Democratic principles in the hands of the social media platforms' gatekeepers: A case study of the Leave.EU's digital political campaigning in the 2016 UK referendum

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1. Introduction

On the 31st of January 2020, the United Kingdom officially left the European Union. This decision was made after not only years of domestic debates, but also one of the most covered and mediatized political campaigns. The fight to be the representative of one of the camps (either remain neither Leave) took shape in a new political setting, characterized by our digital age: digital political campaigns. The active use of social media as a relevant political communication platform can be traced back to Obama's 2008 US Presidential Election. The phenomenon of digital political campaigning has gradually increased and still plays an important role in the political discourse (Gibson, 2020). What appeared as a new way of communication could offer the opportunity for political stakeholders to reach a whole new target of potential voters, this is something that they did not previously have access to (Jungherr and Schroeder, 2021). The access to social media remains rather practical and easy, which could open the possibility for a bigger political and civic participation from its users (Dahlgren, 2018). However, the last political decade has revealed the limitations and a dark side of political campaigning that poses a threat to traditional democratic processes. The active use of social media platforms within the realm of political campaigning has raised many challenges to public authorities.

As the trust of the public in political and mediatic institutions decreases, it seeks different sources of information, thus shifting the power from public authorities to new, private authorities (Jungherr & Schroeder, 2021; Dahlgren, 2018). These new challengers will be referred to as *digital gatekeepers*, for they play a decisive role not only in the flow of information, but also the kind of information available to users. These platforms enable numerous new digital and psychological tools to political stakeholders: social reinforcement, rewarding behavior, disinformation, and echo chambers to name a few. These challenges raise questions of their compatibility with democratic processes, and their consequences to traditional democracy: Who can have the authority to regulate information? What can be defined has factual information? Who can shape the political agenda? When do digital practices become unethical? A plethora of scholars have tried to answer these questions before us, without necessarily coming to a common answer.

As we will highlight in the literature review, the existing studies tend to focus specifically on democratic challenges (political participation and political knowledge; echo chambers;

disinformation) or specific psychological challenges. Our research will therefore try to merge the two, or at least create a bridge between these two academic fields, bearing in mind the time resource we have at our disposal. As we mentioned earlier, the Brexit referendum has witnessed controversial political activities, notably from the Leave.EU political stakeholder. The investigation from the Electoral Commission, as well as the spotlight attention the Leave.EU campaign got from the media, drove us to consider the campaign a knowledgeable and feasible case study. This would give us the opportunity to merge the study of digital tools within a democratic scene, to question the role of an actor such as the European Union in face of such challenges, and finally to question the power digital gatekeepers are gaining.

The purpose of this research is, therefore, to answer the usage of digital tools and digital loopholes by political stakeholders in the context of political campaigning. In order to sufficiently do this, we will first offer an extensive literature review to enable our reader to grasp the variety of actors, layers and connections that are stake in this issue. We will secondly set a theoretical framework, using 2 models and concepts: Ali & Zain-ul-abdin's (2021) heuristic model and Zuboff's (2018) intrumentarianism concept, which will shape the path of our analysis. The analysis will be followed by a discussion, where we confront our results. Finally, we will offer a general conclusion.

2. Literature Review

This chapter of the paper is a review of the existing literature on how political campaigns have exploited social media platforms and human psychology to challenge traditional democratic processes. To effectively explore the study area, we have divided this review into three main sections. The first part of the section will seek to understand the impact of social media on human psychology. The next section will explore recent developments in digital political campaigning and the role of digital gatekeepers, as well as the techniques utilized by digital campaigners to trigger users through behavioral micro-targeting. The chapter will conclude with an examination of relevant EU legislation and seek to understand how gaps in the existing regulatory framework has benefited digital political stakeholders and enabled the exploitation of users.

Social Media on a Psychological Level

In this section, we will review academic literature that analyzes how social media platforms utilize the psychology of their users to drive engagement. The core businesses model for digital gatekeepers is advertising revenue, generated through clicks and time spent on their platforms. By leveraging a data-driven understanding of human psychology, companies compete for human attention as a scarce commodity, often disregarding the lasting impacts of these processes on human emotion and behavior.

Neurological responses to the attention-grabbing technologies

"How do we consume as much of your time and conscious attention as possible? … That means that we needed to sort of give you a little dopamine hit every once in a while because someone liked or commented on a photo or a post or whatever … You're exploiting a vulnerability in human psychology … [The inventors] understood this, consciously, and we did it anyway." - Sean Parker, former Facebook President (Allen, 2017).

