time spent with an open Facebook window, but even this will not track how the time is actually spent. However, it could be extended to track the time spent with an open Tab on the Facebook website, but whether this degree of control is necessary is a decision of the study designer.

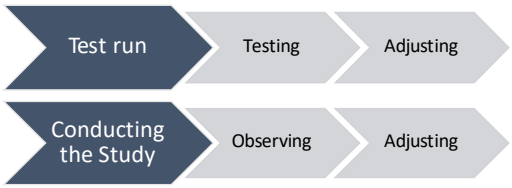
This plugin will be deployed on peoples personal browsers and could technically penetrate into their personal space very easily, since it needs to be able to access their Facebook page, for which it needs extensive authorizations. This makes it important to give the user as much information about this as possible ("gather a large sample", *S-03*), which is why the code for it is publicly accessible and it is highly recommended to do so with the final code after the adaptions were made. This transparency guarantee to the end user comes with some drawbacks however. If there is an entity trying to sabotage a study, it has all the means to enter fraudulent data that could not be detected easily as such. All counter measurements, like an authentication method for each user or special sequences, could be accessed by this entity and copied instantly. This is why no such measure is

currently implemented, but this possibility needs to be addressed in all final analyses.

Example Case: Technical

Going back to our example, it will now become more clear which decisions need to be made. Since there will be no paid participants, there is no need for any control mechanisms on how long people are on Facebook. The amount of personal information that is needed is limited to the political views of the participants and basic information like their age and residence city, although any empty field except their political view is deemed acceptable and the participants will be made aware of this fact. The name and other attributes are considered not important and will not be included in the survey, limiting the amount of personal information on the most relevant ones. The server requirements are not very high, considering the time period is very limited and the target region of Germany is not immensely huge. Mostly a sufficient amount of storage space is important, but other than that nothing particularly expensive is needed. Since there is no highly personal data, the decision is made to store everything on one server, and to link the profiles to the advertisements via an ID. To give the profiles at least some protection they will be encrypted, the ads will not. The plugin will be completed with an automated sending of any ads gathered, and a few optical improvements will be added. The final code will then be made publicly accessible and a data protection report will be created. Now the technical aspect is completed as well and the study can begin.

6.4 TEST RUN & CONDUCTING THE STUDY



The test run and the actual conduction of the study are being described together because nearly all aspects can be applied to both phases. The reason behind this is, that the test run is specifically added to minimize the problems in the actual study. During the test run it is advisable to set as many parameters as possible similar to the later study situation. Of course the test run is designed to be done on a much smaller number of participants (this request can also be found in one of our papers [Krafft et al., 2021]). For example, in addition to a realistic time span of a few weeks, real people should

be asked to participate in the test run. Here, many of the participants' requirements can be evaluated, such as ease of installation, usability and, above all, that the participants do not feel disturbed in their normal processes by the data collection. On a purely technical level, in addition to stress tests of the client/server infrastructure, the updating process of the crawling structure should be tested. These updates will need to be done multiple times as the selectors used in it are very specific and very susceptible to changes (see section 6.3.1). During the test run as well as the actual study there is a high need of constant surveillance of the study and the data, which has been gathered to this point. Any irregularity should be addressed and solved as soon as possible, to ensure that the data is as viable as possible. This is even more vital in the test phase, since then there is a chance to solve deeper problems without endangering the overall success of the study. This need of a test run of a study has shown its importance in the Algorithm Accountability Lab [3], where I worked on several similar studies and problems occured that were completely unknown to us. An example would be during the Data donation project for the Bundestagswahl 2017, where only during the study itself it occured that when a politician is searched for by a person befriended with them on Google+ [4], Google displayed their contact data embedded in the search results. This problem did not occur to us beforehand, due to the fact that no one in the lab even used Google+ and no one was acquainted with any of the politicians we searched for. This was problematic for the study, since it is a privacy problem, since we could unknowingly gather personal information about people alongside the public search results. This along with other projects made it clear to us, that a test run helps immensely to mitigate problems in online based studies, no matter how many the team responsible might have done already.

6.5 RESULT HANDLING

This section should give a broad overview over what can be expected of a study that was created with this design in mind. It can help to make a final decision whether this framework is adequate for the study in mind and gives ideas about what can be achieved with it. An important part of this, is that the study design itself could be categorized into multiple categories of the social sciences based on different aspects of it. First this part will be explained in detail and how it can help avoiding possible mistakes. After that, possible data-driven interpretations will be presented and a short help will be given, how these interpretations could be done and on what one should keep an eye on during it.

3 https://aalab.cs.uni-kl.de/
4 Google+ was a social media platform hosted by Google

6.5.1 *Classification into existing social science fields*

In this part the aspects of the study correlating with social science fields will be highlighted and how they can be used to improve the gathered results.

Aspects of a survey

Although the actual scraping process itself has not much in common with a survey experiment, the questionnaire to get socio-demographic information as well as the sensitive personal information which could be basis for microtargeting from the participant certainly is. Additionally, in this field many subconscious and conscious biases were first discovered and explained in detail, which are often the foundation for stereotypical targeting and the like. Possibly the most dangerous one is the fact that people might obstruct the study just for the sake of it, and may lie on the questionnaire inhibiting the expressiveness immensely and could render the whole study pointless. This danger stems from the impersonal characteristic a study solemnly conducted over an online outlet has, which can lead to people not taking it serious enough [Lamnek and Schäfer, 1998]. To minimize problems related to it, one should try to keep these in mind when the questionnaires are built, since in many settings there could be a tendency to try to address affected people differently, which could hinder the overall success. Also the *social desirability bias* should always kept in mind, to not unwillingly compromise the data by bad phrasing or answer options [Grimm, 2010].

Aspects of an observation

While there is definitely something that is being observed in any study created with this framework, many things about an observation as defined in section 2.3.2 are not applicable to it. That said, they have their overlaps, and they are important. Something often discussed in the literature is the change of behavior in the observed party, due to the observation itself. The fact that participants are aware that they are being monitored, could influence how they behave, commonly known as the Hawthorne effect [Sedgwick and Greenwood, 2015]. They might want to look more sophisticated, and increase how many news article they read, and also might consume media outlets they did not before. This naturally influences the advertisements they will see during this time. All this happens subconsciously, and is therefore very hard to stop from happening. It is advised to make the observation as invisible as possible, to make a participant forget that it is happening at all [Greve and Wentura, 1997]. In the context of this framework, that approach translates to a minimum of user interaction that should be

required after the study has started. This passive approach could on the other hand be interpreted as a privacy concern, due to the amount of information the plugin could theoretically scrape from a participant. Other aspects that can help to improve the quality of the data is the process of choosing the right attribute to divide the participants into relevant groups. The field is highly concerned with which attributes are necessary for an observation to be successful, since it is a very labor-intensive approach [Mey and Mruck, 2010]. This is in so far similar to his framework, as that the attributes which are important for the studies will be of a highly personal nature, and it should be paramount to only ask for the ones that are absolutely necessary, to not increase the privacy concerns. Due to the imperfections of a human observer, researchers in this field are also used to data with a high amount of differences among it and are aware that no observation is perfect [Mey and Mruck, 2010]. These approaches to erroneous data could help during the data cleaning process, which is an important part of the result analysis in an experiment with automated data gathering and it will be explained more closely shortly after in section 6.5.2.
Lastly, the motivation of the participants is a topic in these experiments, as well as in this framework. Researchers found that if people understand exactly what it is done in this experiment and what could be achieved, will make sure they are motivated to take a part in it [Thierbach and Petschick, 2019]. This is immensely important for any online based study, since even though it may reach many people, only a small fraction will really participate in the end. The results of this field could help in explaining the goal of the study in a short and easily comprehensible manner, to encourage as many people as possible.

Aspects of a case study

Since this study design partly focuses on the proof of existence of personalized political advertisement, some attributes of a case study are certainly similar enough to draw upon literature dealing with it in that context. Basically all non-watchdog approaches want to prove some kind of unequal treatment to some degree, which if proven can be used as a basis for societal discussion and as a means to make founded requests of Facebook to address these problems.
But also for an investigative, political study into the direct extent of microtargeting and personalization parts of this methodology can be applied, since the studies will often focus on a clearly defined event, e. g., an election, and its timeline. They will have to limit their research time to this time period, and maybe even further, since if different advertisements are shown to people at the same or at least roughly similar time the case that can be made for a manipulation attempt using personalization is that much stronger. This is due to the ever changing nature of internet based media, where advertisement

campaign duration can be changed from months to minutes. So if the two advertisements, that could be used for a case are too far apart in time, the defending party could claim a change in their course of action, or that new information was available.
These similarities make it possible to apply some learned lessons from that field to this framework. One is explained above in more detail in section 6.1, the need to clearly define what is to be investigated, and to put clear limitations on the expectations. If the scope is set too broad, case studies tend to not deliver enough data to make a well based claim about the effects at work, since the time to gather data is naturally limited and it can not be extended later. This setup could also help, if a large-scale study like a long-term watchdog is to be developed.

6.5.2 *What to do with the Results*

The resulting data of these studies can easily become very large, even for a small sized study and it will most likely contain some kind of corrupt entries. This makes it necessary to standardize it into a usable format and remove all erroneous entries while preparing for further analysis.
The resulting data can gain huge dimensions, and will certainly be in need of some kind of preparation, before it can be processed in an analysis. The two main tools one should use for this processing is automation and documentation [Chu et al., 2016; Rahm and Do, 2000]. This will massively reduce the person hours necessary for the work, and makes the preparation repeatable for everyone who might challenge the results, or who thinks they could use the data for their own investigations. It is however important to always keep the final goal in mind, therefore different goals working on the same data might need different kinds of preparations. Another thing that is to uphold the best practice to never work on the original data. The first step should always be making a copy of it, and proceed with all the work on that. This will make sure that there will always be multiple copies of it, and the risk to lose everything that was worked for is minimized.
Now begins the real data cleaning. The first steps can be done on a smaller subset, to quicken the process, since loading the bulk of data into an environment to read it and work with it can very well take a very long time. First of all, one needs to get an overview of the data, and of how possible errors could look like. For this, a hands on investigation of the data is advised [Rahm and Do, 2000]. Here, working on a subset is a double-edged sword. It allows to get

a good impression of the data quickly, but the data cleaner could miss some obvious problem, because it is not present in the part they investigated. However, it is still advised to do so, since it is highly unlikely all problems will be found during the first cleaning process anyway, and the broad overview it gives is very important. To not only see problems of a certain time frame it is advised to draw a sample from the whole duration of the study.
The next step is the development of errors schemes [Chu et al., 2016; Rahm and Do, 2000]. Many errors will be similar to each other, and as many as possible should be cleaned automatically, which needs a clear definition what should be searched for. Additionally, if some kind of attribute will not be interesting for your analysis, it should be removed as early as possible, since every reduction of data will speed up all following processes. Many errors might also be unique to a different version, so the more updates were made during the study, the more important this kind of cleaning gets.
Possible Problems one should keep in mind are[Chu et al., 2016; Rahm and Do, 2000]:

- **Empty Fields**: Due to some technical errors, some attribute-fields of an entry may be left empty. This needs to be dealt with. It also may be the result of the roll-out of a new version, that started scraping it.
- **Misspellings**: Whenever the participant is required to enter some data, they could misspell something, which would destroy the automated grouping processes, that are based on this attribute.
- **Dependency Violation**: Two fields, that make no sense together. This could relate to impossible birth date-age pairs, or countries and cities.
- **Uniqueness Violation**: If a value is supposed to be unique over all entries, now is a good time to verify that. That could be an ID of a profile.
- **Illegal Values**: This relates to values for fields, that are just not possible. An age of over 150 is an example for this.
- **Misfielded Attributes**: This relates to entries, that were put in the wrong field, like "city = Germany".
- **General Constraints**: There might be some kind of overall constraints on the data, that can now be verified and erroneous entries can be dealt with.

Many of those problems relate to a free form questionnaire, that either the participants themselves filled out, or that was conducted during the interview that was proposed in section 6.3.2. They can be mitigated

by reducing the options that can be chosen during this questionnaire, or by verifying it locally, when the participant wants to submit it. However, being too pedantic could again scare them off, so there could be a need for an impact assessment which way is best based on the study objective. Normally there are the two options to either repair corrupt or problematic data [Chu et al., 2016; Rahm and Do, 2000], or to remove it all together. A way to minimize this damage is to ask the participants for their contact information to be able to clarify any open questions. But even then the repair options are highly limited and much of the problematic data will be deleted right away.
After the schemata are developed, the implementation of a clean-up process can now begin [Chu et al., 2016; Rahm and Do, 2000]. The automation of this is paramount, since the resulting data can always be lost or corrupt, and every step done by hand will then need to be done by hand again. For this any programming language could be used, however one specializing in statistical computing like R[5], Python[6] or Wolfram Mathematica[7] are some of the most fitting.
After the clean up is done, a verification of the data is advised, to make sure that all known problems were found. This again includes a hands on look of some of it.
Something that has become more and more clear while doing these data cleaning tasks is that it is a process, not a task, that can be completely ignored once it is finished the first time. It is not an uncommon thing for errors to occur during later analysis stages, because some problem was missed during this step. After its discovery it should get formalized and then included in the automatic clean up, to make sure this does not happen again if the clean up has to be repeated for some reason. For this kind of work Mathematica has a very handy functionality, which allows the execution of blocks, rather than the whole script. It could also happen that it becomes clear that some attributes that were initially scraped are more important for the overall picture than previously assumed, and they need to be included, which is one of the reasons to redo the clean up entirely. Just as well it could occur that an attribute is not as useful as assumed, and the analysis could be sped up if it was removed. Therefore, there should be no fear to keep the clean up algorithm updated and to always include new insights into the specific data that is at hand, because even similar studies will be bound to have some very distinct problems in their data.

5 https://www.r-project.org/
6 https://www.python.org/
7 https://www.wolfram.com/language/

6.5.3 *Suggested Analysis methods*

This section should help to get some first ideas on how the resulting data could be analyzed, and what should be considered during this process. The most important aspect is to always keep the main objective in mind. The falsifiable statements will act as a guide to the most meaningful analysis. First off, the gathered advertisements will have to be categorized into some kind of scale depending on the goal of the study. It should start of with some kind of not relevant degree, where everything not related to the study goal will be labeled as not interesting, e. g., an advertisement for a razor during a study about political misinformation. All advertisements that belong to this group could than be safely ignored, since they are not connected to the goal at all. Once this weeding out process is over, the data should only contain at least partly interesting entries. Most likely, they should be divided up to a finer degree, to showcase their perceived usefulness at this point. This prioritizes them for the next step of the analysis, and make many comparisons between them much more streamlined. The process of categorization should be done by hand, to ensure that no hidden meaning is placed in well worded ads, where a literal interpretation might not unveil everything. In many cases there will be multiple categories one entry will be a part of. This example categories are for a study about political ads during an election:

- Is it political in nature? (so relevant for this example at all)
- Is the goal promotion of themselves, or of others?
- What is the topic at hand?
- Is it about a certain politician or the whole party?
- Is the information factually correct?
- How is the reader addressed?
- Who is the advertiser?
- What is the tone of the ad?

With all of these categories, and combined with the potentially targeted information, now the investigation can begin. The first step is to compare the whole set of ads that a certain group has seen with the ones other groups have seen based on sensitive attributes, e. g., gender, or separated by age. The advertisements that need to be looked at closer are the ones that were only seen by one group, dependent on the falsifiable statement. To know which kind of information Facebook deemed more interesting for this group, the created categories will help. Are males seeing more aggressive advertisements? Are older people seeing more incorrect information, in the hopes they do not

follow it up? A small number of ad differences should be handled with care, because there is always the possibility of a missed common attribute between those that have seen them. They can be used as a warning, that there is a trend for microtargeting in that direction, but it should not be presented as hard proof. Additionally, the amount of advertisement should be part of the analysis. Even if all groups saw the same ads at least one time, it is important to find out if the distribution was at least comparable. Since the targeting algorithm for advertisement is complex and takes a multitude of unknown input values into account, the common attribute between all who have seen a specific ad can very well be unknown. However, even if a sensitive attribute is only targeted indirectly via a highly correlating attribute, the outcome is still that a protection-worthy group is being targeted specifically.

During all this, one needs to have a close eye on statistical paradoxes. For example, Simpson's paradox[8] can obscure some of the more hidden interrelationships in the data. It describes the effect, that a trend, that appears in some groups can disappear or even reverse if they are combined. This is often due to a difference of number in the individual groups, which when combined deliver a different picture. Of course, during all these analyses the sample size should always be kept in mind. Otherwise an extension neglect can occur, and wrong conclusions could be drawn based on a sample size that is too small [Griffin and Tversky, 1992]. Since there is no way to guarantee all hidden attributes to be well represented, a generalization should only be taken into consideration if the size of the relevant group is sufficient.

8 https://en.wikipedia.org/wiki/Simpson%27s_paradox

7 DISCUSSION OF POTENTIAL PROBLEMS

In this chapter, the created study design will be discussed based on possible problems that can arise during the application in the real world. This includes limitations of it, both technical and non-technical. Lastly, it will be discussed how the framework could be expanded based on study goals that are currently not feasible.

7.1 NON-TECHNICAL LIMITATIONS

Many potential problem are of a rather non-technical nature, even if they occur in a technical environment. Therefore they will be gathered here, to indicate, that they do not have a direct technical solution, but have to be solved from a different point of view.
During the possible studies that can be conducted with this design, there are a great many that look deep into the personal preferences of people, at least as they are perceived by Facebook. The total scraping of all advertisements, as it is necessary for many study goals, could give a deep insight into a persons views and purchase history, which might scare off potential participants, even if there are checks in place to make a de-anonymization impossible. This issue grows with the degree of sensitivity the study goal encompasses. This is part of the self-selection process, voluntary participants will go through, and can only be met head on by discussing these problems up front. As discussed in section 6.3.2, this could be mitigated by allowing the user to have the final say in which ads that were scraped they want to send in, but this could limit the informative value of the study overall.
This also leads to one of the biggest problems that can occur during studies with voluntary participation: the sample itself. It could be that the sample is too small, not diverse enough, or is missing some key attributes, which are vital to find some connections in the data set. To mitigate this problem, there are not many solutions, and to contact an institution that pays groups to participate in studies to make sure the sample has the required distribution might be the simplest one. Additionally one has to keep in mind which of these attributes might be relevant in the data, and that this property has to be reflected in some way, in order to group the data based on it. As discussed in section 6.3.2, this can have a direct influence on privacy concerns of the user.
The most basic limitation any study will have, is that is can only find what is in the data and the data is limited by the sample. So a part of this is followed by the previous point, since even if all known attributes

are well represented, there can very well be many more, which were hidden in the targeting algorithm of Facebook. And even if all the prerequisites are given, the advertisements need to be running during the study period, and be finally delivered to a participant. This is a big hindrance, since even if an ad is a good fit for a certain person, there might just be many that are even better and will therefore be given priority over the one, that would be interesting for the study goal. This shows that even a well designed study together with a good sample can still fail in providing proof for discriminatory or predatory microtargeting, even if the practice is used.

7.2 TECHNICAL LIMITATIONS

The plugin and the proposed server structure have their limitations, which will come up in many use cases. Some of these are showcased here, and reasons and possible solutions are presented. As addressed in section 6.3.2, giving open access to the code gives way to more active tempering with the data. This would technically allow a malicious entity to insert false advertisements and completely fake profiles into the data, which would make the analysis much less meaningful. However, to create a big enough impact to outright cancel the study would include multiple fake profiles each sending a multitude of incorrect advertisements. It is very likely that this part of the data would be recognizable as a fraud, if it was investigated regarding this kind of anomaly. Additionally, the level of effort needed to meaningfully impact a study negatively is not small, which would mean that an interference for the sake of it is highly unlikely.
The biggest technical limitation of this framework would be the focus on Facebook, more precisely on the browser version of it. The focus on Facebook in general is easily explained by its market leader position in the social networking landscape it is still holding, as can be seen in fig. 7.1. So in addition to having the biggest potential audience, anything the market leader does and is not reprehended for will have an impact on all social media platforms. So any study that investigates misbehavior on Facebook, and succeeds in proving it to the point where the government sees a need for a regulation will directly impact any other platform. But also without a governmental measure the newly formed public pressure will most likely also trigger changes in other social media providers. The reason why the plugin is only compatible with Facebook is that websites tend to make the internal build up as complex as possible, to thwart the plans of bots and people who try to abuse their system as much as possible [Krafft, Hauer, and Zweig, 2020]. A not unknown side effect is that all investigations on their sites will also be afflicted negatively, but whether this is a wanted or just accepted fact, is another problem.
The limitation for the browser version stems from the vast difference

between them and the Facebook app. And to make matters worse, it is a high concern of the operating systems of mobile phones to make the apps as closed off from each other as possible, again to minimize the possible attack points for hackers and other malware. While it happens that the cross-app isolation can be broken, it is vastly regarded as a security issue that should be fixed, not as a usable research opportunity [Li et al., 2017; Xing et al., 2015]. This would make a similar approach of installing an additional app void, as it would not have access to the advertisements viewable in the Facebook application. It is a constant battle for researchers to be granted some kind of interface into these platforms, since any demand for it is always met with the argument of security, since every backdoor can, and given enough time will, be exploited by malicious entities.

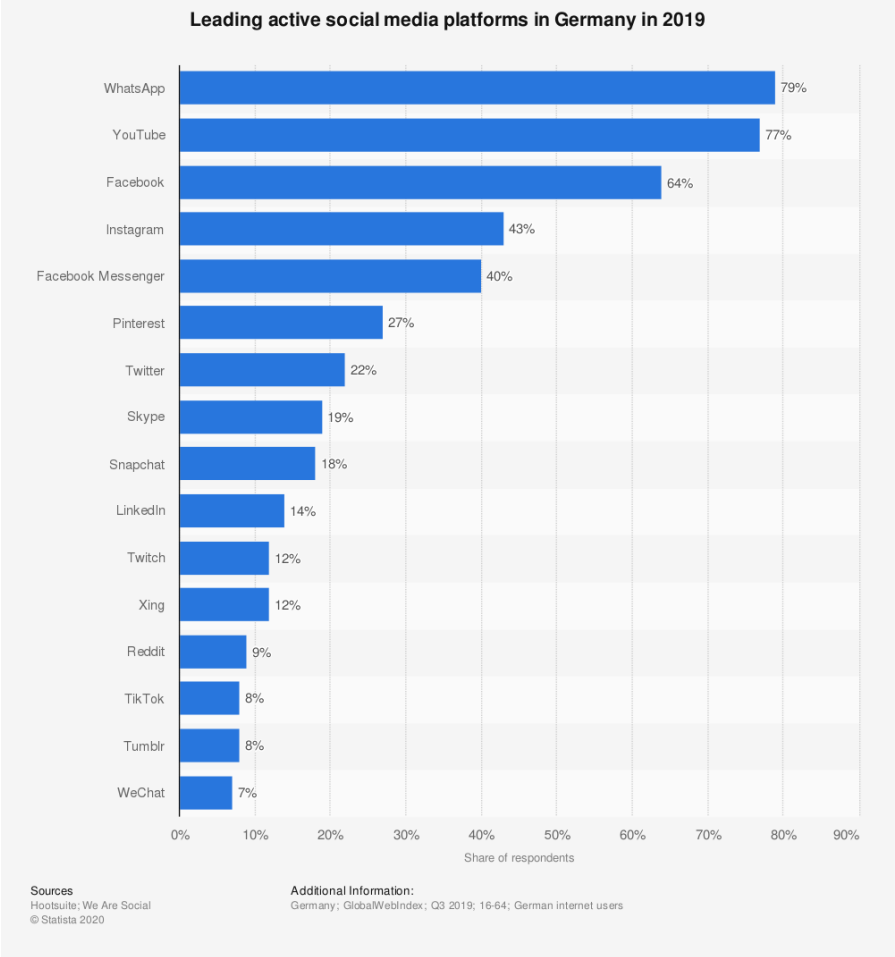


Figure 7.1: Top active Social media platforms in 2019 in Germany [H. Tankovska, 2020b]

7.3 FURTHER WORK

This framework is a starting point, and there are still possible subjects of investigation that can not be covered with it, without putting in much additional work to further the functionality and to investigate beyond what this plugin can do.
One thing that came up in the interviews is that the advertisers themselves hold much interest. The difference between an advertisement sent out by a political party or company themselves or another source can be very important in terms of credibility and impact, but also the tone one can and should expect from them. The lines between these two areas can be easily blurred on Facebook, since anyone can open as many business accounts as they want, and can then publish advertisements about any topic, whether it is related to the site they created or not. On one hand this can be abused by the entities that profit from the support of a - by all appearance - impartial source, on the other hand it can be used as an indirect way to tarnish the reputation of a political or economic enemy, without being directly connected to the act. This would make a deeper look into **who** is really publishing a certain ad very interesting, since it could be a completely different entity than publicly announced. The reason this is filed under this section, is that this involves classic investigative journalism, since the most an automatic plugin could do would be to go to the site mentioned in the advertisement, but gathering information there would already be delicate. So while this work can be to some degree prepared, by finding the advertisements and their official publisher, the investigation itself needs to be done manually after that.
Another scenario that was mentioned was the fact that many groups and also normal users may use natural posts as a means to reach their community with their point of view on political topics. These posts are not paid advertisements, but can easily be part of the political news landscape for the people in the community. The same problems of misinformation can occur, but as the people in the group are already in some way homogeneous given their membership, which often includes a certain political leaning [Cargnino and Neubaum, 2020]. Since not many people will be part of a group just to constantly discuss with it, the effect of an echo-chamber is increased [Pariser, 2011]. The reason this is not possible to include in a study with a tool like the one presented is that these posts are still from the person that posted it, and scraping and using it without their explicit consent is violating their right of privacy. For this reason there is no automatic way to investigate this kind of problem at this point, since any group who would use this kind of posting will not be very interested to have it investigated.

An interesting case was mentioned in an interview (appendix A), where the advertisement would relay the user who clicked on them not to the site it said, but sometimes multiple times to different websites, even based on the users location. Following these clues up would mean following the links to these at best questionable sites directly from the study participants browsers, which could risk the integrity of their data. It would also include more authorizations for the plugin would be needed, since it needs to be able to activate on those sites, which are likely not on Facebook anymore. A simple storage of the url used in the advertisement is not enough, since that can change until the data is analysed in the end.

8

CONCLUSION

This framework is a step towards better online experience, as it can help many institutions and journalists to investigate possible cases of discrimination and problematic microtargeting. This will help to make the online world hold up the values of equality and equity which we are also striving for in the analog world, as it is a tool to hold at least the market leader in social media accountable for misbehavior. Ideally it will also help in building foundations for general regulations, and it most certainly can be used to create similar frameworks for other social medias. In the long term however, we as a society should only strive to maintain watchdogs to make sure there is no violation of law or something akin, and all direct theme driven studies should be achievable with direct Application Programming Interfaces (API) built into the Facebook advertisement system directly, which would allow researchers and journalist to investigate these problems in a more direct way. But until these APIs are compulsory, there is no other way to ensure the discrimination and malicious microtargeting is kept to a minimum, as currently no large social media platform has this kind of API. Having it would remove the burden to gather a sample and could allow certified entities a direct look into the system and to find any problematic targeting by using the very targeting system itself. With this the problem could be removed completely, or at least brought to a degree that is known to the public and deemed acceptable.
With the framework and the included plugin the necessary technical knowledge is minimized, but even if the decision is made to not use it and a completely self-made plugin is preferred, the pointers to potential problems and the solutions for them can help any study about Facebook advertisements. Hopefully this helps in making the process more streamlined, and encourages more studies about this important topic, especially everything related to the political opinion making process, since with the prospect of ever more precise targeting, this problem will rather get bigger than smaller. This framework especially highlights the non-technical problems of getting a large, representative sample, as this is the biggest obstacle in this endeavor, but with a good preparation and competent partnerships to broadcast the existence of the study and the good it can do, this risk can be mitigated as much as possible. During the completion of the plugin or the development of an own solution the privacy and security of the participants' information should be the highest priority, since they have no obligation to help and should be treated accordingly.

Part II

APPENDIX

A

INTERVIEWS

INTERVIEW GUIDE

For these Interviews a guide was prepared, but since they were conducted more akin to normal conversations, these questions were often not asked directly, but acted more as a guide for the interviewer to remind them, which section might not have come up. It can be categorized as a problem-centered expert interview, since the goal was to gather new impressions in a casual environment Mey and Mruck, 2010. For this kind of interview, an open approach is advised, as it gives the expert the option to give completely new insights into the conversation, that could hardly be gathered with targeted questions, since the target is not clear. The question were generally designed to start with broader questions, that become more directed in the end Helfferich, 2019. Most of these interviews were conducted in German therefore the guide will be added in both languages, German and English, for easier comprehension.

German Guide

Vielen Dank für Ihre Teilnahme
Ziel der Arbeit: Ursprünglich eine Studie zur US-Wahl geplant, Corona hat es aufgehalten, bei den Recherchen sehr wenig zu dem Thema insgesamt gefunden, Framework wie man eine Studie über personalisierte und/oder politsche-Werbung auf FB aufbaut, wird das Plug-In beinhalten, alles Weitere würde mmn einschränken, Server ist komplett dem Designer überlassen, auch ob und wie viele persönliche Daten erfasst werden, ist ein Crowdsourced Audit, Direktes Ziel BTW 2021, aber soll auch für viel mehr nutzbar sein
Ziel Interview: Was könnte man gezielt überprüfen?
Was ist aus Sicht des Befragten dafür relevant?
Gibt es Möglichkeiten/Einschränkungen die ich übersehe

- Sie haben Publikation XY geschrieben, dabei ist mir aufgefallen, dass ...
- Wir suchen im Moment nach prototypischen Studien: haben Sie dazu etwas gelesen?
  Wenn ja:
  - Was war das Ziel der Studie?
  - Gab es Probleme, die während Planung vermeidbar gewesen wären, wenn sie bekannt gewesen wären?

  - Name/Link/how to find

- Haben Sie bereits darüber nachgedacht Werbung auf Facebook in Bezug auf Personalisierung zu überprüfen?
  - Wenn ja, was hat Sie davon abgehalten sie durchzuführen?
- Was sollte Ihrer Meinung nach das konkrete Ziel einer solchen Studie sein?
  - Mögliche Ziele: Watchdog (allg polit Werbung, Quellen davon finden, widersprüchliche Werbung, verletzliche Gruppen als Ziel, Fehlinformation verbreiten über Gegner/Historische Ereignisse)

Für jedes Ziel:

- Was wären die Anforderungen die Sie an das Plugin hätten?
- Welche Gruppen bräuchten Sie für ein solches Vorhaben? Größe, Aufbau: Sampledesign? Wie lange sollte eine solche Studie andauern?
- Auf welche Art und Weise würden Sie die Daten gerne Analysieren?
- Welche Informationen über den Nutzer:Innen sind dafür notwendig?
  - Gruppenbildungsrelevant.
  - Wohnort evtl. durch Werbung nicht vermeidbar.
- Sehen Sie mögliche Privatsphärenverletzungen, die während solcher Studien auftreten können?
  - Wenn ja, gäbe es Ihrer Meinung nach Möglichkeiten diesen zu begegnen, ohne den Nutzen der Studie zu beeinträchtigen?
- Glauben Sie, dass Nutzer:Innen bereit wären an einer solchen Studie teilzunehmen?
  - Könnte man es durch bestimmte Transparenzzugeständnisse erleichtern?
  - Durch Nachvollziehbarkeit?
- Wie fänden Sie es, den Nutzer:Innen die Möglichkeit zu geben zu entscheiden, welche der ihm angezeigten Werbungen er einsenden möchte?

Vielen Dank, das wären alle meine Fragen, gibt es etwas was Sie ergänzen würden?

English Guide

Thank you for your participation
Goal of the Project: Originally a study into political advertisement during the last US election was planned, stalled due to corona, during the inquiry I found very little overall research, decided to create a framework to guide how to build a study about personalized and/or political advertisement on FB, will include the plugin, all further work would IMO limit possibilities, server is left to the designer, how much personal information should be gathered too, is a crowdsourced audit, direct target would be German BTW 2021, but is supposed to be usable for much more
Goal Interview: What could be the target of investigation

What is relevant in this context from the perspective of the questioned

Are there possibilities/limitations I am not seeing

- You have written XXX, during my read it occured to me that, ...
- I am currently looking for prototypic studies, have you read smth like that recently?
  If yes:
  - What was the goal?
  - Die some problems occur, that would have been avoidable, if they were known during planning?
  - Name/Link/how to find
- Have you ever thought about investigating advertisements on Facebook in relation to personalization?
  - If yes, why did you not?
- What would be a good goal for a study, according to you?
  - possible goals: Watchdog (political ads, find advertisers, contradictory ads, targeting sensitive groups, misinformation campaigns)

For every goal:

- What kind of requirements would you have for a plugin, you would like to use for this?
- What kind of sample would you need? Size, structure? How long should it be?
- What kind of analysis do you think would be useful?
- Which personal information would you need?
  - relevant for grouping

  - Place of residence
- Do you see privacy problems in this study?
  - If yes, do you see possible ways of mitigation for this, that would not limit the study to harshly?
- Do you think people would participate?
  - Could it help to increase transparency?
  - Accountability?
- Would it maybe help to give the participant the final decision over which ads they want to send in?

Thank you for your time, do you have any questions?

INTERVIEW TRANSCRIPTS

This section contains the transcripts of the interviews. Before the actual transcript starts, there will be a short introduction of the interviewed person, presenting their research fields and what they have worked on in the field up to now. Some interviewees did not accept to being named, therefore they are being kept anonymously with a anonymous interviewee and a number as a pseudonym and their introduction will be shortened accordingly.

Keno Christoffer Potthast

Keno Potthast has studied law with a specialization on media law at the Universität Hamburg, and currently works as a jonior researcher at the Leibniz-Institut für Medienforschung | Hans-Bredow-Institut[1] since 2019. His research is part of the program "Transformation of Public Communication: Journalistic and Intermediary Functions in the Process of Opinion Formation". This program examines how a public sphere can be constituted under a mediated public communication and the changes digitalization brings with it. He currently works on his doctorate in this field, where he focuses on microtargeting in the political opinion forming. Recently he wrote articles concerning trumps twitter-ban and the political implications, as well as how political microtargeting is currently rated under German law.

[Potthast]: Nachweisen kann man eben nicht, dass wirklich Filterblasen dadurch entstehen oder bestärkt werden und gibt es überhaupt Filterblasen? Gibt es die nicht? Das ist so und das macht es für die Rechtswissenschaft quasi ein bisschen schwerer, damit umzugehen, weil man sonst so schön, wie man so schön sagt und Regulierung

1 https://leibniz-hbi.de/de

unter Ungewissheit betreiben würde. Das heißt, der Gesetzgeber weiß, wenn er nicht, wenn er nicht weiß, ob es wirklich schlecht ist oder es vielleicht auch gute Seiten an Microtargeting gibt, dann, dann reguliert er unter Ungewissheit und hat nicht genug Informationen, um tatsächlich das bestmögliche Gesetz zu verabschieden. Und genau das ist so ein bisschen das Dilemma, dass ich jetzt beispielsweise auch habe. Aber bei mir wird es dann darum, gehen zu sagen Ok. Was wäre denn wenn, wenn diese Filterblasen entstehen und das wäre das schlechte an den Filterblasen? Und wie könnte das Recht darauf reagieren? Deswegen bin ich auch so ein bisschen weiß ich nicht, ob ich dir jetzt quasi richtig rechtliche Antworten darauf geben könnte, ob jetzt dein Studiendesign rechtliche Lücken hat. Ich kann es versuchen. Also wenn es jetzt so ist. Irgendwelche datenschutzrechtlichen Bedenken, dann bin ich nicht der der große Datenschutzrechtler, sondern eher so im Verfassungs- und Medienrecht. Dann könnte ich aber. Also wir haben am Institut auf jeden Fall Leute, die sich im Datenschutzrecht sehr gut auskennen. Da könnte ich dann auf jeden Fall nochmal nachfragen, wenn dir das nochmal was bringen würde. Ansonsten versuche ich einfach, dir alles zu erzählen was ich kann.

[Krafft]: Also grundlegend nachfragen finde ich natürlich immer hilfreich. Aber ich denke, dass es im Rahmen deiner Arbeit auf jeden Fall auch Pointer für mich gibt. Zum Beispiel wäre ja einfach was für Studien wäre denn für deine Arbeit interessant? Was könnte mal was möchte? Was könnte man in diesem Zusammenhang denn mal untersuchen? Vielleicht hilft die Werbung, die von politischen Parteien ausgeliefert führt, targeten die vielleicht einfach nur bestimmte Gruppen, auch wenn es vielleicht noch nicht rechtlich verletztend ist, sind das Hinweise, die man nachgeht, denen man dann auch nachgehen müsste und eventuell unterbinden müsste.

[Potthast]: Definitiv. Also was für mich super spannend ist, weil es beispielsweise auch direkte rechtliche Fragen betrifft, ist die Offenheit der Kommunikation oder die Offenheit der Werbung Offenheit im Sinne von Öffentlichkeit, also wenn wir an Dark Ads denkt und die Tatsache, dass oder oder die Vermutung, dass bestimmte Nachrichten eben wirklich nur einer kleinen Gruppe zielgerichtet zugespielt wird, aber eben nicht Teil eines öffentlichen Diskurses sein kann, dann sind das auf jeden Fall rechtlich nicht uninteressante, nicht uninteressante Gesichtspunkte. Was man dazu sagen muss, in die rechtliche Arbeit und die auch die Doktorarbeit an sich arbeitet, eigentlich nur mit Text. Also wir, wir setzen gar nicht selbst irgendwelche Studien auf und erforschen in dem Sinne gar nicht selbst. Also erforschen das Recht und mit dem Recht. Aber es ist jetzt nicht so, dass ich für meine Arbeit Interviews mache oder Feldversuche oder sowas, sondern ich bin quasi auf Ergebnisse anderer Disziplinen dann angewiesen. Also wenn du jetzt beispielsweise das Design entwirfst, was dann wiederum Kommunikationswissenschaftlerinnen und Kommunikationswissenschaftlern

ermöglicht, eben genau nachzuvollziehen, welche Gruppen sind es, die da angesprochen werden. Ist es tatsächlich so, dass die Nachrichten nur bestimmten, also dass die CDU oder die die AfD oder die Grünen oder sonst was einer Personengruppe A sagen und der anderen Personengruppe B also verschiedene Nachrichten ausspielen, dann, dann hilft es, also jetzt nach meiner Vermutung, der Kommunikationswissenschaft und deren Ergebnisse helfen dann dem Recht so. Das ist so.

[Krafft]: Also meine Frage wäre eher so ein bisschen worüber würdest du dich freuen, wenn das jetzt veröffentlicht würde? Also wenn jetzt eine Studie rauskommen würde, die dir unglaublich helfen würde, was hättest du denn gezeigt? Das wäre also das, was ich da von diesen Fällen gerade suche.