The human brain controls the way we perceive ourselves and the world around us. The social cognitive theory, presented by American psychologist Albert Bandura in 1989, argues how environmental factors can alter brain structures and sensory systems (Bandura, 1989). Naturally, there are certain biological constraints to the achievable modification. Nonetheless, Bandura maintains that humans possess an unparalleled ability to cognitively adapt (Bandura, 1989). In the present digital era, that we, researchers are still trying to understand how new external forces are altering the human brain. In order to perceive the technologies of the digital media platforms and how they are leveraged by political stakeholders, we must examine what our most vital organ, 'the brain' tells us. Historically, the interaction between the human brain and technology has not been a novel research area. However, the emergence of new, digital technologies has made the field of study increasingly relevant. He et al. (2017) refers to these as social networking sites. Their study explores brain morphology as an indicator of how social networks are stimulating users to develop an addiction-like condition with the technology. Evidence suggests that the brains of individuals with social media addictions are similar to those with substance-use addiction (He et al., 2017). Through *repetitive enactment of a rewarding behavior and recurring strong intrinsic rewards*, social networking sites stimulate a desire to remain engaged (He et al., 2017, p. 2)

The quote is striking compared to the quote from former Facebook president Sean Parker, presented at the beginning of this chapter. There is clear knowledge, from executives, scientists, and engineers that new technologies may have lasting, detrimental consequences on their users. He et al. (2017) advocate for more research into the 'dark side' of social networking technologies. Other findings echo the demonstrable impact they have had on brain development. Excessive screen time has been shown to delay brain development in preschool aged children (Hutton et al., 2020). The current research on the neuroscientific effects of social media is limited, but preliminary findings raise critical questions about how social media is interacting with our brains.

In the next section, we will examine the research by various psychological sub-disciplines on how social media use impacts our cognitive functions. Uncaper & Wagner (2017) conducted a meta-analysis of this literature emphasizing the need for more research in order to establish causality between media multitasking and human cognition. While unable to discern the exact impact of extensive media multitasking, the study is sufficient in supporting our hypothesis that digital media platforms influence human cognition.

In an experiment by Yeykelis et al. (2014), mental arousal level was measured in individuals before and after switching content. The median content length was found to be 19 seconds, much lower than reported in earlier studies (Yeykelis et al., 2014). Arousal was found to be highest at the switch, having been preceded by a 12 second period of gradually increasing skin conductance (Yeykelis et al., 2014). These findings indicate that intensive and rapid switching could deplete attention and diminish productivity (Yeykelis et al., 2014). In some cases, the anticipatory arousal lead users to experience a 'hunting state,' characterized by even more rapid shifting (Yeykelis et al., 2014). Similar to the findings of He et al. (2017), and the statements by Parker, social media platforms are designed to leave users constant wanting more. Updates like infinity scrolling, rather than advancing to the next page, constantly build on the goal of digital gatekeepers to keep users engaged.

Tiggeman et al. (2018) looked at how Instagram's 'like button' affects social comparison and body dissatisfaction amongst women. The study provides further insight into the consequences that social media platforms may have on human psychology, a positive relationship between an

Instagram post's number of likes and facial dissatisfaction (Tiggeman et al., 2018). Although this study is not directly interested in the self-image issues of social media users, the same psychological effects appear to be at work in digital political campaigning. In 302 studies of social media, social comparison was found to be the most prevalent psychological mechanism (Zuboff, 2018). Social comparison stems from the innate human tendency to evaluate personal behavior against that of others (Festinger, 1954). Taking social comparison as a point of departure for the impact of social media platforms on human psychology, we will turn to social reinforcement theory, a common thread found in research by Tiggeman et al. (2018), Zuboff (2018) and Kozyreva et al. (2020). Social reinforcement was notably put into a framework of schedules by American psychologist B. F. Skinner as part of his radical behaviorism (Zuboff, 2018; Kozyreva et al., 2020). The core idea is that a subject's behavior can be modified through exposure to different ratios and intervals of stimuli. These concepts and findings will be presented in greater detail in the theoretical chapter.