[Potthast]: Ja, sie hätte gezeigt, dass Leute, die bestimmte Werbung enthalten, erhalten, auch tatsächlich sich von dieser Werbung überzeugen lassen und daraufhin ihre Wahl Kreuz anders setzen. Das ist natürlich ein sehr, sehr frommer Wunsch, weil wahrscheinlich nicht so einfach geht. Aber das wäre beispielsweise eine Sache, die mir helfen würde. Aber auch jeder, Und mittelbar dann eben jeder Zwischenschritt dazu würde mir natürlich dann auch helfen. Also das genau das Problem ist und das ist so ein bisschen das, was ich vorhin meinte mit dem Recht und das ich relativ weit hinten in der Kette sehe. Was das Recht beispielsweise machen kann oder könnte, ist zu sagen, wenn die Kommunikationswissenschaft, die Informatik, sonst andere Disziplinen, bestimmte Black Boxes haben, was Microtargeting angeht, dann kann das Recht natürlich hingehen und sagen Okay, und jetzt Farbschicht mit Transparenz Pflichten, damit die anderen Disziplinen an Daten können kommen können, mit denen sie arbeiten. So das wäre beispielsweise so eine vorgelagerte, so eine ja noch so eine vorgelagerte Maßnahme. Aber um jetzt wirklich sagen zu können Microtargeting ist schädlich und es muss ein Gesetz geben, das es verbietet. Was ich glaube, was es nicht nicht geben wird. Und weil ja solange es nicht so ganz nachvollziehbar ist und es auch noch positive Belange gibt, wirds schwer in diesen Abwägungsfragen dann tatsächlich zu sagen man muss es verbieten. Jetzt habe ich den Faden verloren. Ja, ich weiß. Ich weiß. Ich ähm. Ja genau. Vielleicht. Soweit erstmal.

[Krafft]: Also würde das reine Beweisen von Microtargeting von bestimmten Gruppen nicht als Rechtsgut Verletzung ausreichen. Also wenn man jetzt eine Studie hätte, die nachweisen würde, dass eine politische Gruppe gezielt nur dieses, diesen sehr kleinen Teil der Bevölkerung ansprechen möchte und sonst gar keinen, mit dieser Nachricht würde das noch nicht ausreichen, um da relevant vorzugehen.

[Potthast]: Ich glaube nicht. Ich glaube nicht, weil dieses zielgerichtete Ansprechen von von bestimmten Gruppen das ist ja etwas, was die

was eigentlich nicht neu ist, also dass der Politiker die Politikerin an deiner Haustür klingelt im Dorf und weiß Ah, Roman ist, hat schon immer so gewählt und dass das passt auch so. Und dann reden die dir so ein bisschen nach deinem Gusto. Das ist nicht neu eigentlich und genauso. Ja, das das, was ich als neu empfinde, ist die Paarung mit der Desinformation. Also dieses Subtile, dass das Leute auch gar nicht wissen, dass sie gerade zielgerichtet angesprochen werden. Wenn, wenn wenn jetzt der Politiker bei dir klingelt, dann weißt du alles klar hier. Heinz Klaus von Partei X Ypsilon Der will mich jetzt überzeugen und das Spiel kenne ich und so. Aber ich habe das Gefühl, dass dadurch, dass das Wissen darüber nicht, nicht da ist, dass das gepaart mit diesem mit der Subtilität, die die Technik auch bereitstellt, dass das das Neue, dass das Problem neuartig ist, dieses, DAS Leute angesprochen werden, also das reine Ansprechen ist meiner Meinung nach, kann auch sein, dass es ein hot-take ist, aber von der Verfassung auch so vorgesehen. Also jetzt nicht dieses zielgerichtete: "Wir wissen, du magst gerne grün, also reden wir nur über Grün." Das jetzt nicht zwingend, aber die Partei hat halt schon einen verfassungsrechtlichen Auftrag an der Willensbildung des Volkes mitzuwirken. Und das ich ich persönlich, also nach meinem nach meinem Kenntnisstand würde das reine Ansprechen einer kleinen Gruppe noch nicht rechtserheblich sein.

[Krafft]: Und wenn wir da noch die widersprüchlichen Information, die du mal angesprochen hast, noch mit reinnehmen würden. Das wäre dann aber bereits das Problem, dass wenn wir zeigen könnten, zwei Subgruppen, die komplett getrennt sind, kriegen widersprüchliche Information ausgeliefert. Also die Partei sagt jetzt zur Gruppe A "Ich bin für Umweltschutz" und Gruppe B "ich bin dagegen".

[Potthast]: Ja, das ist dann erstmal dann, dass es dann erst glaub ich ein gesellschaftlich-moralisches Problem für die Parteien. Aber jetzt rein rechtlich, dass man jetzt sagen würde der Politiker, die Politikerin darf darf nicht, nicht ja verschiedene Nachrichten erzählen. Das sehe ich so auch nicht. Die unterliegen dann, wenn man jetzt beispielsweise davon ausgeht, dass das ein Politiker, eine Politikerin bewusst unwahre Tatsachenbehauptungen verbreitet, dann unterliegen sie, sofern man denn annimmt, dass sie Grundrechtsträger oder an Grundrechte gebunden sind, einem. Nicht so starken Schutz, weil Artikel 5 mit der Meinungsäusserungsfreiheit bewusst unwahre Tatsachenbehauptungen vom vom Schutz ausschließt. Aber dazu muss das Element dieser Tatsachenbehauptung enthält immer einen Moment der der Beweisbarkeit und oft ist es eben so, und das sieht man jetzt beispielsweise auch an an den an vielen Trump-Äußerungen, dass diese, dass diese, ja dass die Beiträge immer so geschrieben oder die Worte so gewählt sind, dass es eben nicht klar rechtswidrig ist, was was zum Teil erzählt wird. So dass das ich glaube, oder das Bundesverfassungsgericht hat mal in der Entscheidung um, in den 60er irgendwann

gesagt: "Das Täuschen und Lügen zum politischen Wettbewerb und zum politischen Meinungskampf dazugehört". Und das ist auch ein großer Punkt in dieser ganzen Desinformation Debatte, das man ja oft auch davon ausgeht oder dass ein Standpunkt sein kann: "naja, dafür um solche Wogen zu glätten oder um um solche Lügen und sowas aufzudecken, gibt's eben den demokratischen Diskurs". Und dann und dann kommen wir beispielsweise wieder an den einen Punkt von vorhin. Wenn der das demokratische Diskurs aber vereitelt wird dadurch, dass bestimmte Gruppen nur angesprochen werden und manipuliert, also mit Desinformation und gegebenenfalls manipuliert werden. Wenn dieser Diskurs nicht stattfinden kann, dann wiederum würde ich sagen würde es, würde es einen rechtlichen Bezugspunkt oder einen Knotenpunkt in der Verfassung geben, der sagt: "Na, so ganz wollen wir das jetzt aber eigentlich nicht". Also eine Diskurs Vereitelung. Es ist ja. Mir fällt es schwer, jetzt quasi zu sagen rechtlich ist das und das verboten oder nicht verboten, weil man das immer nicht so ganz sagen kann und da gerade im Äußerungsrecht sehr Einzelfall abhängig ist. Deswegen bin ich da immer sehr sehr vorsichtig. Aber meine meine Vermutung wäre, dass ein Studiendesign was oder ein einen Outcome einer Studie was sagt: "Okay. Gruppen werden unterschiedlich angesprochen per se", anderen Wissenschaften erst einmal hilft als direkt der Rechtswissenschaft, also beispielsweise der Kommunikationswissenschaft, weil die dann wieder daraus irgendwelche Wirkungspotenziale oder vermutete Wirkweisen oder sowas ableiten kann. Und das kann ich, das kann ich nicht. Ich kann das Gesetz und wenn das da irgendwie, wenn ich da Bezugspunkte herstellen kann, dann ist es okay. Und wenn nicht, bin ich auch ein bisschen angeschmiert. So ein das ist einfach ein sehr unerforschtes Feld. So hab ich das. Also das ist ja auch dein Gefühl, weswegen, weswegen wir ja hier jetzt ja quasi auch sitzen. Ja, genau. Also das ist so mein, mein Gefühl. Aber wenn, wenn du weitere Beispiele hast von von möglichen Outcomes, kann ich mich auf jeden Fall versuchen dazu zu äußern. Also wenn dir das hilft, dass wir so darüber reden, dann super gerne.

[Krafft]: Auf jeden Fall. Also es hilft immer ein bisschen, gerade, dass es auch als eine Grundlagenhilfe dienen kann, öffnet nochmal ein bisschen weiter die Optionen, die man da Leuten präsentieren kann. In diesem Framework. Habe ich noch gar nicht gesehen, dass man halt an die Rechtswissenschaften doch mit einem längeren Arm rangehen muss, weil da nochmal andere Dinge dazwischen gelagert werden müssen. Dann wären noch eine Option, dann gibt's dann eigentlich keine richtigen Aussagen, die von politischer Werbung wirklich verboten sind. Also eine dauerhafte Überwachung. Was da gerade an politischer Werbung ausgerollt wird, wäre dann auch nicht wirklich relevant, oder? Also aus rechtlicher Perspektive, journalistischer, gesellschaftlicher natürlich.

[Potthast]: Naja, es gibt. Es gibt natürlich Inhalte, die und das ist jetzt beispielsweise auch wurde ja auch in der Debatte um Trumps Capitol Aufruf diskutiert. Es gibt natürlich Inhalte, die rechtswidrig sind und die müssen dann auch gelöscht werden. Von der Plattform beispielsweise. Klar, die gibt es. Ich ich fürchte einfach, dass das die und das weiß ich nicht. Aber. Ich vermute das mal ins Blaue hinein, das tatsächlich rechtswidrige Inhalte seltener Gegenstand von von dieser Werbung sein werden. Das kann aber auch genausogut andersherum sein. Wenn das der Fall ist, wird er also spinnen wir jetzt mal den Fall, dass tatsächlich rechtswidrige Werbung ausgespielt würde. Dann müsste dürfte sie nicht ausgespielt, also dann müsste sie gelöscht werden. Ja. Also Löschungsanspruch ppräventiv dürfte sie dann ja gut. Es wäre natürlich wünschenswert, sie würde dann auch aus rechtlicher Perspektive wünschenswert. Sie würde nicht ausgespielt werden. Aber ja, genau. Also ja.

[Krafft]: Aber wäre dann da so ein Watchdog also quasi ein Wachhund Ansatz interessant aus der Sicht, dass man, wenn man einen solcher, dass man sowas überwacht, einfach dauerhaft überblickt, die politsche Werbung, die auf Facebook ausgerollt wird, auch mal aus einer Regierung, also aus einer rechtlichen Perspektive überwachen könnte.

[Potthast]: Klar also, dass das das würde auf jeden Fall erstmal nicht schaden. Das aber klar, dass das ich wüsste. Ich könnte dir natürlich nicht sagen, was dabei was dabei herauskäme. Also es gibt ja die Facebook Ad Library, die ja quasi in der sichtbar sein soll, welche Parteien welche Werbung wann und über welchen Zeitraum und mit mit welchem finanziellen Background irgendwie anzeigen. Insoweit müsste man natürlich gucken, inwieweit sich der Ansatz dann von der Ad Library unterscheidet, weil ich auch nicht die jetzt auch nicht ganz genau sagen kann, wie das funktioniert. Ob die Ad Library eine Sache ist, die so funktioniert, dass Parteien die Werbung quasi anmelden bei Facebook und Facebook packt dann auf die auch in die Ad Library oder wer derjenige ist, der ja die quasi postet, sozusagen diese Library.

[Krafft]: Da kann ich sogar kurz helfen. Also es ist von Facebook selber. Man muss die Werbung als politisch markieren. Und es gibt doch halt so ein klein Erkennungsmechanismus von Facebook selber, wenn es man halt nicht markiert, reagiert da erstmal nur Facebook darauf. Das hat auch mit das Problem, da ist ja sehr viel Vertrauen in eine Firma wieder. Die auch einen Nutzen hat jede Werbung mitzuteilen. Und weil, dann verdient man mehr Geld damit.

[Potthast]: Ja, das bringt mich noch zu einem zu einem rechtlichen Punkt, der viel diskutiert wird und der es überhaupt nicht einfach macht, mit diesem gesamten Thema umzugehen. Und das ist die Frage nach, was ist politische Werbung überhaupt? Also ist politische Werbung schon oder kann politische Werbung der organische Post sein, eines Politikers, einer Politikerin, die sagt "Morgen ist Wahl, bitte

geht alle wählen und denkt dran, macht euer Kreuzchen richtig" oder ist kann politische Werbung auch und muss politische Werbung über offizielle Kanäle stattfinden? Oder kannst du als Partei auch deine Strohmänner haben, beispielsweise die und dein Netzwerk, wie es ja in Kreisen der AfD wohl sehr sehr extrem gefahren wird. Also ich hab, ich war irgendwie mal auf einer, bei einer Podiumsdiskussion, unter anderem mit dem Wahlkampfleiter der CDU in Sachsen, der meinte, wir brauchen Microtargeting. Wir kommen auch gegen diese, diese Armee von dieser gut vernetzten und gut organisierten AfD nicht, nicht an sonst. Und genau, also die Frage danach, wo fängt politische Werbung an? Wo hört sie auf? Wie sind, wie wären Regelungen, die das Recht auf stellt umgehbar das sind, das sind auch alles Fragen. Die machen es nicht, die machen es nicht leichter. Jetzt weiß ich gerade nicht mehr, was deine Ausgangsfrage war. Sorry.

[Krafft]: Ich muss kurz nachdenken. Der Punkt war interessant. Zumindest mal anzusprechen.

[Potthast]: Ja. Wir waren, glaube ich, bei den verschiedenen Gruppen und ob es und wenn es rechtswidrige Inhalte gibt. Genau.

[Krafft]: Ob man die auch aus Recht als aus quasi Regierungsebene auch mal untersuchbar halten möchte. Also selber mal noch sammelt getrennt von Facebook.

[Potthast]: Ja, klar, glaube ja. Ich glaube, wenn du. Ja, ja. Warum nicht? Doch es würde. Ich glaube, ein ganz großer Punkt ist, in dieser ganzen Diskussion irgendwie Licht ins Dunkle zu bringen, weil keiner irgendwie so ganz richtig weiß oder nur so halb, und ich möchte jetzt hier nicht irgendwie wem auf die Füße treten, weil ich eben auch nicht weiß, was andere Leute forschen. Aber das, was ich mitkriege ist: es ist ein junges Forschungsfeld. Da sind ganz viele Leute, haben daran Interesse. Aber jetzt beispielsweise auch gerade in In Deutschland ist Microtargeting was ganz anderes als in den USA, beispielsweise weil ja das Datenschutzniveau hier erst einmal höher ist, weil wir die Datenschutzgrundverordnung haben, weil wir ein vermeintlich hohes Datenschutzniveau im Bundesdatenschutzgesetz haben, weil wir ein anderes Wahlsystem haben und so weiter und so fort. Ich habe so ein bisschen das Gefühl, dass sich der der Fokus der Forschung in den letzten Jahren sehr auf das Ausland, also das nichteuropäische Ausland beschränkt hat. Beispielsweise habe ich mitbekommen, dass in Brasilien und Indien beispielsweise auch Microtargeting nochmal einen ganzen, ein ganz anderes Ausmaß hat als als hier in Deutschland. Wer? Ich weiß nicht, ob dir Tom Dobler und Nathalie Herberger die Namen was sagen.

[Krafft]: Tom Dobber sagt mir was, den habe ich auch angesprochen wegen einem Interview.

[Potthast]: Ja, genau. Also der beispielsweise. Ich kenne ihn auch noch nicht, aber ich habe jetzt die letzten Tage mal ein bisschen in seiner Diss. rumgelesen von dem, was was irgendwie verfügbar war.

Der hat ja auch nochmal irgendwie,wenn ich das richtig gelesen, hab ne eigene, eine eigene Werbung gebastelt, also einen eigenen Fake gebastelt sozusagen und dann irgendwie versucht rauszufinden, die Leute darauf reagieren und damit umgehen. Ja genau. Also vielleicht hilft dir die Richtung noch ein bisschen weiter.

[Krafft]: Das war in die Richtung mit dem Deep Fakes und Reaktion darauf.

[Potthast]: Genau.

[Krafft]: Ist dann nochmal nochmal schwerer zu finden. Wirklich. Weil die gehen halt in einem Video unter. Und das automatisch zu analysieren ist ein völlig eigenes Feld.

[Potthast]: Ja okay, verstehe also, also du würdest quasi direkt bei der Werbung bleiben.

[Krafft]: Bei der Werbung bleiben, versuchen da zu analysieren. Da sind auch Videos teilweise dabei, aber das hält sich dann doch eher an Grenzen und die Texte geben immer noch gute Auskünfte.

[Potthast]: Okay und und das wäre dann quasi wären Inhalte, die als Werbung gekennzeichnet sind.

[Krafft]: Genau.

[Potthast]: Okay. Weil das ist ja, das ist ja klar. Also das würde dann ja so ein bisschen nochmal interessant sein, ob man es quasi hinkriegt. Zum bei den Beiträgen, die nicht als Werbung gekennzeichnet sind, aber so klaren, was heißt klaren Werbe-Charakter haben, aber wo wir beide sagen würden Na komm, das ist doch eigentlich ist es doch Werbung. So! Die unter. Unter der Hand laufen. Also unter dem, was offiziell als Werbung gekennzeichnet ist. Sowas fände ich jetzt auch, also fänd ich dann auch nochmal interessant. Weil es dann nochmal so, weil sowas vielleicht dabei helfen könnte, so diesen Werbebegriff zu bestimmen und irgendwie zu sagen was ist denn eigentlich politische Werbung? Das ist aber jetzt auch nur Rumspinnerei. Also nagel mich da bloß nicht auf irgendwas fest. Ja, ist vielleicht unbefriedigend, wenn ich so, wenn ich so unklar antworte. Aber das Problem ist auch was die Rechtswissenschaft auch hat ist, dass wir leider in den seltensten Fällen sagen können, das und das, das muss jetzt reguliert werden und das sind die Gesetze, die dazu verabschiedet werden müssen. Es ist halt alles immer ein bisschen komplexer. Nicht so ganz. Es ist also der Lieblingssatz von Juristen, der ist sowieso immer: es kommt darauf an und das stimmt halt leider auch. Es ist echt sehr Einzelfall abhängig.

[Krafft]: Ich glaube, mir hilft dieser Einblick auf jeden fall.

[Potthast]: Ja super, dann freut es mich.

[Krafft]: Dann wäre noch die Frage, ob es aus poltiischer Sicht interessant wäre, also aus rechtlicher Sicht interessant wäre, wenn Werbung gar nicht als politische Werbung gekennzeichnet wird, also es als natürliche Werbung verkauft wird für etwas anderes oder einfach nur als Werbung und dann aber politischen Inhalt hat, das aber nicht

gekennzeichnet wird. Und natürlich dann auch wer die Werbung macht. Aber das aus rechtlicher auch noch interessant ist diese beiden Aspekte.

[Potthast]: Definitiv. Definitiv. Das wäre interessant, weil meine Ansicht ist, dass Politikerinnen und Politiker oder eben auch Parteien eben an andere rechtliche Voraussetzungen der Wählerbeeinflussung haben als normale Menschen, als wenn wir beide uns jetzt irgendwie unterhalten. Da müsste ich mir tatsächlich nochmal ein bisschen mehr Gedanken drüber machen. Aber jetzt ad hoc würde ich sagen ja, dass das interessant ist, weil das eben auch so ein bisschen, finde ich anschließt an das, was wir gerade besprochen haben mit, was ist überhaupt politische Werbung und wie ist sie überhaupt erkennbar und muss sie gekennzeichnet sein bzw. ist sie unterhalb dieser Kennzeichnungsschwelle? Das ist also das ist ja auch eine Sache, die man gut umgehen kann, diese Kennzeichnung. Also wenn ich jetzt eine Troll Armee habe oder irgendwie meine WhatsApp Gruppe mit tausend Leuten, die zu einer bestimmten Zeit alle das gleiche posten um einen trending Hashtag zu erzeugen um dann irgendwie diesen ja zu verzerren, die Meinung der Bevölkerung zu verzerren. Dann ist es nicht als Werbung gekennzeichnet, aber es hat trotzdem einen extrem wichtigen oder zu beachtenden Effekt. Gegebenenfalls und auch da wieder weiß ich nicht, ob das wirklich ein Efekt ist, genauso wie eine Schweigespirale oder sonst was. Kann ich dir nicht sagen, weil es ist nicht meine Disziplin ist, aber wenn es sowas gibt, dann ist es rechtlich tatsächlich auch interessant. Ich weiß, es ist vielleicht ein bisschen nervig so diese ganzen Umwege. Aber ja, so ist es leider.

[Krafft]: Hat auf jeden Fall mal interessante Einblicke gegeben, wie das in der Rechtswissenschaft so genau abläuft.

[Potthast]: Ja, also ist kann natürlich auch sein, dass dir andere Rechtswissenschaftler noch etwas anderes dazu sagen. Das möchte ich gar nicht. Das möchte ich gar nicht bezweifeln. Aber in diesem, in dieser Sicht von wie muss es reguliert werden und was für Gesetze müssten verabschiedet werden? Aus dieser Sicht ist es schon voraussetzungsvoll mit Blick auf bewiesene Effekte sag ich jetzt mal. Also das ist wirklich immer so ein bisschen das Dilemma. Und wenn du da irgendwie helfen kannst, indem du entweder dem Recht direkt oder einer anderen Disziplin hilfst, glaube ich, ist es schon ziemlich. Ja es ist ziemlich cool. Also ich finds finds sehr sehr interessant.

[Krafft]: Also wäre aus deiner Sicht quasi das Relevanteste, dass man mal quasi irgendwelche irgendwelches Targeting wirklich beweist und dann andere Leute größere Kommunikationseffekte nachweisen können und das daraus dann Gesetzes Relevanz gezeigt wird.

[Potthast]: Genau. Genau das. Das wäre jetzt so mein mein take, wenn auf dieser Ebene der Rechtswidrigkeit. Also wenn es jetzt so ist es das es klar rechtswidrige Inhalte gibt, dann ist es für die Rechtswissenschaft natürlich auch interessant. Aber da hat da kennt

die Rechtswissenschaft quasi die Antworten. Das wären dann Löschungspflichten oder Unterlassungsklagen oder sonst was. Genau. Und also ja, dieses Mittel. Ja genau. Also wie du sagst mittelbar. Wenn, wenn, wenn es mittelbar dazu trägt kommt, dass andere Leute, andere Disziplinen, da mehr, mehr Kenntnisse gewinnen können, dann hilft es auch der Rechtswissenschaft definitiv. Also wie gesagt, es kann auch sein, dass jetzt irgendwie jemand anderes, ein anderer Jurist, andere Juristen die Microtargeting machen, was komplett anderes sagen. Aber ich kann es mir nicht vorstellen, weil ich relativ früh in meiner Auseinandersetzung damit in dieses Dilemma gekommen bin, dass ich mich mit meinen Seniors und auch Wolfgang Schulz, also meinem Doktorvater, den Tobias ja auch gut kennt, unterhalten habe, dass sich da sagte Ich habe hier ein Dilemma. IDie einen sagen es gibt, es gibt Filterblasen, die anderen sagen, es gibt Filterblasen nicht. Die einen sagen, es gibt die Fragmentierung und die Polarisierung in der Gesellschaft. Oder es führt dazu, die anderen sagen naja, die Leute haben immer noch genug zufälligen Nachrichtenkontakt und das spielt, ist weniger beweisbar oder spielt weniger eine Rolle. Und ganz früh war ich da, dass ich dachte "Okay, der Gesetzgeber arbeitet hier unter Ungewissheit". Es kann auch sein, dass ich dir in einem halben Jahr das ich dann nochmal eine andere Meinung bin, aber jetzt jetzt gerade ist es quasi so mein Kenntnis und Erkenntnisstand. Ja und ich glaube, wenn man also ins Ausland guckt, vielleicht auch ins Inland. Ich weiß nicht, ob Hala-Kuczynski da irgendwie was zu gemacht haben, falls dir die Namen was sagen. Simon Hala Oder Simon Kuczynski und Hala müsste ich nochmal nachgucken. Das sind glaub ich auch Kommunikations oder Sozialwissenschaftler, die im Bereich Microtargeting unterwegs sind, die meiner Meinung nach auch da irgendwie bisschen mehr zu forschen und ich glaube auch, dass die das irgendwo auch schon festgestellt wurde. Simon Hegelich ist auch noch ein Name, der dir vielleicht weiterhilft. Professor Simon Hegelich, der auch in dem Bereich unterwegs ist, die festgestellt haben Okay, Microtargeting, gerade jetzt auch in der Vorbereitung zur Europawahl und so gibt es definitiv. Also wird gemacht. Und in so einem vorläufigen Papier dazu hat Hegelich, glaub ich, war das dann beispielsweise auch festgestellt, dass das eigentliche Problem oder der Traffic viel bei den organischen Inhalten stattfindet, also eben solchen, die nicht als Werbung, als Werbung gekennzeichnet sind. Aber wenn du, wenn du die Arbeiten von denen noch nicht kennst, kann ich dir auf jeden Fall empfehlen. Die haben mir damals ein bisschen weitergeholfen. Auf jeden Fall. Und die haben inzwischen vielleicht auch aktuellere Sachen.

[Krafft]: Dann werde ich die auf jeden Fall nochmal genauer angucken. Was von dir noch sehr hilfreich wäre, sämtliche rechtlichen Rahmenbegriffe und Gesetze, die jetzt Microtargeting so direkt angehen, wenn es da was gibt, mir vielleicht mal zu senden, weil in deim

Bereich komme ich halt zu sehr wenig, weil man sucht eine Sache und findet drei Bücher.

[Potthast]: Ja, ja, schick ich schicke ich dir gebündelt rüber, müsste ich selbst noch mal gucken. Also es gibt quasi keinen klaren legal Framework zum Microtargeting selbst. Aber was es beispielsweise gibt, sind Gesetze im Rundfunkrecht zu politischer Werbung. Ich glaube, lass mich mal ganz kurz schauen. Ich guck mal ganz kurz, Julian Jaursch heißt er, der von der Stiftung Neue Verantwortung. Ich glaube, der hat so eine Auflistung dazu gemacht. Ich schaue mal ganz kurz. Das sind alles. Politische Onlinewerbung definieren 24. November, aber das war ja nochmal mehr. Ja, schicke ich dir rüber. Ich glaube, der hat da ein ganz schönes Paper zu geschrieben. Um einmal diesen kompletten rechtlichen Rahmen zu beleuchten der selbst ist auch Politikwissenschaftler, das heißt, es ist nicht zu zu rechtlich nervig, unverständlich aufgeladen, hoffe ich. Ansonsten kann man darüber auch gerne nochmal unterhalten. Genau. Also es gibt Gesetze im Rundfunkstaatsvertrag die politische Werbung regulieren. Es gibt das Telemediengesetz, was beispielsweise auch sagt, das dort rechtswidrige Inhalte sind zu löschen von den Plattformen. Dann hast du wahrscheinlich auch schon von dem so schön Netzwerkdurchsetzungsgesetz gehört. Was auch Regelungen zu rechtswidrigen Inhalten vorsieht. Aber das sind eben alles Gesetze, soweit ich das jetzt erst auf den ersten Blick überblicke, die sich um die Inhalte kümmern der Beiträge. Und nicht darum, ob es vielleicht rechtlich schwierig ist, dass Parteien überhaupt nur gewisse Gruppen ansprechen. Also das, also dieses Merkmal des Microtargeting ist gesetzlich nicht aufgefangen. Momentan ja. Das gilt es zu untersuchen.

[Krafft]: Zu der allgemeinen politischen Werbung im Funk. Es mir noch aufgefallen, wäre es da vielleicht aus rechtlicher Perspektive noch interessant, Kontrollen einzuführen, die diese Gleichstellung garantieren könnten. Ob man nicht überprüft und sagen kann hier, wir kontrollieren das dauerhaft und können da wirklich sagen, wir halten die Onlinewerbung an die gleichen standards, wie die traditionelle.

[Potthast]: Du meinst inhaltlicher Natur. Oder was Sendezeiten angeht. Also weil das ist beispielsweise, da gibt es so abgestufte Konzepte, was die Sichtbarkeit im Sinne von wie lange darf eine Parteiwerbung ausspielen und darf es die kleinen Parteien auch und wann dürfen Parteien wie lange Plakate aufhängen und sowas? Solche solche Regelungen gibt's. Und ja, so, ob man das jetzt eins zu eins übersetzen kann? Es ist so ein bisschen die Frage, also wird es auch Gegenstand so ein bisschen meiner Arbeit, weil ich. Und das wäre vielleicht auch eine interessante Frage an dich, ob du mir da vielleicht weiterhelfen kannst, weil ich mir gedacht habe. Wenn man jetzt über die Straße läuft und da sind 50 Werbebanner, dann ist es ja eine sehr, sehr begrenzte. Also die Zahl ist ja endlich. Aber Werbung auszuspielen auf Social-Media-Plattformen beispielsweise, das ist ja

jetzt erstmal keine endliche Ressource. Oder wäre dann nicht das viel wichtigere, das die wichtigere Merkmal, die Aufmerksamkeit als Währung sozusagen? Also das ist ja so ein bisschen sowieso, das Gut der der Social Media Plattform eben die Aufmerksamkeit und die Aufmerksamkeitssteuerung. Und so würdest du sagen, es gibt auf Social Media Plattformen eine Endlichkeit der Werbeanzeigen.

[Krafft]: In gewisser Weise auf jeden Fall, weil das ja alles Geld kostet. Also allein aus dem Aspekt kann man ja nicht unendlich viel Werbung schalten, weil das wird dann schnell sehr teuer. Und ja, dahingehend hat man eine Restriktion von außen, von der reinen Menge, die eine Person angezeigt bekommen kann, an sich jetzt. Nur kann man es nur über die Zeit begrenzen, über die Zeit, die die Person auf der Social-Media-Plattform verbringt. Wenn ich nur 5 Minuten auf Facebook bin und die mich nur mit Werbung zukleistern und ich keinen einzigen Post sehe, komm ich nicht wieder.

[Potthast]: Ja, ja, das stimmt. Ja, ja und die Timeline ist wahrscheinlich auch nicht unendlich. Also ich meine, man sieht ja auch nur einen bestimmten Abschnitt. Und wenn ich mich jetzt 5 Minuten an der gleichen Stelle aufhalte, dann ja klar.

[Krafft]: Also ich muss, ich muss ich immer weiterbewegen. Aber da findet Facebook immer Dinge, die die anzeigen kann. Auf derTimeline.

[Potthast]: Ja okay. Wäre dein, dieses Studiendesign auf Facebook quasi ausschließlich, also beschränkt. Oder würdest du auch Twitter oder andere in Betracht ziehen?

[Krafft]: Das direkt wäre nur für Facebook einfach aus dem Gedanken heraus, weil es ist technisch immer ein sehr großes Problem auf verschiedenen Plattformen diese Werbung abzugreifen, weil es da keinerlei Gemeinsamkeiten gibt. Wenn man hinter die Optik selber geht. Die sind intern so konfus aufgebaut, um jegliche Art von Bots aktiv zu vereiteln. Das es unheimlich schwierig ist, da auf mehreren Plattformen mit nur einem Tool zu arbeiten. Deswegen ist es dann nur auf Facebook jetzt begrenzt. Viele Aspekte davon kann man natürlich auch auf andere übertragen. Der technische Teil aber ist komplett auf Facebook festgelegt.

[Potthast]: Ja, ok. Ja, ich finde, das finde ich auch nochmal interessant. Die verschiedenen Plattformen und welche Unterschiede es dann Die es gibt. Aber jetzt weiß ich noch nicht, ob das überhaupt rechtlich fruchtbar zu machen ist. Es ist sowieso ein ganz kleines bisschen so. Das Problem, dass vieles von dem, was was gesellschaftlich und politisch diskutiert wird, eben nicht zwingend rechtlich fruchtbar zu machen ist.

Michael Puntschuh

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in a think tank called "irights-lab"[2] in the the research division. He coodinates the "Algo.Rules" project[3], which wants to bring the discussion about the ethical and societal implications of algorithmic decision making into the broader public.

[Krafft]: Erstmal auf jeden Fall danke, dass du dir die Zeit genommen hast. Ich hoffe es ist okay, wenn ich dich duze?

[Puntschuh]: Absolut, bitte.

[Krafft]: Die Mails waren ja, die E-Mails haben so gewirkt, aber ich wollte das nochmal klarstellen vorher. Also ich würde anfangen, kurz erklären, was das eigentliche Ziel meiner Arbeit ist und dann nochmal darauf eingehen, was genau ich mir von dem Interview jetzt so grob erhoffe. Angefangen hat es als Studie über politische Werbung auf Facebook während der mittlerweile letzten US-Wahl. Bei der vorherigen in 2016 gab es ja viele Probleme mit politischer Einflussnahme auf Facebook, vor allem über Werbeschaltungen. Und ich wolllte da mal untersuchen, so wie die gerade abläuft, was da passiert, ob es da sehr krasse Gegensätze gibt für bestimmte Personen in sehr kleinen gruppen. Ob es da widersprüchliche Nachrichten gibt und insgesamt, wie die aktuelle Lage da einfach ist. Dann kam aber leider Corona und das hat das alles sehr verzögert. Bei der Recherche ist mir aber bereits aufgefallen, dass es zu dem Thema für meinen Geschmack zu wenig gibt. Dafür, wie relevant es ist. Daher hat sich die Arbeit dann ein bisschen umgewandelt zu einer Art Framework, die dabei helfen soll. Wie man so eine Studie über personalisierte oder auch politische Werbung auf Facebook aufbauen kann und die auch den technischen Aspekt ein bisschen vorbereitet, sodass einfach mehr Institutionen, Journalisten und Personengruppen solche Studien durchführen können und dann halt auch völlig verschiedene Ziele damit erreichen können. Deswegen ist das die Studie, das Framework sehr offengehalten und würde sehr viel dem Designer final überlassen. Das direkte Ziel dabei wäre dann natürlich, jetzt bei der Bundestagswahl 21 da in Deutschland ein bisschen ein Auge drauf zu haben, wie da die Auslieferung der Werbung auf Facebook läuft. Aber idealerweise kann das auch viel für mehr genutzt werden, auch in dem wirtschaftlichen Bereich, wie da die die Auslieferung sind und was da so passiert. Was wir von dem Interview erhoffen würde, ist da noch ein bisschen abzuklopfen, was man denn überhaupt in solchen Studien überprüfen könnte. Was aus deiner Sicht dafür relevant wäre für die einzelnen Ziele und ob es insgesamt einfach Möglichkeiten oder auch Einschränkungen gibt, die ich übersehe, da ich einen sehr technischen Hintergrund habe und dann natürlich einen völlig anderen Blickwinkel habe.

[Puntschuh]: Ich hätte noch vielleicht eine, noch ein paar Fragen zu der Studie selbst oder zu dem zu dem Problem, das ich mir anschaue. Also einmal einmal kurz zur Zielstellungen. Inwiefern geht es darum

2 https://irights-lab.de/

3 https://irights-lab.de/projects/algo-rules/

auch indem in dem einen Seite hießes Prototyp wie viel des Studiendesign und wieviel ist wirklich schon die Entwicklung von diesem Pluginin oder dieser der technischen Infrastruktur dahinter, die solche Studien ermöglichen soll?

[Krafft]: Also das Plugin selber wäre grob bereits fertig. Das würde ein Scraper beinhalten, der auf Facebook, also es ist ein Browser-Plugin das installiert werden muss. Wenn es installiert ist, würde es im Hintergrund, wenn man auf Facebook surft und sich einfach bewegt, alle als Werbung gekennzeichneten Posts rausscrapen, also extrahieren. Und dann gäbe es zwei Optionen entweder das alle direkt übermittelt werden würden an einen Server oder dass der User nochmal entscheiden kann, ob er nur eine Teilmenge davon einsetzen möchte. Das kann man aber komplett noch offen lassen. Der Server selbst wäre halt noch gar nicht implementiert, weil da sehr viele Datenschutzrichtlinie dazukommen und auch der, der die Studie final durchführt entscheidungen treffen muss, welche persönlichen Daten erfasst werden müssen und wie groß die Verbindung zwischen diesen persönlichen Daten und der Werbung dann am Ende ist, aus insgesamt datenschutzrechtlichen Gründen. Das heißt wie gesagt, das Plugin wäre grob fertig. Es braucht ein bisschen Feinschliff für die finale Anpassung, aber der sehr technische Aspekt ist fertig.

[Puntschuh]: Dann die zweite Frage, die ich hatte, war, widersprüchliche Aussagen oder widersprüchliche Inhalte. Was meinst du damit?

[Krafft]: Da war der Gedanke, dass während es theoretisch schon möglich ist, auf Facebook so genau Leute zu targeten, dass man komplette Teilmengen nehmen kann und für die die jeweilige Aussage der Anzeige komplett anpassen kann. Ich könnte also einen sehr konservativen Bereich der Bevölkerung nehmen und sagen, dass ich bestimmte Ansichten habe. Und es gibt völlig getrennt von denen, einen liberalen Teil der Bevölkerung ansprechen und denen das genaue Gegenteil entsprechen. Und jetzt mal ganz krass zu werden. Und da gibt es ja diese Aussage das Narrativ, dass das aktuell versucht wird, in diesem sehr aufgeladenen Wahlkämpfen von populistischer Seite, dort einfach genau so zu arbeiten, Leuten das zu versprechen, was sie haben wollen, mit null Intention, das auch wirklich einzuhalten, was dann halt ja auch überhaupt nicht geht. Wenn ich auf der einen Seite verspreche, etwas zu tun und auf der anderen Seite das genaue Gegenteil verspreche.

[Puntschuh]: Okay, das wäre erst mal, glaube ich, dass ich noch genug zum Verständniss habe. Sollen wir dann jetzt einfach darüber sprechen, oder hast du direkte fragen? Oder wie wollen wir? Wie möchtest du das strukturiert haben?

[Krafft]: Also ich habe einen groben Leitfaden, den würde ich aber eher für mich als Gedächtnisstütze nutzen, wenn wir auf irgendetwas nicht einfach natürlich drauf zu sprechen kommen. Wir können direkt einfach so anfangen. Wenn du das möchtest.