Another study that explores psychology to explain how humans interact with screen-based technology is the research conducted by Boers et al. (2020). In a longitudinal study, they found that screen time and social media use had a positive relationship with adolescent alcohol consumption (Boers et al., 2020). To argue for causality, they applied Bandura's (1986) social learning theory to explain how social media is spreading social norms that promote adolescent alcohol consumption (Boers et al., 2020). They findings suggest that exposure to a peer's alcohol consumption online is highly correlated to personal alcohol consumption (Huang et al., 2013; in Boers et al., 2020). Adolescents have been the focus of many studies in this field. A 2014 study by Lemola et al. (2014) showed how electronic media use were positively correlated with sleep difficulties and negatively with sleep duration, leading to symptoms of depression being observed in the sample. Research is still limited and many of the experimental research designs have limited validity. The aim of presenting such a wide variety of cognitive effects of social media is to establish a solid empirical ground for arguing that digital tools designed by the digital gatekeepers can be utilized by political stakeholders to modify our behavior. We will develop the concept of this form of power, by utilizing Shosana Zuboff's (2018) concept of instrumentarianism. We will look at the social interactional dynamics where theoretical notions are present.

Biased towards the unsettling

"A wealth of information creates a poverty of attention" - Lorenz-Spreen (2020, p. 1102)

Faced with an excess of information, humans are forced to choose where to lend their attention. Humans have a tendency to react strongly against something that is unsettling to us, privileging negative and derogatory content over positive and constructive content. The term "unsettling" is used here as an umbrella term for a range of emotions such as fear, disgust, and anger.

The volume of information is depriving us of our attention and the information thriving in these online ecosystems are false and unsettling. Falsehoods on Twitter outperformed factual information (Vosoughi et al., 2018). Remarkably, "false political news" spread the most prolifically. One characteristic of the false information is its novelty (Vosoughi et al., 2018). If the false content invoked responses such as fear, disgust, or surprise, the likeliness of sharing rose (Vosoughi et al., 2018). False news, relative to factual content, was shown to reach 20,000 people in one third of the time (Vosoughi et al., 2018). One troubling consequence is that in this environment, bots and trolls are that much more effective.

In the case of Weibo, the main Chinese social media platform, anger was found to be the most prevalent emotion in posts (Fan et al., 2014). The content coded as angry spread faster and wider, like the studies on false information have found. One indication of how primal human psychology is complicit in this trend flourishing globally is the lack of safeguards in maintaining a coherent narrative in public discourse. This is an undeniable challenge to social cohesion. A slightly different approach taken to understand the role of emotion on social media platforms is understanding how certain emotions can be morally contagious (Brady et al., 2017). Posts with "emotional" words increased the spread with a factor of 20% for each additional emotional word (Brady et al., 2017). This process is "moral contagion", and it is highly conditioned by group membership (Brady et al., 2017). The spread happened across political affiliation in the United States (Brady et al., 2017). Moral psychological research are asking these questions to understand how ideas are formed and end up shaping historical events such as Brexit. From this study it appears clear that digital stakeholders hold the power to shape ideas controlling the streams of information. Down the chain of causality, it will lead to outcomes having real consequences in the

physical realm such as Brexit. Many public opinion stakeholders seem to have picked up on how emotional language can increase the spread of one's message and leverages of it as a strategy (Brady et al., 2017). In a study with a similar interest, Del Vicario et al. (2015) showed how a Facebook page classified as "conspiratorial" gathered a wider audience than one classified as "scientific". A key observation from these findings is the tendency towards social homogeneity in online groups, a feature of echo chambers and filter bubbles (Del Vicario et al., 2015).

With empirical evidence presented for the types of content that thrives on social media platforms. The question turns to how it is perceived. In a Stanford study assessing students' ability to identify credible sources online. The assumption about the students being digital natives and therefore much better equipped than older generations to assess credibility and validity of online sources was debunked by the findings (SHEG, 2016). The study refers to this ability as the cornerstone of civic online reasoning (SHEG, 2016). However, it is daunting if the leaders of tomorrow from an institution like Stanford performs poorly on these metrics which are rightly the cornerstone of civic online reasoning. A different take on how information is perceived online is provided by Pennycook et al. (2018). They show how our own heuristics are assisting the credibility of fake news by a process called fluency via prior exposure, also called the illusory truth effect (Pennycook et al., 2018). If this data stands the test of time and replicability, there is a risk that there could potential be mass delusions. The evidence of prior exposure having a compounding effect will lead the reader to heuristically ascribe the information as more accurate when continuously exposed is concerning (Pennycook et al., 2018).