[Puntschuh]: Ja cool. Also erstmal erstmal super spannend und cool. Auch, dass du dir überlegst die Grundlagen legen willst, damit andere das nutzen können. Finde ich einen spannenden Gedanken und natürlich ein spannendes Thema. Auch weil wie du auch gesagt hast sozusagen es gibt noch nicht so krass viel Forschung dazu und die Forschung ist auch nicht ganz eindeutig, die es dazu gibt. Also wie sozusagen einmal die Frage, ob das stattfindet und in welchem Maße das stattfindet. Aber dann auch die Frage inwiefern hat das tatsächlich Auswirkungen auf Wahlen und inwiefern hat das Wahlverhalten beeinflusst? Auch wenn das jetzt etwas ist, was du in dem Studiendesign nicht messen würdest. Aber, aber da gibt's ja eben unterschiedlich, oder Studien, die Unterschiedliches aussagen und auch nicht unbedingt den Effekt, so teilweise eben den Effekt gar nicht so groß dann schätzen, wie man es vielleicht denkt oder wie es auch in der politischen Debatte vielleicht auch kommt. Genau. Also ich gehe einfach mal durch Punkte durch, die ich mir aufgeschrieben habe, ohne dass das jetzt besonders strukturiert ist. Also ein Gedanke da falls du noch dazu mehr Untersuchungen brauchst, auch gerade aus der sozialwissenschaftlichen Ecke, dann kann ich den Forschungsmonitor Informations-Intermediäre empfehlen. Den macht eine Kollegin von mir. Und da fasst sie jedes Quartal glaube ich einmal Forschung zu, ja Plattformen, also Informations Intermediären, zu Plattformen, die informationen teilen oder als informationsvorbereitungs Plattform dienen. Forschung und Ergebnisse dazu zusammenfasst. Es gab auch, glaube ich mal eine ausgabe, zu Wahlen genau. Weiß nicht ob du das kannst, aber jedenfalls kann ich schon mal empfehlen. Dann zu dem Punkt widersprüchliche Aussagen. Das finde ich ja. Das finde ich wirklich, also finde ich eine interessante Frage, weil sich mir dann da die Frage stellen würde: Okay, was willst du genau erfassen? Also geht es um eher um das Framing der Aussagen. Also ich kann ja dieselbe politische Botschaft oder auch z.B. dieselbe politische Handlung mit unterschiedlichen Geschichten erzählen und unterschiedlich framen oder unterschiedlich legitimieren oder begründen. Oder geht es tatsächlich darum, oder zweitens geht es darum, unterschiedliche Teile derselben Agenda nur eben teilweise zu präsentieren? Ja, also irgendwie. Kandidatin A hat Maßnamen 1, 2 und 3 und die werden aber nicht alle 3 gleichmäßig an alle Gruppen kommuniziert. Oder dann drittens und das klang jetzt eher so, als geht das in die Richtung geht es wirklich um die Kommunikation unterschiedlicher Maßnahmen, also auf der Sachebene und nicht auf der Framing Ebene? Unterschiedliche Messages und sozusagen da. Also da finde ich es schon das wäre schon ein krasser, finde ich ein großer Erkenntniswert, überhaupt sowas zu erfassen, dass es überhaupt so was stattfindet und noch gar nicht, dass es groß getargetet ist, sondern dass überhaupt, dass es auf der Sachebene sozusagen solche Widersprüche gibt. Und ich bin mir nicht ganz sicher, wie man das gut messen kann dann

oder wie man das gut quantifizieren kann, weil das eigentlich alles dann eher eine Inhaltsanalyse wäre und eine qualitative Analyse. Aber vielleicht kann man sogar irgendeine Metrik entwickeln oder vielleicht gibt's sogar eine Metrik dazu, wie sehr zwei Aussagen sozusagen auseinandergehen oder nicht, weil widersprüchlich. Klingt jetzt so quasi nach entweder sie sind widersprüchlich oder sie sind nicht widersprüchlich. Aber man müsste halt gucken, was ist der Grad an Widersprüchlichkeit, sozusagen an der Aussagen oder der Grad an Unterschiedlichkeit. Vielleicht weil das klang ja so, als wäre das auch das Ziel von dem Design. Also quasi, dass unterschiedliche Gruppen unterschiedliche Messages bekommen.

[Krafft]: Also das war einfach nur so ein Fall, der für mich technisch sehr einfach umsetzbar ist, aber gesellschaftlich unheimlich schlimme Auswirkungen haben könnte. Ich sage jetzt einfach mal so, dass man mit diesen genauen targeten auch sehr unterschiedliche Aussagen an die Person liefern kann, die wenn sie nicht aktiv drüber reden halt kommt es ja nie raus aktuell. Ich würde jetzt nicht mitkriegen, wenn jemand mit einem komplett mir entgegenstellten politischen Einstellung eine völlig andere Werbung angezeigt bekommen würde. Das würde ich übers Internet aktuell nicht mitkriegen. Das wüsste ich nicht. Und die Person da würde ich genauso wenig. Und dann wären wir beide für eine Person, die ja völligen Blödsinn verspricht und einfach nur gewählt werden möchte. Deswegen war das für mich so ein Punkt, den ich gerne angesprochen habe, weil es technisch eigentlich so einfach umsetzbar ist, mit den ganzen Möglichkeiten, die Facebook einem da liefert Werbung zu targeten. Damit wäre es eine politische Werbung zu schalten sehr einfach, Ja, und das war ein politischer Gedanke dahin gehend, dass man das aktuell nicht wirklich erfassen könnte und das kein guter Zustand ist.

[Puntschuh]: Ja, vielleicht. Du bräuchtest vielleicht irgendwie Benchmarks, weil einerseits was mir einfällt, das greift dann in die ganze Forschung zu Teilöffentlichkeiten, was auch in sozusagen in einfach in die Öffentlichkeitsforschung oder auch Diskurrsforschung geht. Und vielleicht könnte man als Benchmark nehmen, weil es gibt ja trotzdem noch Medien, die diskriminierungsfrei kommunizieren, also die klassisch funktionieren und an grundsätzlich nicht ne ganz fest definierte Zielgruppe haben. Webseiten, Fernsehen, Zeitung und also vielleicht wäre das dann eine Möglichkeit, wie du die Werbung, die du dann über Facebook irgendwo abfängst, dass du die gegen das, was sozusagen die offizielle Linie ist in Anführungszeichen, benchmarks´t und dann schaust okay, ist das wirklich, ist das unterschiedlich davon? Und wo ist das unterschiedlich? Auf der Framing-ebene, auf der Sachebene. Genau damit du dieses wie Unterschiedlichkeit oder Widersprüchlichkeit auch ein bisschen noch, damit das noch klarer ist, was du damit meinst. Weil wenn man eben sagen würde ja, es wird unterschiedlich geframet. Dann hätte das aus sozusagen aus

sozialwissenschaftlicher Perspektive geringere Auswirkungen auf den öffentlichen Diskurs, als wenn es wirklich auf der Sachebene unterschiedliche Aussagen sind. Weil dann ist das ja quasi eine kognitive Dissonanz schon. Also dann ja. Und das das zu erfahren wie das, ob das eine oder das andere überwiegt oder wieder das Verhältnis ist wäre super spannend, auch um ganz andere Arten von Studien da darauf aufzubauen. Also um überhaupt zu ermitteln und zu schauen, wie kommunizieren eigentlich Parteien im sozusagen im Zeitalter von Social Media. Genau das vielleicht zu dieser, zu dieser Widersprüchlichkeit. Ich überlege gerade, ob ich da irgendwas ganz Konkretes kenne, aber ich habe nie Wahlforschung, wirklich, ich war nie da in dem Bereich wirklich aktiv.

[Krafft]: Ja, es ist ja kein Problem, wenn man da nicht aktiv war, dann findet man ja auch nicht immer alles.

[Puntschuh]: Ja dann, genau dann hätte ich noch gefragt, was wird. Was genau wird gesammelt und mit was? Was wird mit das abgeglichen? Also einerseits. Im Prinzip gibt's ja quasi die Möglichkeit zu sammeln mit dem Inhalt die Inhalte auf Social Media, dann die Kriterien, die Werbelriterien von Seiten der Werbetreibenden, die sie eingegeben haben, um diese Anzeige zu schalten. Also was unter diesem kleinen Fragezeichen steht. Und dann die ist quasi das tatsächliche Profil der Person, der diese Werbung angezeigt wurde. Und hast du dann vor dann alles drei zu erfassen.

[Krafft]: Zwei davon auf jeden Fall. Also da erst mal der reine Inhalt der Werbung wird auf jeden Fall erfasst werden. Und bei dem Profil der Person ist halt wieder dieser Datenschutz Aspekt da. Das heißt, da muss man sich halt bei der, da musst der finale Designer der Studie sich entscheiden wie viele Daten er braucht und wie viele er dann auch noch abfragen möchte. Aber das kann natürlich. Das kann halt immer zu einer negativen Reaktion bei den Leuten dann führen, dass sie nicht so viel über sich selber preisgeben wollen. Und wenn man zuviel fragt, dann kommt vielleicht auch immer der Punkt, dass jemand sagt, Nee, mache ich doch nicht mit und löscht das Ganze wieder. Das mit den auf welchen, mit welchen Ziel Vektoren die Werbung gearbeitet hat, würde ich noch gerne hinzufügen. Da muss ich gucken, ob das gut funktioniert. Wenn das funktioniert, würde ich natürlich drin haben, weil das sehr wichtig ist. Aber vor allem finde ich auch relevant, ob das wirklich alle. Da ist wieder so ein bisschen Vertrauen an Facebook drin, dass sie einem da wirklich alles sagen. Da hat man von außen aktuell wenig Verifikation Möglichkeiten, dass da nicht doch noch was passiert. Also auch so ein Aspekt, den ich mit diesem Design insgesamt ein bisschen verbessern werden verbessern möchte, das man hier halt auch einfach verifizieren kann, dass diese Aussage die Facebook tätigt. Wir benutzen nur diese Aspekte. Wir haben uns bewusst gegen diese Targeting Möglichkeiten entschieden, auch wirklich nicht mehr da sind oder sie einfach nur für genug Geld vom Werbe Betreiber doch

noch verfügbar sind. Ja, aber da wäre auch die Frage noch ganz gut, was du dir vorstellen könntest, was man da an Zielen verfolgen könnte. Mit welche Anwendungs Szenarien könntest du dir denn vorstellen? Auch weg von diesem widersprüchlicher Werbung und allem?

[Puntschuh]: Ja. Also vielleicht einmal, was ich mir vorstellen könnte, sozusagen das tatsächliche Profil der Personen. Ich weiß nicht, ob das nicht auch grundsätzlich schwierig ist zu erfassen, weil im Prinzip bräuchtest du ja die quasi den du hattest das jetzt Vektoren genannt. Also du bräuchtest ja quasi den Vektor der Person, den Facebook irgendwo abgespeichert hat. Weil du das auch nur begrenzt herauslesen kannst aus dem, was auf dem Profil wirklich sichtbar ist. Da steht dann zwar irgendwie die und die Parteien sind geliket oder so. Aber im Prinzip brauchst du der Vektor, der gebaut wird aus der gesamten Nutzungs Historie.

[Krafft]: Da wäre halt eher der Versuch, aus den den tatsächlichen Eigenschaften das reverse zu engineeren. Das heißt, wir würden den Fragebogen einfach so demografische Information abfragen und dann, facebook Verpacktes am Ende ja natürlich anders, aber effektiv wären und dann mit dieser Werbung nur Männer in dieser Altersgruppe angepeilt und die noch diese Sub-Eigenschaften haben. Natürlich können wir da nicht auf genau die Daten arbeiten die Facebook hat, weil Facebook die ja auch nicht zur Verfügung stellt.

[Puntschuh]: Also was ja auch eine Möglichkeit wäre, ob man irgendwie mit Nutzer;Innen Feedback arbeitet. Also also quasi das für die, das, für die die politische Werbung dann angezeigt wird in diesem Plugin oder in einem Fenster, das sich da dann öffnet. Diese Werbung wird ja angezeigt, weil du der und der und der Gruppe angehörst. Stimmt das oder stimmt das nicht? Aber je nachdem, wie sozusagen was man erfassen will. Aber das wäre vielleicht noch eine Möglichkeit, wenn du nicht unbedingt direkt ein Profil erstellen willst über die Person, die dann teilnimmt an der Studie. Das wäre etwas Datenschutz freundlicher, weil du dann jeweils nur immer, weil du könntest dann zwar immer noch extrahieren, was für ein Profil, was für ein Profil die Person vermutlich hat auf Basis der, sozusagen auch wenn du aggregiert alle politische Werbung, die diese Person jemals gezeigt hat und ob sie halt gesagt hat ja zutrifft, nicht zutrifft, trifft nicht zu. Aber du könntest, wenn du das separat abspeicherst, dann hättest du eigentlich auch gar keine Möglichkeit mehr, das zurückzuverfolgen. Also wenn du quasi jede Werbung für sich als ein Datenpunkt abspeichern. Und dann eben nur noch abgefragt wird, passt das jetzt zu? Passt das zu dir? Passt das nicht zu dir? Ja, aber das geht genau, hängt davon ab, was man dann für eine Erkenntnis haben will. Vielleicht.

[Krafft]: Aber es ist ja insgesamt auch eine recht interessante Frage, ob die Werbung tatsächlich relevant war. Also so ein bisschen in die Richtung, ob das Profil, das Facebook gebaut hat, wirklich passt zur Person, dann final. Finde ich tatsächlich.

[Puntschuh]: Also das gibt's ja auch in den Wahlforschung oder Wahlkampf Forschung. Das dann halt Plakate gezeigt werden und Leute sagen, Städter sollen sagen Spricht dich das an. Bewegt dich das emotional, dass man das halt mit einem Fragebogen verbindet. Das macht es natürlich aufwendiger, die Teilnahme. Aber man kann das ja auch staffeln. Man könnte ja auch sagen Okay, man sammelt sozusagen für alle, für den gesamten Wahlkampf. Alle Daten ab und fragt, aber jede Nutzer:In zehnmal in diesem Zeitraum oder so, ob die Werbung gepasst hat. Man könnte dann auch dann hast du halt unterschiedliche Datensätze, mit denen du dann weiterarbeiten kannst. Und diese ist sozusagen. Passt das zu dir? Passt das nicht zu dir? Da ist auch die Auswertung vielleicht nochmal, je nachdem, ob man auch da vielleicht eine offene Frage einbaut oder so. Natürlich nochmal aufwändiger.

[Krafft]: Also viel von der Auswertung muss effektiv von Hand geschehen und halt viele von der Einordnung der Werbung selber, weil da ja sehr viel über den Wortlaut passiert und auf emotionaler Ebene abläuft. Das ist mit einer automatischen Auswertung nur sehr schwer wirklich abzugreifen. Also das werde ich auch. Hab ich auch vor da noch eine Warnung, da noch drin reinzuschreiben, dass die Auswertung viel Handarbeit fordern wird, weil halt. Menschen reagieren anders. Also wir reagieren auf Text? Nicht nur anhand der Worte. Ja.

[Puntschuh]: Ja, und ich meine, was, wenn du quasi wenn du die ganzen Daten abkratzt, hättest du auch den Vorteil, dass man sich dann fokussieren kann. Also dass du dann z.B. erkennen kannst Ja okay, diese 50 Werbeanzeigen Typen wurden von den meisten Leuten gesehen. Da hab ich die größte bedingende den größten Datensatz zu. Dann schaue ich mir auch die jetzt nur inhaltlich an und nicht alle 1000 oder so.. Also das wäre auch nochmal eine Möglichkeit, da dann die, das zu verengen. Wenn das heißt, wenn man das in seiner Bachelor- oder Masterarbeit macht und nicht ein dreijähriges Forschungsprojekt dazu durchführt bei.

[Krafft]: Tatsächlich kann man dadurch die Häufigkeit bereits eine gewisse. Einen Fokus legen auf jeden Fall, je nachdem, was das Ziel ist, guter Einwand.

[Puntschuh]: Und dann? Was natürlich Einschränkungen sind, aber das wird dir wahrscheinlich alles bekannt sein ist. Du hast einmal, einmal natürlich eine Einschränkung. Welche Leute sind überhaupt auf dieser Plattform unterwegs? Auf Facebook, zu dem du die Daten sammelst und dann als zweites welche Leute installieren sich so ein Plugin? Das macht es insgesamt natürlich natürlich viel schwieriger. Aber ich wüsste auch nicht, wie man das groß, irgendwie das gross verbreiten könnte ohne. Ohne ihn, ohne irgendwie eine Kooperation mit jemandem eingehen zu müssen, der da Daten in dieses System speist, sprich mit, mit einer, mit einer Plattform oder mit Parteien,.

[Krafft]: Also der Selektion-bias bei diesen, bei diesen Studien ist immer sehr hoch. Das ist halt genau dieser Aspekt, dass nur die, die daran teilnehmen wollen, auch teilnehmen werden, solange es freiwillig passiert. Da war bis jetzt halt die einzige Lösung, die ich dafür wirklich hätte, wäre entweder mit großen Instituten zusammenzuarbeiten, die hoffentlich eine Groß genuge Reichweite und dann auch Vertrauen der Bevölkerung haben, dass da Leute, die normalerweise nicht teilnehmen würden, trotzdem teilnehmen werden. Und der letzte, die letzte Lösungs Methode ist ein gekauftes, repräsentatives Sample. Da es halt anders kommt man kaum an eine wirkliche Repräsentativität von einer von solchen Gruppen. Ja, das ist auch bei allen Studien, die ich sonst zu diesem Thema gelesen habe, denke ich immer das Hauptproblem. Da werden teilweise Sample Größen von 500 Leuten genommen, weil man einfach nicht mehr hat.

[Puntschuh]: Ja, ja, das ist nicht schwierig. Man müsste irgendwie überlegen, ob man bei dem ProPublica gab's das ja auch so ein bisschen, dass man überlegt, wie kann man einen Anreiz schaffen, sich dieses Plug-Ins holen mehr als nur ich gebe daten für die Wissenschaft und bei ProPublica war, das glaube ich, dass dann auch Werbung das sie dir ja dann auch mal gezeigt haben, welche Werbung wir jetzt nicht zu sehen bekommen hast. Also das ist so eine Art Neutralitätscheck oder sozusagen Widersprüchlichkeitscheck an und für sich war. Das kann könnte attraktiv sein. Oder dass man sich irgendwie Gamification Faktor einbaut, also überlegt, ja. Bist du vielleicht sogar der mit den widersprüchlichsten Werbeanzeigen auf Facebook? Oder weiß nicht das, das ist jetzt jetzt jetzt schon ein bisschen vom Studiendesign weg und mehr ins Marketing für die Datensammlern. Aber. Aber wenn eben Sample Bias oder Selection Bias so ein großes Problem ist, dann, dann ist das schon wichtig zu überlegen, wie kommt man da in andere Zielgruppen rein. Und öffentlich gibt's halt nicht so viel. Ah, genau eine Sache hatte ich noch sozusagen Werbung auf Social Media. Was? Was genau? Also fallen darunter sozusagen nur die Werbeanzeigen, die bezahlten Werbeanzeigen, die auch als solche gekennzeichnet sind. Und was ist, wenn wenn das jemand teilt? Oder wenn jemand den Text zu einer Werbeanzeige verlinkt und dann separat postet? Also es geht. Ich gehe schon sehr breit. Aber ich überlege quasi wie Information auf Social Media sich verbreiten und eine Werbeanzeige zu sehen ist sicherlich ein ein Teil und es ist auch der Teil der am ehesten... Sozusagen direkt kontrolliert wird von denen, die die Anzeigen schalten. Aber sie bauen ja auch darauf, dass sich die diese Anzeigen dann selbst verbreiten, dass das Leute liken, dass das Leute auf ihren Profilen teilen, weil sie die Werbung so cool finden oder weil Obama was Obamacare alle Leute tötet oder so.. Es baut ja auch darauf, dass es, dass es geteilt wird und da entfaltet es dann auch nochmal eine andere Wirkung. Aber das zu erfassen ist ein fließender übergang.