Pennycook et al. (2018) argue that fact-checkers provide a false security against false information. Since the effects were found to mostly raise general skepticism in users, rather than skepticism about the specific post (Pennycook et al., 2018). Having cited a long range of studies pointing at problematic psychological side effects on the way social media platforms work, it becomes relevant to investigate if there is a distinction between people who are no longer active on social media. Quitting Facebook four weeks prior to the 2018 American midterm election improved subjective wellbeing, while reducing factual news knowledge and polarization (Allcott et al., 2020). Social media have undeniably been credited with many good things, such as erasing barriers in sharing information and helping connect people. Social media is argued to have played a role in

the mobilization of political protests and social movements both in democracies and in autocracies (Allcott et al., 2020). On the other hand, sceptics cite the correlation between the launch of smartphones and a surge in depression and suicides (Allcott et al., 2020). Further, the deactivation of Facebook showed no effect on political engagement, and voter turnout remained the same (Allcott et al., 2020). In the camp of social media sceptics is Lorenz-Spreen et al. (2020) arguing strongly for intervention in how online content is shaping public opinion on crucial matters (Lorenz-Spreen et al., 2020). The media ecosystem generated by social media relies heavily on human attention as their primary resource and the technology is defined *by information overload, finely tuned personalization and distorted social cues leading to manipulation and the spread of false information* (Lorenz-Spreen et al., 2020, p. 1102).

Similar to the focus of our study area, a 2020 report commissioned by the EU Joint Research Center investigated the *influence of online technologies on political behavior and decision making* (Lewandosky et al., 2020). In terms of challenges, the report refers heavily to a lengthy academic entry in "Psychological Science in the Public Interest," also published in 2020. This piece of academic work outlines four central digital challenges, *persuasive and manipulative choice architectures, AI-assisted information architectures, false and misleading information, and distracting environments* (Kozyreva et al., 2020). This framework serves as one way of classifying the challenges previously outlined in the literature. The reports provide our study with a solid academic background as Kozyreva et al. (2020) and Lewandosky et al. (2020) do a very impressive job at providing a comprehensive literature study of the field.

The next part of literature review will define what we mean by Digital Political Campaigns. In this section of the literature review, there have been multiple findings on how the human brain reacts to social media engagement. We will further explore these findings in the discussion chapter of this paper.

Digital Political Campaign and Digital Gatekeepers

Digital political campaigns have become a characteristic trend of our contemporary political processes. It is difficult to date precisely the first online campaign, Howard (2005a) mentions the use of digital technologies in the 1970s. Nevertheless, the 1992 US election cycle was a milestone

in the use of digital tools in political campaigning (Gibson, 2020; Janda, 2015; Howard, 2005a). Therefore, we can trace back the slow but solid appropriation of digital tools into traditional democratic processes to around two decades ago. Incidentally, new actors emerged enabling the trend to gain the momentum we are seeing it having today. This new type of actors will be referred to as "digital gatekeepers". This terminology, we believe, allows us to cover both their variety and their relevance to our study. Thus, we will start by offering the state of the literature on digital political campaigns, as well as digital gatekeepers. It will offer our reader a definition of these terms and understand their historical progression. Subsequently, we will outline the main features the academic community has attributed to digital tools and their consequences on political campaigning.

Digital political campaign covers the vast majority, if not all, of political campaigns around the world. What makes a political campaign digital is its use of digital technologies, such as blogs, newsletter lists, websites, and more recently online video sites and social media (Gibson, 2020; Boulianne, 2020; Dimitrova et al, 2014; Howard, 2005b). However, digital technologies offer multiple opportunities to political stakeholders. They support stakeholders in adapting their structure and goals, reorganizing political leadership and the relationships with the citizens, and linking citizens to democratic institutions (Bimber, 2014; Howard, 2005a). Political campaigns are not constrained anymore by traditional offline tools, such as physical debates, physical act of campaigning, or distributing flyers. As Gibson (2020) noted, using the term "*digital campaign*" allows actors to reach not only a growing body of technological, computing, data, and scientific expertise, but also the changes and consequences that derives from it. Howard (2005a) created the term "hypermedia campaign" to translate the adoption of "*fast, high-capacity hardware and software communication tools that let people transmit, interact with, and filter data*" to express political purposes and garner its capacity for innovation (2). One feature of digital technology in political campaigning is the capacity of the public to not only "consume" political content, but to also "produce" it (Howard, 2005a; Gibson, 2020). Indeed, the relatively cheap access to digital media, such as social media and digital newspaper, offers an easy access to political information for a large number of citizens, and could therefore open the possibility for a bigger participation (Jungherr & Schroeder, 2021; Dahlgren, 2018). Entman & Usher (2018) divided digital technologies into 5 components, including in particular "*platforms*", "*analytics*" and "*algorithms*"