[Krafft]: Also wenn das ein wirkliches Teilen des Posts, dann würde er glaub ich sogar vor dem Tool bereits noch mit getrackt werden können. Wenn natürlich jemand in einem natürlichen Post effektiv eine Werbeanzeige schaltet, kann man das nicht wirklich nachvollziehen. Da müsste man ja die komplett analysieren und auch das Profil dahinter. Ob das wirklich jetzt eine Werbung ist oder einfach seine Meinung. Das ist also ob man das gut nachvollziehen kann, weiß ich nicht. Aber ist natürlich ein großer, ein völlig anderes Problem, was da noch existiert, weil es gibt das ergibt ja die so Bot-Accounts, die effektiv Werbung betreiben und sich nur als natürliche User tarnen. Ich glaube, das wäre ein Feld, das zu sehr von dem eigentlichen Werbung sammeln abweicht, als dass man das sinnvoll verknüpfen könnte. Definitiv wichtig, aber ich bin gar nicht drauf gekommen, dass man sowas damit hätte abdecken können. Aber mir fällt kein guter Weg ein, ich hätte es mal notieren. Eventuell komme ich darauf zurück.

[Puntschuh]: Kann ja auch einfach nur der Einschränkung eine Grenze des Designs sein. Ja, was ja völlig in Ordnung ist.

[Krafft]: Also mindestens das werde ich natürlich reinbringen. Aber auf jeden Fall nochmal ein bisschen Gehirnarbeit reinfließen lassen.

[Krafft]: OK, dann wäre ich jetzt durch die Punkte, die mir spontan eingefallen waren, dass man durch gut an.

[Krafft]: Ich hab mich mal mit dem iRights-Lab noch ein bisschen auseinandergesetzt. In Vorbereitung hierauf. Und ihr habt hier einen kleinen Fokus zumindest auf die Governance von Algorithmen. Also ein bisschen die im Auge behalten.

[Puntschuh]: Ja.

[Krafft]: Wäre es da nicht. Wäre da nicht auch so ein paar Watchdog Ansätze für Facebook-Werbung. Interessant aus dieser Sicht also quasi ohne direktes Ziel einfach im Auge zu behalten, was da aktuell passiert, um Fehler und Fehlverhalten wirklich vorbeugen zu können und nicht erst, wenn es mal anekdotisch aufgetreten ist, dann halt zu reagieren zu müssen.

[Puntschuh]: Also also quasi sowas. So ein Tool im weitesten Sinne für Monitoring, also für Monitoring wirklich zu verwenden.

[Krafft]: Ja so die Richtung.

[Puntschuh]: Das wäre dann ja das hängt natürlich damit zusammen, wie stark überhaupt Wahlkampf und politische Werbung grundsätzlich reguliert sind. Da bin ich leider nicht so tief drin. Also quasi jetzt wirklich rechtlicher watchdog. Inwiefern sich das lohnen würde?

[Krafft]: Es muss ja nicht rein rechtlich sein. Es kann ja auch der gesellschaftliche Impact sein, der einfach gemessen und im Auge behalten werden soll.

[Puntschuh]: Da gehe ich, da gehe ich voll mit. Also da gäbe es auch ein großes Interesse für die für die Gesamtbevölkerung. Weil du natürlich Parteie, du schafst einen Anreiz, wenn du das über

warst, du unveröffentlichter. Ein Anreiz für Parteien, gradlinig zu kommunizieren oder einheitlich zu kommunizieren. Oder vielleicht nur Framing anzupassen, aber nicht auf der Sachebene Widersprüche dazu kommunizieren, widersprüchlich zu kommunizieren. Und das, ja also mir fällt ein, es gibt z.B. in Tschechien ab und zu zu Wahlen so eine Aktion. Da fotografieren Leute Wahlplakate und senden die einen, weil es in Tschechien keine Zahlen oder keine offiziellen Zahlen dazu gibt, wie wie viel eigentlich Parteien für Wahlwerbung ausgeben. Und ja, ich ich hab war, ich hab mal ne hab mein halbes Jahr für Transparency International in Prag gearbeitet und das war eigentlich ganz cool, weil man darüber dann einmal erfahren hat so okay, welche Partei macht wieviel Werbung natürlich und natürlich krass verzerrt, weil Leute haben das freiwillig irgendwelche Fotos rein gepostet. Aber wenn Partei A doppelt so viele Plakate hatte wie die Partei B, dann konnte man schon vermuten, dass auch die Budgets unterschiedlich sind. Und so was ähnliches könnte das ja auch sein, dass man so eine so einen. Wie heißt das politifact. Ne. Diese. Diese diese mit die erste perfekt checker Seite, wo es ja dann profile auch gibt zu einzelnen Politiker:Innen und wo dann immer stand im schnitt more or less truthful oder pants on fire oder. Also dass man dann so einen fast schon mehr Berichterstattung draus macht und dann sagt okay, nächste Woche ist Wahl. Wir haben uns jetzt okay, ist vielleicht ein bisschen ambitioniert, aber schau uns die letzten vier Wochen Parteiwerbung angeschaut und folgende Parteien kommunizieren einheitlich folgende Parteien personalisieren Messages, aber sind auf der Sachebene gleich und folgende Parteien kommunizieren grundsätzlich widersprüchlich, also dass wir. Wer da sicherlich was was für Journalistin interessant wäre für zivilgesellschaftliche Organisationen alle möglich, also sowohl in der IT-Branche mobil, ja eher unterwegs oder ich eher unterwegs bin oder auch Tobias oder auch die klassische politische Bubble, also irgendwie Abgeordnetenwatch. Germanwatch Also die Richtung. Also ich habe schon richtig Lust drauf, diese Erkenntnisse zu sehen und inwiefern das? Ja, inwiefern wirklich? Wie überhaupt kommuniziert wird und wie widersprüchlich das ist. Oder. Oder nicht.

[Krafft]: Ja, ich glaube auch, dass das es unheimlich viel Nutzen hätte, wenn es denn in einer relevanten Größe durchgeführt wird. Und ich hoffe, dass ich damit so ein bisschen unterstützen kann. Das ist das große Ziel davon.

[Puntschuh]: Ja, also man kann verschiedene. Ich meine, jetzt gehen wir schon eher in die aktivistische Richtung. Aber wenn man, wenn du z.B. herausfinden würdest, dass die sozusagen das Facebook sagt, das und das ist das Profil der Person, also der Ziel Vektor, aber der tatsächliche Vektor der Person ist anders und deshalb wird der Person die Werbung angezeigt, dass es da einen Unterschied gibt zwischen dem, wie das Transparent kommuniziert wird und das, was tatsächlich der Fall ist. Es wäre natürlich krass.

[Krafft, Tobias]: Das ist ja auch die Sache, weswegen wir tatsächlich noch Personen oder Institutionen suchen, mit denen wir sowas durchführen können. Bisher ist es ja nur die Entwicklung des Studiendesign, was wir euch allen schmackhaft machen wollen.

[Puntschuh]: Also ja, also ich finde das schon mal gut als Forschungsprojekt auch spannend. Und ich weiß jetzt nicht, ob das auch, ob das jetzt auch Teil dieses Gesprächs wäre. Aber ich glaube, das würde auch irgendwie in den Forschungsbereich vom iRights-Lab fallen. Und ich kann mir eigentlich auch vorstellen, dass es, dass es für solche Studien auch gut Finanzierung zu finden gäbe. Wenn man jetzt schon in die Richtung überlegt. [Handy Klingelt]. Entschuldigung. Ja.

[Krafft]: Gut. Dann hätte ich noch das grobe Anwendungsszenario, ob das relevant sein könnte aus deiner Sicht, wenn bestimmte Gruppen, die man als verletzlich einstufen könnte getargetet werden, also sehr kleine Gruppen, die eventuell durch bestimmte Eigenschaften als schützenswert gelten Wenn man die speziell für solche Werbung, sei es politisch oder auch auf rein wirtschaftlicher Ebene targeten würde. Siehst du, da auch Bedarf oder Nutzen, wenn man das genau im Auge behalten würde oder wenn die das Narrativ bereits vorkommen würde, untersucht.

[Puntschuh]: Was meinst du denn mit besonders gefährdet?

Jetzt aus einem wirtschaftlichen Standpunkt heraus? Da hatte hatte ich vor einigen Tagen mit jemandem geredet, der hat es angesprochen, dass es bereits das Narrativ gibt, dass einkommensschwache Personen oder Personen, die, soweit Facebook es weiß, auch mit ihren Finanzen Probleme haben, häufig sehr subversive Finanz Angebote kriegen. Also Banken, die unheimlich hohe Zinsen für Dispos verlangen und auch sehr hohe Kontoführungsgebühren. Kredite, die auf den ersten Blick natürlich super wirken und dann riesige Zinsen im hinaus haben. Aber halt diefes. Da wird versucht, dass Leuten, die finanzielle Probleme haben, diese Probleme auszunutzen und das halt vielleicht auf diesem Weg oder auch noch, ob du dir andere solche Fälle vorstellen kannst. Wo so etwas getan wird.

[Puntschuh]: Also ich kann mir vorstellen oder was interessant zu wissen wäre eben, inwiefern, wenn dieses tailoring stattfindet, ob das ob auch wirklich Manipulations Mechanismen ausgenutzt werden wollen, die psychischen Druck ausüben auf die Personen, je nachdem, dass man irgendwie. Dass man irgendwie sagt. Keine ahnung. Person X ist, wir wissen von der Person, dass sie alleinerziehend ist und aber auch vier oder fünf Kinder hat in einem unter 10 Jahren. Also grundsätzlich irgendwie gestresst ist. Und ob man dann die Situation, in der die Person sich befindet, auch für dieses Messaging ausnutzt. Und das wäre ja theoretisch schon möglich, dass. Würde, ja würde sich sicher indem in den zwischen Mediadaten irgendwie zeigen lassen. Aber das wäre jetzt auch alles eher eher konstruiert. Also ich kenne jetzt keinen konkreten Fall. Also es wäre in jedem Fall etwas was

was Untersuchenswert wäre. Ob das stattfindet. Weil dann eben auch diese ja, oder. Es gibt ja auch bei jeder Werbung auch auf Sendern, auf TV-Sendern, die grundsätzlich Kinder gucken oder auch Werbung für Lebensmittel, die besonders zuckerhaltige sind. Und da gibt's ja auch sozusagen die Ausnutzung bestimmter Mechanismen, um den Absatz zu stärken. Und auch da wird das ja kritisiert und da geht es nur um Cornflakes und nicht um Wahl. Also das. Das wäre sicherlich interessant zu erfassen und ich kann mir auch vorstellen, dass es da, dass das, dass es das theoretisch geben könnte. Aber ob das stattfindet, weiß ich nicht. Ja, das wäre in jedem Fall ein Anwendungsfall und ich glaube auch, es wäre auch interessant zu wissen. Interessant zu wissen, ob das die. Welche Gruppen also bei welchen Gruppen da wirklich solche Mechanismen ausgenutzt werden und wer da besonders in Anführungszeichen gefährdet ist oder besonders attraktiv ist für solche, für solche Formen von Werbung, für solche Manipulationen. Weil das würde ja dann wiederum zum Beispiel begründen, warum man gerade für solche Gruppen dann verstärkt politische Bildung vor Wahlen bräuchte oder andere Projekte, die sozusagen die Souveränität im politischen Diskurs dieser Personen stärken würde. Und da würde ich auch denken, Leute mit geringem Einkommen, ich bring wieder nach Tschechien in Tschechien zB. Wahlbetrug durch Stimmenkauf. Da sind, findet vor allem dort statt und dort auch wird vor allem diese Bevölkerungsgruppe ist davon betroffen, wo Roma leben in Tschechien, eine große, eine große oder signifikante Minderheit, auch im politischen Diskurs sozusagen auch diskutiert, gerade von rechts rechtspopulistischen rechtsradikalen Parteien. Und die werden ganz gezielt angesprochen von Parteien für Stimmenkauf. Offline alles. Das hat jetzt nichts mit, nichts mit Facebook zu tun. Aber da wird quasi auch eine sozusagen eine doppelt Situation, nämlich einmal eine finanzielle Situation und auch die Marginalisierung aufgrund sozusagen ihrer Identität. Und diese Doppel Doppel Ausgrenzung wird dann ausgenutzt für solche Mechanismen und ja, das werden sicher interessant zu wissen.

[Krafft]: Da muss ich mal kurz aus persönlichem Interesse fragen: Werden da die Stimmen wirklich gekauft oder werden bestimmte Maßnahmen versprochen dieser Bevölkerungsgruppe helfen sollen?

[Puntschuh]: Ja, nee, nee, das ist schon. Also Kommunalwahlen in Tschechien. Aber das ist auch sehr von Kreis zu Kreis unterschiedlich. Aber es gibt so bestimmte bestimmte Kreise, wo das wirklich eins zu eins stattfindet, also wo Leute. Ich meine, man kann das ja nicht kontrollieren zu sagen hat. Hast du auch wirklich so abgestimmt, wie ich dich jetzt bezahlt hab? Aber da wird wirklich Geld übergeben und die Person verspricht dann Okay, ich stimme für Partei X ab und auf Kommunalebene lohnt sich das eben weil da da ja viel über die Bauvorhaben entschieden wird und dann sozusagen darüber, dass Geld wieder reinkommt.

[Krafft]: Das ist wirklich ein völlig anderes Feld, aber problematisch.

[Puntschuh]: Da Ja und ja und das. Also das. Da ist dann der Übergang so ein bisschen fließend und auch in der Regulierung schwierig. So Partei, Geschenke, Wahlwerbung, Wahl, Werbegeschenke. Ja, also wenn irgendwie Partei X jetzt Pfannkuchen auf dem Marktplatz verteilt. Ist das schon Bestechung oder nicht? Und natürlich wirkt erst einmal komplett anders. Aber man kann sich vorstellen, dass dazwischen ein Spektrum besteht. Und das war, das war so ein bisschen oder ist in Tschechien so ein bisschen Thema. Ja, und genau das wollte ich nur quasi als Beispiel aufzeigen. Und das würde dann auch wiederum an die ganze Forschung zu Intersektionalität an andocken, sozusagen in der man ist man dann target ist mein Ziel wegen der Zugehörigkeit zu einer Gruppe oder weil man sich in einem schnipp bereich verschiedener Gruppen befindet. Und grade dieser schnitt bereich irgendwie eine besondere Rolle hat oder so.

[Krafft]: Also wieder so ein bisschen, wie sieht mein profil eigentlich aus, wer anhand welcher marker werde ich jetzt wirklich getagged hat?

[Puntschuh]: Ja genau, weil es kann ja sein, dass Partei X wirklich wie widersprüchlich kommuniziert, aber nicht grundsätzlich, sondern nur für 5 prozent der Bevölkerung, weil dort eben diese Manipulationsmöglichkeiten besonders hoch ist. Aber auch das nur wieder Sample-bias Selection-bias.Eigentlich bräuchte man die Daten von den Parteien. Was Sie, was Sie für Werbung schalten,.

[Krafft]: Das hat wieder so ein bisschen das Problem Die, die wir kriegen, werden nicht relevant sein.

[Puntschuh]: Dann kommt es auf die richtigen Partner an.

[Krafft]: Aber, dass das Sample ist halt bei all diesen Online Geschichten ein unheimliches Problem. Ja, wenn man so viele Möglichkeiten abdecken muss. Und selbst wenn man dann was findet, kann man nicht immer genau sagen, woran es gelegen hat. Ah, ne kleine Sache, die am Anfang nicht untergegangen ist, hat das iRights-Lab sich irgendwann mal überlegt, auf Facebook-Werbung zu untersuchen in irgendeinem Bereich.

[Puntschuh]: Ne, ne, bisher nicht. Also wir machen, wir machen eher diesen Meta Meta Überblick. Da sind wir grad am am stärksten glaub ich unterwegs, dass wir Forschung zusammenfassen und dann daraus politische Handlungsempfehlungen entwickeln. Aber Studien mit Datenerhebung selbst durchführen zu dem Thema nicht.

[Puntschuh]: Das bestätigt auch das, was ich bisher von den Artikeln immer gelesen habe, aber kann ja immer sein, dass ich dann, dass ich ein schlechtes Sample gezogen habe. Ja.

[Krafft]: Gut, ich glaube, das wären dann aber bei mir mal alle Fragen auch eigentlich durch. Gibt's noch irgendetwas, was du ergänzen würdest, du da jetzt, noch eine Frage aufgekommen ist?

[Puntschuh]: Vielleicht nur wie? Wann? Wie? Wie möchtest du das? Studien? Oder möchtest du fertigstellen? Wie mich? Das muss dann vielleicht an Partner. Ob man kommunizieren. Nur so interessehalber.

[Krafft]: Also das ist ja meine Masterarbeit. Das heißt, das müsste ziemlich dringend bis 1. April fertig sein. Und dann kommt es noch ein bisschen darauf an, wie es auch bewertet wird, ob ich es gut gemacht habe und dann werden wir. Wenn es aber gut ist, dann hoffen wir das auch ein paar Leute herantragen zu können. Und Institutionen und Personen, die generell mal Interesse bekundet haben, in diesem Bereich etwas zu machen. Zumindest Vorschlagen.

[Krafft, Tobias]: Genau. Gleichzeitig wird auf unsere Arbeitsgruppen Seite gerade etwas dazu gebaut, wo wir auch dieses Studium Konzept von seinem und seiner Arbeit ableiten anbieten bzw. auch Personen darin darauf aufmerksam machen. Wenn sie sich mit diesen Beschäftigten beschäftigen wollen, haben wir einen Grundstock der Arbeit an dieser Stelle gelegt und der kann hier nachgelesen werden und man kann darauf angesprochen werden.

[Puntschuh]: Cool. Ja gut, dann ist ja jetzt auch heiße Phase. Duper Ja, dann wünsche ich dir dafür in jedem Fall viel Erfolg.

[Krafft]: Dann vielen Dank und auch noch viel Dank, dass du dir die Zeit hierfür genommen hast.

Anonymous Interviewee 1 (AI-1)

This person is currently working as a consultant for digital and media for the VZBV[4], the Federal association of the consumer protection center. They have experience in investigating costumer right violations in a internet based market, which brings them expertise, which can show new insights into this project, with these interests in mind

Transcript:

[AI-1]: Allein der ganze Bereich. Inwieweit überhaupt gezielte Werbung überhaupt effektiv ist. Ja, das ist. Ja. Ich meine, da werden ja wirklich. Da werden ja ganze Milliardenbeträge reingesteckt. Und die große Frage ist inwieweit ist diese Werbung überhaupt effektiv und bringt die Leute dazu auf diese überhaupt erst mal drauf zu klicken? Und wieviele von den Klicks sind überhaupt echt wert? Ich meine der ganze Körper an Research, der da hinten dran steckt ist ja schon ziemlich groß, aber ich hab da nix einzelnes irgendwie im Kopf. Und zu dem Spezial Bereich da gabs aber doch glaub ich war das nicht so im Zuge der letzten Bundestagswahl. So eine Studie, die sich angeschaut wie viele Bots unterwegs sind. Oberflächlich. Aber da müsste ich jetzt auch nochmal länger irgendwie recherchieren. Also ich meine es gab oder sind in Deutschland auch eine Studie kam aus Deutschland. Von

4 https://www.vzbv.de/

hier so einem Institut, eigentlich eine Beratung aus Berlin? Die haben da sich diese diese Häufigkeit von Bots angeschaut und so weiter und versucht haben da irgendwie sich anzuschauen, ob das jetzt wirklich eine reale Problematik ist, also irgendwelche Bots unterwegs sind bei Twitter und co. Fällt mir jetzt so spontan ein. Aber ich schreib mir das nochmal auf. Falls mir was einfällt, würde ich mich nochmal melden.

[Krafft]: Das wäre sehr freundlich. Gibt es denn vielleicht aus dem Verbraucherschutz Bereich Watchdogs oder sowas in die Richtung eher?

[AI-1]: Ja. Also was was die Kollegen bei uns auch gemacht haben vom Marktwächter Digitales. Das war vor zwei Jahren. Haben die sich auch so was ähnliches angeschaut. So eine ähnliche Problematik wie Sie, da ging es um personalisierte Preise. Da haben sie dann auch an verschiedenen Stellen der Republik so kleine Boxen aufgestellt, die dann quasi simuliert anfragen, an was weiß ich irgendwie 30 große Online-Händler gestellt haben und das dadurch halt auch versucht, da Personalisierung in den Preisen rauszufinden. Das ist das, was mir einfällt. Es geht in eine ähnliche Richtung.

[**[Krafft]:** Ja, die hab ich tatsächlich schon gefunden.

[AI-1]: Das haben sie wahrscheinlich schon alles auf dem Schirm.

[Krafft]: Das war sogar das Thema meiner Bachelorarbeit damals. Ging gleich Richtung. Dann könnten Sie sich denn vorstellen, aus ihrem Bereich so eine Studie durchzuführen. Über personalisierte Werbung wäre das aus der Sicht des vzbv interessant, da ein bisschen Auge drauf zu haben.

[AI-1]: Ich könnte mir vorstellen, dass das interessant wäre. Ich versuche nur zu überlegen. Bei uns muss sowas natürlich alles immer, sag ich mal in die einzelnen Lobby Ziele und so weiter und diese ganzen Policy Stränge irgendwie eingegliedert werden. Also im Bereich eher personalisierte Werbung ich überleg grad vielleicht im Bereich Irreführung oder sowas, dass man sich irgendwie mal anschaut. Ja dann gibt's denn verschiedene Arten von Werbung, die auf die verschiedene soziale Gruppen targeted und dann vielleicht gerade irgendwie die schwachen Verbraucher. Also ich denke jetzt mal spontan an diese ganzen Fake Produkte rund um Corona? Na da wäre es ja mal interessant zu gucken, ob die jetzt mal auf spezielle Zielgruppen losgehen und welche Zielgruppen sie in den Blick nehmen. Sowas wäre vielleicht nicht uninteressant, also nur zu gucken. Versuchen, die Werbetreibenden irgendwie gezielt die Schwächen einzelner Verbraucher Gruppen auszunutzen? Jetzt kann man natürlich das Beispiel Corona nehmen, finde ich irgendwie relativ schlecht. Vielleicht wird jetzt wieder wahrscheinlich denke, gut, der da hat irgendwelche Pillen und irgendwelche Wundermasken, die alles filtern was da durch geht, das habe ich letztens gesehen. Das wird man wahrscheinlich an vermeintlich irgendwie Bildungsschwache targeten, weil die das glauben aber es ist natürlich auch so, dass im akademischen Milieu, wie soll

ich sagen, ein gewisses intellektuelles Selbstbewusstsein herrscht, dass da viele Leute Globuli und so Zeug irgendwie nehmen. Also bei denen scheint man ja auch für manche Nachrichten empfänglich zu sein. Aber okay. Also so was wär interessant. Das könnte ich mir vorstellen. Aber es müsste man sich mal mit den Einzelnen, mit den Handelsleute oder sich mal nochmal tiefer gehen Gedanken machen. Ich fände sowas grundsätzlich interessant.

[Krafft]: Das ist doch schon mal sehr gut. Das ist ein interessantes Ziel, gerade mit Corona, ja auch etwas was ziemlich aktuelles und man guten Grund dafür hat, das durchzuführen.

[AI-1]: Das ist halt jetzt so ein aktueller Aufhänger, wenn Sie da so eine Studie machen, mit wem auch immer so einen aktuellen Aufhänger zu haben, der gerade irgendwie gut. Die dann da gut einfängt, ist natürlich immer netter, aber aber grundsätzlich z.B. auch hier genau: Finanzmarkt ist sowas wahrscheinlich auch eine interessante Sache. Ja, irgendwelche komischen Finanzhaie oder irgendwelche Anbieter, die zu hohe Konto Gebühren verwenden oder dubiose Kredit Geschichten. Wie suchen die sich denn ihre Verbraucher aus? Die Finanzen ist immer ein tolles Thema. Da geht es ja gleich um Kohle. Da kann man wunderbar gleich auch einen großen großen Wohlfahrtsleust irgendwie ausrechnen und da hat man was in der Hand. Das ist dann nicht nur so. Oh oh oh, da wird irgendwie was Dubioses verkauft, sondern hier, da wird den Leuten richtig gezielt geschadet damit. Da pickt man sich durch Schwachen raus und den drückt man dann Sachen rein, die die auch noch irgendwie in lebenslange Schulden stürzen. So was wäre so eine nette Variante. Also wenn ich jetzt mal so an eine Kommunikationsperspektive denke. Und natürlich die Kollegen im Finanzmarkt Bereich haben natürlich auch immer wieder mal so ein Thema. Also irgendwelche hohen Kontogebühren oder sowas. Ja, das passiert natürlich immer wieder schon mal. Sonst könnte ich mir sowas durchaus vorstellen. Vielleicht aber auch eher, sagen wir mal so, vielleicht eher, weil es, wenn es so explore aktiv ist, wäre das dann wahrscheinlich eher was für die Kollegen im Marktwächter, die sich sowas mal anzuschauen da zusammen dann mit den Fach Teams. Also wir haben ja diese Marktbeobachtung und das sind quasi so sage ich mal die Kollegen, die schauen sich wirklich so gezielt die Märkte an führen so Studien durch und Umfragen et cetera und dann so Leute wie ich. Ja, wir sitzen dann quasi in den inhaltlichen Teams und man würde dann würden mit diesen mit dem Marktwächter-Teams dann zusammen irgendwie dann wahrscheinlich machen. Also zumindest würden wir das ein bisschen begleiten.

[Krafft]: Können sich dafür genauere Anforderungen vorstellen, was die das Plugin oder halt die Technik dahinter erfüllen müsste.

[AI-1]: Sie würden das selbst über so ein Plugin machen?

[Krafft]: Genau.

[AI-1]: Also klar. Also das es ja die Anforderungen sind. A: Sicherheit. Man darf natürlich die Systeme nicht. Also wenn das der vzbv den Leuten also ich vermute mal das ist ein Plugin, was natürlich dann weit gestreut wird in die Bevölkerung und sie würden dann man würde dann quasi sagen Leute, installiert euch das Ding, wir wollen mal rausfinden, was da für Schindluder getrieben wird. Das wäre so die Botschaft. Und wenn man mit so einer Botschaft rausgeht, muss natürlich klar sein, dass wenn wir so ein Plugin empfehlen würden, dass das natürlich tipptopp wasserdicht ist, was die Sicherheit betrifft und auch den Datenschutz und so weiter. Also dass Datenschutz und Sicherheit sind absolut wichtig und klar. Natürlich sollte entsprechend irgendwie noch eine gute usability haben, dass die Leute das installieren können, ohne sich irgendwie verrenken zu müssen und danach auch wieder deinstallieren können, wenn sie wollen. Ich sage mal so diese Glaubwürdigkeit des vzbv, die muss dann natürlich, da die wir uns ja da auch versuchen, schon irgendwie so sag ich mal so zu erarbeiten und aufrechtzuerhalten. Die muss natürlich und darf natürlich da in keinster Weise kompromittiert werden.

[Krafft]: Natürlich haben sie auch einen Selbsterhaltungszweck dahinter. Sie wollen ja nicht irgendetwas einfach hier pushen.

[AI-1]: Ja genau. Also das ist natürlich das A und O. Wir können da nichts machen, das irgendwie, dann sage ich mal unserem Image irgendwie, dann schadet das mal so marketingmäßig auszudrücken.

[Krafft]: Sie haben bei beiden möglichen Einsatzszenarien angesprochen, dass das ja eher an viel mit schwachen Verbrauchern zu tun hätte. Hat der vzbv da Wege, genau diese Gruppen für so eine Studie zu rekrutieren, weil das die Sample Rekrutierung ist eigentlich bei solchen Dingern immer das größte Problem, weil viele Leute da einfach. Ja. Sie nehmen nicht Teil, auch wenn es für sie selber sinnvoll wäre.

[AI-1]: Ja klar, das haben wir nicht immer. Wir haben da jetzt keine speziellen Datenbanken oder Verbraucher- Datenbanken oder sowas. Wir können das halt, der vzbv wenn er sowas machen würde, könnte er sowas. Aber genau wie gesagt, bis jetzt. Ich sage Ihnen das alles unter Vorbehalt.

[Krafft]: Natürlich, natürlich.

[AI-1]: Also das müsste natürlich im Endeffekt müsste sowas wahrscheinlich von weit oben entschieden werden. Das kann ich natürlich nicht entscheiden. Das ist immer so die Voraussetzung, dass der Mittelpunkt, von allem was ich sage. Aber der vzbv würde sowas dann wahrscheinlich unter einem Aufruf machen. Es gibt auch durch die Marktwächter und unsere Projekte hin und wieder mal Aufrufe, auch Dinge zu melden. Also das wird dann so verteilt über Twitter und andere Wege halt irgendwie dann veröffentlicht. Dann heißt es dann: Liebe Verbraucher, wir suchen hier irgendwie Evidenz zu dem und dem Problem. Habt ihr hiermit schon mal Erfahrungen gemacht? Meldet

euch bitte da und dort. Ist das eine. Natürlich kann man auch mal über die das das wäre so kann man öffentliche Aufrufe halt über das Netzwerk des vzbv. Das würde ich jetzt so völlig zusammenfassen. So könnte man das machen. Aber so spezielle Datenbanken. Glaube ich nicht, dass man das hätte. Ich meine in den Verbraucherzentralen schlagen natürlich auch Leute auf, die dann Beratung suchen. Ich denke jetzt nicht, dass diese Datenbanken da jetzt genutzt werden. Das sehe ich nicht. Ehrlich gesagt, ich würde über öffentliche Aufrufe neigen, ist eigentlich der Standard?

[Krafft]: Es war auch mehr eine Frage, wie sie denn da vorgehen würden, die zu die Leute zu erreichen. Aber dann sind die Aufrufe da ja auch eine gute Möglichkeit.

[AI-1]: Ich meine, der vzbv hat ja schon auch eine gewisse Reichweite. Ja so! Also eine gewisse Reichweite ist da, es ist nicht, kein Superinfluencer. Aber ein paar Leute kriegt man wahrscheinlich schon irgendwie mit. Ich weiß nicht wie viele Leute bei diesen ganzen AlgorithmWatch Studien da mitgemacht haben. Aber es waren auch einige.

[Krafft]: Ich hätte noch ein bisschen rückführendere Frage zu den Zielen mit den Studien. Könnten Sie sich vorstellen, dass eine Watchdog Approach, also ein einfaches, ja eine dauerhafte Überwachung der politischen Werbung relevant wäre?

[AI-1]: Wie haben Sie den Approach genannt?

[Krafft]: Watchdog, also Wachhund?

[AI-1]: Dauerhafte Überwachung...

[Krafft]: Zumindest während so einer Wahl, dass man halt direkt dagegen vorgehen kann und nicht erst im Nachhinein über diese Ad-Library, wo man auch davon ausgehen muss, dass Facebook ja wirklich alle Werbung rein macht

[AI-1]: Also zum Thema politische Kommunikation, da bin ich einfach nicht so weit drinne, ich sag mal so so.. Ich könnte mir vorstellen, dass die Politologen und diejenigen, die da jetzt sag ich mal in der politischen Kommunikation drinne sind. Also wenn jetzt Politiker fragen, dann werden sie ihnen sicherlich sagen Ja, das macht Sinn, weil die natürlich täglich mit irgendwelchen Werbung für dubiose Artikel, Fake News und so weiter, so Targeting dann konfrontiert sind. Also das ist halt einfach nicht mein Bereich. Kann ich Ihnen so nicht. Ich selber nicht wirklich beantworten. Ich könnte mir vorstellen, dass es Sinn macht, aber das ist eine rein persönliche, intuitive Einschätzung.

[Krafft]: Okay, dann könnte man diesen Watchdog Ansatz aber auch auf Markt relevante Themen ausweiten, dass man da halt wie gesagt direkt drauf reagieren kann und nicht erst im nachhinein oder wenn ein Problem aufgetreten ist.

[AI-1]: Also da könnte ich mir vorstellen, dass es für die Kollegen interessant sein könnte. Also jetzt sage ich mal auf der Marktbeobachtung herab, dass aus dieser Verbraucher Werbung Perspektive heraus

könnt ich mir das vorstellen, dass so was interessant ist. Ich sage es mal so die Kollegen von mir in den Verbraucherzentralen, in den Bundesländern, die machen ja quasi Verbraucherberatung. Also ich bin im vzbv, wir sind quasi so eine Art Dachverband. Wir machen die politische Arbeit auf Bundes und Europa Ebene und bei ihnen jetzt dann halt in Mainz, da sitzen dann die Verbraucherzentralen oder auch überall Niederlassungen und die machen die Beratung. Also wenn Sie jetzt beispielsweise irgendein Problem mit der Telekom Rechnung haben, was auch immer dann gehen sie zu denen und diese Berater, die sind natürlich auch ich sag mal institutionell eingebunden. Und wenn da irgendwas aufschlägt, also sagen wir beispielsweise jetzt auf einmal bemerken die Leute hier beschweren sich auf einmal irgendwie auffällig viele Leute über irgendwie einen ganz besonderen Anbieter, dann wird es auch intern kommuniziert. Aber das ist natürlich was anderes als, sage ich mal, so eine systematische Überwachung, die Sie da jetzt quasi vorschlagen so ein Scanning. Also das ist noch was anderes. So ein Ansatz gibt's. Aber dann sage ich mal so Menschen basiert und basiert auf dem dem Prinzip der Beratung und auf dem Beratungsgespräch mit Problemen, die die Verbraucher in die Verbraucherzentralen sag ich mal reintragen. Aber ja, da kann ich nicht beurteilen. Aber ich könnte mir vorstellen, dass es auf jeden Fall das eine oder andere Interessante irgendwie liefert. Aber man muss halt natürlich dann da frage ich mich halt ja, wie stellt man da, wie filtert man die Suche nach, was sucht man, wie macht man das? Ja, nach was sucht man, wie sucht man also? Wie findet man quasi, wie definiert man die Probleme, nach denen quasi diese ganze geloggte Werbung und individuell präsentierte Werbung präsentiert wird? Nach welchen Kriterien filtert man das? Wie sucht man dann nach Auffälligkeiten, nach interessanten? Also gut, wenn man jetzt Stichwort Corona nimmt, kann ich mir das vorstellen, dann haben sie dann irgendwie so dubiose Corona Werbungen, Produkte, dass ist dann so ein Themenbereich, okay, das kann man irgendwie nachsehen. Aber so einfach ins Blaue hinein.

[Krafft]: Die jeweiligen Watchdog-Projekte hätten dann natürlich einen direkteren Zweck z.b. Wie sie angesprochen haben. Die hohen Kontoführungsgebühren von Banken. Wenn man das zum Beispiel gezielt überprüfen möchte, dann kann man genau für diesen Zweck ja ein Watchdog aufsetzen, der dann auch nur auf dieses Ziel aus ist. Natürlich, eine komplette Überwachung ist völlig over-the-top, da kann niemand mit den Daten mehr umgehen.

[AI-1]: Okay, das ist natürlich okay. Also Sie würden quasi so ein Projekt aufsetzen wo dann gesagt okay, wir monitoren jetzt quasi so einen exklusiven Bereich oder einen Sub-markt, den monitoren wir und schauen uns mal an was dafür Werbung ausgespielt und auch an welche Personen die ausgespielt wird, das ist ja so der Hintergrund, wie wird das personalisiert, oder?

[Krafft]: Ja, genau das wäre dann der für diesen Watchdog der Gedanke.

[AI-1]: Oh Gott! Ja warum eigentlich nicht? Also wie gesagt, also ich sage Ihnen das jetzt ganz unverbindlich. Ich bin ja selber nur ein einfacher Referent, aber klingt jetzt irgendwie gut ja, als ob man da doch das eine oder andere rauskriegen könnte. Also gerade jetzt, wenn man so spezielle Sachen hat wie jetzt hier Kontoführungsgebühren oder irgendwelche dubiosen Finanz Angebote, dubiose Corona Angebote usw..

[Krafft]: Haben Sie da eventuell Ansätze, wie Sie solche Daten dann am Ende analysieren würden? Oder wäre das doch etwas im Bereich heraus?

[AI-1]: Also wie wir das analysieren würden. Ach Gott. Das ist bei uns eigentlich wie soll ich das sagen, das ist wahrscheinlich relativ banal. Also ich hab keine Ahnung, was jetzt die Leute die Marktwächter im Einzelnen machen, aber nachdem was ich so zu sehen bekomme, ist das eigentlich immer so die standard Art von Auswertung, die man halt so macht, also die Techniken. Also wenn Sie jetzt darauf anspielen, was für Spezialtechniken wir machen in der Auswertung, also im Endeffekt brauchen wir halt irgendwie Tabellen und so weiter. Und irgendwelche Kreise Diagramme, bei denen irgendwie klar ist. 80 prozent, auf denen man halt irgendwie kommunizierbar Aussagen treffen kann. Sowas wie 80 prozent der oder 40 prozent der, der sag ich mal einkommensschwachen Verbraucher werden auch noch mit zusätzlich dubioser Werbung konfrontiert von dubiosen Finanzgeschäften und den Leuten, die finanziell besser gestellt sind, die kriegen irgendwie zu 80 prozent Werbung von seriösen Instituten, irgendwie sowas um zu zeigen, dass da die Anbieter da mit den armen Leuten Schindluder treiben oder die Schwächen ausnutzen. Also im Endeffekt brauchen wir halt im Endeffekt so, dass ist sage ich mal das Endprodukt, wie man da jetzt im Einzelnen hinkommt, also ich denk mal, die Kollegen sind offen. Also wir haben ja auch ein Team von Leuten, die halt da schon was die quantitativen Auswertungen von solchen Daten betrifft, schon ganz okay sind. Ich weiß es nicht, wie die da solche speziellen Datenanalysen dann auch machen, ist mir nicht bekannt.

[Krafft]: Es war nur eine Frage, dass man da dann nachher, so, dass. Je nachdem wie es analysiert werden soll, da muss man auch da nachgehen, welche Daten man dafür brauch und welche Attribute man dann gezielt abfragen muss. Von den Verbrauchern auch. Man möchte ja nicht zu viele Daten.

[AI-1]: Bevor sie da diese diese Plug-Ins installieren. Natürlich auch irgendwie ein schönes großes sozio demographischen Abfragebogen. Also das meine ich, das wäre wie immer so was für uns imm ganz interessant ist, das ist so ein bisschen so, also diese diese typischen demografischen Faktoren, die auch in Umfragen usw. erhoben werden, also verschiedene Altersstufen, natürlich das Geschlecht und so weiter.

Ja, Bildungshintergrund, Einkommen, all solche standard Sachen, die sage ich mal so ganz normalen Infas Umfragen, Bus, Omnibus, Umfragen und so weiter mit abgefragten. Das sind insgesamt, lassen sie mich mal schätzen, also locker gefühlt 15 Attribute. 16 Attribute, sowas 20 Attribute. Das würde ich auch so sehen. Weil man will natürlich immer dann auch Aussagen treffen: Ah, also das klingt jetzt immer ein bisschen oberflächlich, aber ich versuche jetzt einfach so ein bisschen so vom Ende her zu denken. Weil im Endeffekt müssen Sie natürlich mit irgendeiner Botschaft rauskommen, die dann dazu dient, entsprechend die Politik dazu zu bewegen, was zu machen. Und diese Botschaft ist eben, das klingt jetzt so bisschen banaler, aber dahin zu kommem ist es natürlich nicht. Es soll natürlich auch immer fundiert sein. Das ist schon klar. Ich will halt nicht irgend ein Quark da raushauen, nur damit bisschen eine gute hätten einen ab. Ich habe trotzdem den Anspruch, dass es solid ist. Sie brauchen immer welche Aussagen. Ich hab keine Ahnung, was ältere Verbraucher über 70 werden überdurchschnittlich oft, irgendwie von der und der Werbung getargetet und die sind auch noch finanzschwach. So sowas brauchen wir dann. Sie müssen schon mehrere Daten, also mehrere demografisches erheben, damit sie dann auch mit der Masse. Und sie brauchen sich auch viele, viele Daten halt, damit sie da halt dann auch im Endeffekt landen. Aber die dann natürlich dann diese Altersgruppen alle abbildet. Die muss man halt auch erst mal rekrutieren. Bei so einer Studie müssen man.

[Krafft]: Sie haben ja gesagt, dass es über die Aufrufe es immer recht gut funktioniert, Leute zu rekrutieren. Glauben sie, es wäre nochmal jetzt in diesem speziellen Fall hilfreich, wenn man den Nutzer:Innen am Ende die Möglichkeit gäbe, zu entscheiden, welche der Werbungen sie auch final einsenden würde. Also nicht einfach automatisch alle eingesendet werden, sondern eher dann nach einer Session eine Liste bekommt. Diese Werbungen wurden heute angezeigt. Welche davon sollen eingesendet werden?

[AI-1]: Also, halte ich für einen guten Ansatz, weiß aber nicht, ob das täglich geschehen muss. Ich weiß nicht. Wie würde das wird. Ich hätte jetzt eher gedacht. Also wir haben sie wieder. Ich frag mich, was die Motivation hinter diesen Dingen. Also z.B. falls sich die Leute dafür schämen könnten, dass sie einzelne Werbung angezeigt bekommen, also irgendwelche keine Ahnung, irgendwelche Sexgeschichten oder sowas. Weil dann derjenige, der die Werbung analysiert, darauf schließen könnte, dass gerade der Verbraucher irgendwas gemacht hat, dass ihm diese Werbung angezeigt wird. Oder was ist da die Motivation?

[Krafft]: Unter anderem sowas. Aber auch dadurch, dass man, wenn man alle Werbung wirklich sieht, kann man durchaus ein gutes Bild von der Person kriegen, auch wenn man nicht mal so einen Fragebogen

ausgefüllt hätte. Also da ja die Gesamtheit an Werbung auf Facebook ist. Erschreckend genau die Person, die man da abbildet.

[AI-1]: Auf jeden Fall sicherlich, diese Option ist sinnvoll. Vielleicht ja. Also ich hab immer so die Frage, wann das, wann man wann diese Abfragen erfolgen soll, ob man das von Anfang an einstellen kann. Was es da für Anfangseinstellungen gibt, oder? Oder dachten Sie so quasi am Ende des Tages oder am Ende der Woche fragt dann der. Fragt dann, der. Ja, der, der, das Plugin die Leute, was die so einschicken wollen oder was sie nicht einschicken.

[Krafft]: Also mein erster Gedanke wäre es gewesen, dass es nach jeder Session passiert, damit wir es gar nicht langfristig abspeichern müssen. Dann könnte es natürlich auch wöchentlich machen. Dann muss man es halt wiederum auch lokal speichern. Aber das ist natürlich eine Option, das könnte man natürlich auch anbieten.

[AI-1]: Ja. Also ich sags mal so, ich würde den Leuten auf jeden Fall die Möglichkeit geben, wahrscheinlich macht es schon sinn, das irgendwie Session-weise zu machen. Mal ganz ehrlich wie viel eine Sessions sagen wir mal eine Stunde. Wenn sie eine Stunde lang surfen. Da kriegen, wie viel Werbung kriegen Sie denn da angezeigt? So viel? Oder? Also würde ich mal vermuten.

[Krafft]: Vermutlich.

[AI-1]: Dann müssten Sie sich ja durch so eine ewig lange Liste durchklicken. Das macht man vielleicht einmal. Also da müssen wir natürlich aufpassen, dass die Leute dann nicht so kommen, sag ich so Ermüdungserscheinungen bekommen und dann sagen: "komm, das ist jetzt aber nach jeder Stunde Surfen irgendwie fuffzig Werbung zu klicken ist mir zu doof". Die Frage, also das muss man natürlich irgendwie vermeiden. Sich vorstellen, dass das irgendwie zu Frustration oder zu Ärger führt und dann natürlich auch dann die Akzeptanz des Tools sinken würde. Aber die Möglichkeit zu geben, dass ist auf jeden Fall denke ich mal sehr sinnvoll. Auch damit die Leute das Gefühl haben "Wir haben die Kontrolle", wir wollen ja. was sie auf jeden Fall nicht haben wollen, ist, dass die Leute irgendwie denken, was ich mir das so ein Plugin installiert und dann quasi ungefragt alles, was ich mache, irgendwie, irgendwo hin oder so. Das ist aber hart. Also dass es. Von daher ist es natürlich schon ein sinnvoller Ansatz, den Leuten so eine Kontrolle darüber zu geben.

[Krafft]: Ja, das war der Gedanke, dass da eine Kontrolle beim Endnutzer liegt.

[AI-1]: Wenn sie das natürlich wöchentlich machen, dann also keine Ahnung, wie viele hunderte Werbungen sie pro Woche angezeigt bekommen. Also dass das wird wahrscheinlich keiner machen, sich da durch zu klicken. Aber wie gesagt, das habe ich vorhin auch eingangs schon gesagt. Beim vzbv, also wenn wir das einsetzen sollten, dann ist natürlich die Integrität, das A und O. Ich mein, es ist mein Kollege, der hat sich irgendwie jetzt irgendwie 8 Jahre lang um die DSGVO

gekümmert. Was sehr schwierig ist, wenn wir da irgendwie so ein DSGVO Skandal an der Backe hätten. Wir haben das mal so platt zu sagen, ja dann, das wäre ein Problem. Das sollte nicht passieren.

[Krafft]: Es ist aber auf jeden Fall eine gute Erkenntnis. Aber dann wären das grundlegend auch alle meine Fragen soweit, gibt's noch was.

[AI-1]: Mochmal eine Frage zu ihrer zu Ihrem Projekt, jetzt sie machen jetzt dieses Tool und dieses Interview das mit Arbeit nicht veröffentlicht oder sowas.

[Krafft]: Oder ich würde das in meiner Masterarbeit, in dem Rahmen ich die das Tool ja auch entwickelt habe. Ein grobes Transkript davon reinpacken und das halt als Grundlage für die Requirements, also für die Anforderungen an das Tool benutzen.

Anonymous Interviewee 2 (AI-2)

This interviewee is currently working as a data journalist, and focuses on keeping an eye on big tech companies and their influence on society. They worked for multiple journals and have already worked on multiple investigative stories related to microtargeting in ads and discrimination in social media.

Transcript:

[Krafft]: So I will start with presenting what I'm working on, I want to build a framework to help people design a study to investigate personalized and political advertisement on Facebook. It will include a plugin with the basic functionality to scrape the ads from Facebook itself. I want to keep it very open to let the study designer himself and themselves make all decisions based on what the direct goal from this study will be. Also, how many, and if at all, it will include gathering personal data from the participants. The direct goal for this would be to help investigate how the election in Germany, the Bundestagswahl 2021 might be influenced by this. But I want to make it usable for much more for basically many coming elections and also for the economic sector, by helping Verbraucherschützer, customer right activists, activists to also find this misbehavior and at least have some kind of proof that it happened and that they can work against us. The goal of this interview would be that I want to have more point of views on how and what could be investigated on Facebook, in respect to personal advertisement. In this, what you directly would think would be relevant. And also if there are some possibilities or limitations that I might be not seeing, because I'm on a very technical level. I am studying computer science and my experience with these whole studies that include social systems is limited, I have some, but it's always good to have more perspectives and to broaden the horizon of

that. So first of all, I read your article about the automated automated discrimination on Facebook, where you were they broadcasted some kind of some ad, some advertisements. And you found that Facebook uses broad stereotypes to enhance the advertisement results, that jobs that were commonly assigned to some gender like truck driver, were mostly, were also delivered, mostly delivered delivered to male, uesrs, users Facebook, and based on this, I wanted to ask if I lost my train of thought, if you encountered some kind of problems with the basic premise of the study. Or if you wanted to do this, like this in the beginning, or you had to change your approach based on the limitations of Facebook because Facebook is very restrictive with its access to the whole advertisement complex.

[AI-2]: Sure, in this case, we just replicated a study by Northeastern so I encourage you to read their paper, they have two papers, one, which is general, which is the one we've replicated and then they have another one which is specifically about political advertising.

[Krafft]: And Northeastern you said?

[AI-2]: You'll find the link in the article we published.

[Krafft]: Okay, I will look more into this. I found one article that was very similar. So I just wasn't who replicated who in this case? So you showed some kind of interest in this field. So I want to ask, what do you think would be interesting to investigate, in personal advertising on Facebook? What kind of goal you could see that would be worth it to go through the trouble.

[AI-2]: I have some ideas but before I wanted to ask you what's the difference between your project and targets.me.

[Krafft]: I'm sorry, I didn't find this one. But on a quick overlook, it seems like who targets me is more based on the personal experience to find out who he was targeting you. And my work would be more suited for people to investigate more detailed goals, like whether there is some kind of misinformation campaign where people try to give different subsets of people different information to enhance their political success, for example, where you could appeal to a more conservative audience with the kind of view their type of you and another populace with another completely another message to get both sides to vote for you. But in reality, you can't do two things that contradict each other. So that would be my first answer to this, based on a quick overlook of who targets? Yes, yeah.

[AI-2]: So who targets me, this is a browser plugin that collects collects Facebook ads. So it's very similar to what you described, and then they give journalists access to the data they collected. So it would be possible to achieve at least some of the goals that you mentioned using their data. And you should definitely talk to them. Because they have to have a lot of experience. And they're pretty cool people. This being said, the, the bigger problem of these projects is the sample in the sense that you are certain that your sample will not

be representative. And are you aware of the citizen browser by the markup?

[Krafft]: Nope. At least not under the name. No, not at this point.

[AI-2]: So what they did, which is very different from other projects, and which is really great is that they so of course they built they build in this case, they didn't build a plugin, but they built a browser. And they're actually paying a sample of the US population to use it. So they are. So I mean, they know very well who their sample is. And they know it with with certainty. So it makes it much harder for them to be gamed or to misrepresent the sample that they have. Which again, is always the big issue with with such tools. there so this would be I mean, the approach by the market is, is really great, but it's probably too expensive for a university project.

[Krafft]: Your inoput was already very, very helpful. I missed both of these, because they're mostly targeting, was suited for journalists. And I'm mostly looking for some kind of scientific approach. So they weren't really on my radar.

[AI-2]: I think you're confusing, scientific and academic, which is a third project is the Ad observatory which is done by an academic institution and they do also very interesting things. But these are lists lists of ads in the case of The ad observatory. What's interesting in this project is, I mean, in the last projects too, one can compare the data they have with the data, Facebook shows in their own ad library. All these are fairly interesting. But they have limitations. And because you mentioned "Verbraucherschutz" something that no one is investigating is how Facebook encourages scams. I published an article on a topic, let me find it.

[Krafft]: I think I saw it by looking into what you did, but I didn't think that they were direclty connected, it would be helpful to investigate it on ad based study.

[AI-2]: So my point is, I put the link to the article here. And it's a story that has been somehow somewhat investigated in the US and the UK. Beyond politics, many criminal organizations use Facebook to find people to scam. And the advertising algorithm or the advertising system, or Facebook is extremely effective at this. And because these ads are not in the outline of your Facebook, they're not on anyone's radar. And I honestly have no idea how many people are scammed, but it probably runs in the in the 1000s. So gathering data, that's is one of my priorities for for this year.

[Krafft]: Seems highly concerning that these ads are not on the ad library. But that's also something I think would be interesting to investigate for exactly this reason. Whether Facebook is even really honest with this ad library, which they apparently are not.

[AI-2]: They're not this is this has been shown many times. Yeah.

[Krafft]: This is a good way to prove it further. What kind of properties do you think would you need for the sample to get some kind

of valid data for these kinds of study for this kind of investigation? For the scams, I mean.

[AI-2]: For the scams, there are two things. The first has to do with how widespread these scams are. And it will already be fairly hard to find that out. The only reason I'm aware of the magnitude is that one of my Facebook accounts is registered to someone who's over 60. So that's the kind of demographics that these scammers target. And I have no idea how a project could monitor the newsfeed of targeted people. So that would be the first problem. And the second problem is that because all of these scammers use cloaking when you click on the ad from an IP which is not based in the region that the scammers target, you do not see the scam. So you have two hurdles, which would be fairly hard to overcome.

[Krafft]: That's incredibly valuable data. stuff I'm getting from this interview. I can't thank you enough.

[AI-2]: I mean, if you're interested in this in this scam thing, I don't know of anyone who's working on that anymore. right now. So that that might be something of value, but it would be very far from the Bundestagswahl.

[Krafft]: Yeah, but as I said, that's just the direct use I had in mind when I started to build this framework. But the more i work with it the more I see that it can be used in so many ways. And it's always good to have, to know at least of these kinds of options. On a different note, at this point, it's possible to mark Facebook advertisements as political. But as far as I know, it's voluntary. And not everyone is doing it. Do you think that would be a valuable field to investigate?

[AI-2]: Yes, er no. Facebook automatically flags, ads that they consider political. I mean, this this happened to us when we did the experiment that you referred to. So it could be interesting to try to see what Facebook, I mean, what they flagged as political. But if you read the last, the latest article by the markup on their citizen browser series, you'll see that the issue popped up. Because Facebook promised to stop recommending political groups in the US. They did it nevertheless. And the issue of how Facebook automatically labeled groups as political or non political is addressed in the article. And it would certainly be valid research. In terms of public interest, I would say, we have a pretty good idea of how Facebook considers what is political or not political, in the sense that they have certainly a classification algorithm with perhaps some human oversight. And and we know that their classification system doesn't work.

[Krafft]: You mentioned the political tagging in the article. Did you encounter some other problems during this study? That could have been now easy to solve? That you know about them?

[AI-2]: I'm not sure what you mean with easily so the other issue that we encountered during this experiment is that another set of ads was taken down under the false accusation that they were get rich

quick schemes. So again, it raises the question of how bad automated filters are. So that would be worth investigating. But again, it would be extremely hard to come up with anything precise because as you know, Facebook systems take into accounts, many variables so it would be hard to to find out precisely what triggers what reaction from their systems and we also know that their systems are constantly evolving. Again, making it very hard to come up with to to reach any precise conclusion.

[Krafft]: If you would consider using my framework for a study, what would your requirements be for it, what would it need to be able to do for you to think it would be worth it to use.

[AI-2]: As I Try to say, I think the issue of making a library of political ads on Facebook is I wouldn't say solved, but you have many people working on it. And it has been, but several projects have been done and several projects are ongoing. So I wouldn't say there is a nead, at least from my point of view, they are, what I would be very interested in are basically the approach that the markup went for, which is to first build a sample and then build a tool. And I think this would provide much better insights on how Facebook is working and how Facebook is influencin, in this case, the vote. And the second, the second thing, as I mentioned, which is not investigated, and for which I'd be curious to see if if a technical solution could help is the issue of criminal activity through Facebook ads. Okay,

[Krafft]: Regarding the sample. A sub goal of my work was to have these all these studies, be connected, and therefore have a more perceived credibility for the singular user. So they know that this is done in the same way as this study, and this study and this study, so they can rely on it a little bit more, do you think that would help when building a sample?

[AI-2]: Do I understand correctly that you're talking about the credibility of the plugin for participants?

[Krafft]: Yes, because I think it's a big problem that they have to install a plugin in their own browser, and there's always this privacy issue, do they really trust it? Do you want to they want to have it on at all times.

[AI-2]: In terms of operations for social project, it is the biggest problem. We are running a similar experiment on Instagram, where we have a browser plugin that people can install so that we can see what is in their newsfeed on their Instagram newsfeed. And we do that to investigate how Instagram treats political messaging before the Dutch general election in two months. And what we found out is that people will not install a browser unless someone they trust tells them to and to give you concrete numbers through our channels, which are probably comparable to what the university would have, we managed to get maybe 20 installs, 40 installs. And then, of course, you have the all the other technical issues that Facebook activity or in our case,

Instagram activity does not only take place through the browser. We then partnered with the largest news organization in the Netherlands. And that brought us the amount of data donors that we needed. They got us something like 700 data donors, which was good. Yeah, I've seen peer reviewed research on such projects with like, eight donors. So yeah, this is an issue. And that's why I think building the sample, and in the case of the markup, they're actually paying the sample to to use the browser. I think this would provide much richer insights.

[Krafft]: So do you think it would help, if all this kinds of study would share some kind of framework? Or do you think it wouldn't really influence this?

[AI-2]: And I'm no big believer in in frameworks. We are also building a framework project it's called Data scope. And the idea is also to, to build a framework to make it easier for academics and journalists to collect data from data donors. The problem I see is that most of the projects have requirements that are too different from one another. And is the technical part of building a plugin or any data collection system is not that high compared to the issue of building a sample? So I'd say that the framework itself, I don't see it, gaining traction.

[Krafft]: Okay, thank you for honesty.

[AI-2]: But I think building a clean code for a single for a one off experiment, could could also be the best way towards a good framework. Because I mean, if if the experiment succeeds, and you manage to convince others that your code is good, and you manage to refactor it in a way that parts of it can be reused, I think you you have a framework right there. But I, I don't see data donations to be something like as generic as of doing something in the browser for which you would be the JavaScript library.

[Krafft]: Okay. My last question would be, again, about the sample. Do you think it would help if the people who installed the plugin had the last say in which of the advertisement they would send in, so the sending would not be automatic, but they would get a list of all advertisements they saw today, in the session, and then they could choose which they want to send in and which not? Do you think that would help? Or limit the expressiveness of the study?

[AI-2]: Honestly, I don't think many would bother. But you might want to talk to the people who are building the forgot the name, regrets plugin for YouTube. Let me send you the link. It's called the regrets reporter. You can install it. And then it's whenever you watch a YouTube video from a recommendation that you didn't really want to watch. You can choose to send a report. I don't know if it works. You can even ask them.

[Krafft]: Then that would be all of my questions. Do you have anything else you would like to say about it?

[AI-2]: No, but please, please keep me updated about what you do whatever direction you choose to go in.

B

AAL WORKSHOP

Before the interviews were conducted, I wanted to gather as much computer science based information as possible, which is why this workshop was conducted. The Algorithm Accountability Lab [1] is a study group under the supervision of Prof. Dr. Zweig[2] at the University of Kaiserslautern [3] with a focus on algorithm accountability. Its projects are concerned with the questions of how algorithms and artificial intelligence is and should be incorporated in decision making processes related to humans. Since these algorithms are usually black boxes, the analysis of these systems is a main concern of it, alongside with the research of ways to make them more transparent and accountable. This thesis is also part of the work of this lab. The workshop was designed as a open conversation, to gather as much information as possible and to keep an open mind about the overarching topic. It began with a short explanation of the framework and what it is that should be achieved with it. Then everyone was encouraged to participate in the discussion about which goals would be interesting and how they could be grouped.
Since this was during the conceptualization phase, not everything was added to the final version of the framework.

1 http://aalab.informatik.uni-kl.de/forschung/
2 http://aalab.informatik.uni-kl.de/gruppe/zweig/
3 https://www.uni-kl.de/en/

Figure B.1: Overall goal of the workshop (red) and malicious behaviors one could investigate (blue)

Figure B.2: Potential goals for studies about microtargeting, not directly related to this framework, sorted by goal (blue) and who would be the direct target (other colors)

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