as they play a major role in the contemporary political campaigning. Platforms are characterized by the individual social media filters and policies, dictating who can access what (Entman & Usher, 2018; Howard, 2005b). Analytics are used to match and target the content individual citizens will receive, all based on the data (such as tastes, habits, worldviews, purchases), third organization and political stakeholders have gathered (Entman & Usher, 2018; Barberá et al., 2015). According to Howard (2005b), data have even become "the means" of creating and sorting political messages. Finally, algorithms can be compared to an autonomous entity that decides "what should happen next", thanks to the data gathered on individuals, and therefore shape the users' experience (Entman & Usher, 2018; Eslami et al., 2015; Howard, 2005b; Milan, 2015). Milan (2015) even goes further by arguing that the algorithmic environment of social media produces organizations and narratives that consequently have a certain type of collective action. These components, and incidentally the different actors gravitating around them, are vital to be understood as they are not only relevant, but we will also use them extensively in our study. Indeed, political parties, coined as political stakeholders, and third organizations, coined as digital stakeholders, make an active use of these new technologies to target and personalize the information voters will have access to, in order to either match and reinforce their political opinions or either influence their future political behavior (Gibson, 2020; Entman & Usher, 2018; Barberá et al., 2015; Howard, 2005a and 2005b).

Even though the use of digital technologies has steadily increased during the last three decades, we can draw 3 waves based on the type of technology used, but also the intensity of their usage. The first wave would take place in the 1990s. Indeed, as we mentioned in the previous paragraph, a common consensus was established during this decade. The new millennium also signed off the entry of new technologies, which situate our second wave in the first 2000 decade. Finally, the third and last wave would begin a little before the end of the 2000s decade. Indeed, the Obama 2008 election signed a turning point into the usage of digital technology in political campaign.

In 1996, Epstein was writing that the US election process was on the verge of a new technological era, and he wasn't wrong. In his article, he highlighted the use of websites as a channel for candidates to address the electorate directly (Epstein, 1996). This spartan and rather simplistic "web 1.0" allowed a multitude of political parties to engage in a top-down political communication

where a real interaction between the citizenry and the candidates was extremely limited, if not inexistent (Gibson, 2020; Dimitrova et al., 2014). Moreover, a minority of the citizenry (composed for a majority of wealthy and educated individuals) had access to websites at the time as it was a brand-new political communication tool (Gibson, 2020; Epstein, 1996; Howard, 2005a and 2005b).

The second wave occurred at the turn of the new millennium, and the intensification of digital political campaigning. The access to the internet democratized among the citizens (Norris, 2001), as well as the creation of new platform such as Facebook, YouTube, and blogs. The Web 2.0 was launched (Gibson, 2020; Dimitrova et al., 2014; Anderson, 2007). Moreover, technologies are not only accessible to powerful incumbent parties but small challenger too (Howard, 2005a). However, it is still important to note that parties and candidates had still not developed a clear understanding of the advantages offered by these new technologies (Gibson, 2020). Indeed, the political dialogues were still limited and framed by political parties (Gibson, 2020). Howard (2005a) highlights the concept of "*managed direct democracy*", which translates into an active fight of campaign managers to constrain and filter the stream of political information offered to the public. Bimber (2014) argues that digital media had been nothing more but an amplified version of traditional politics. Nevertheless, other academics supports the increased interactive character of political campaigns thanks to newer digital media forms (Dimitrova et al., 2014).

The third and last wave we identified took place after the Obama 2008 presidential election. This election signed off the rapid adaptation of political parties to a decisive change in political communication (Bimber, 2014): the access of the internet had spread to the entire world; access to IT departments for all parties; access to third organization to collect and use personalized data. Indeed, the following years until now, digital technologies have stepped up to the center stage, where highly accurate methods are introduced for pinpointing and pulling the personal data which is then used in the political campaigns (Gibson, 2020; Howard, 2005b). Today, digital technologies organize political information, predict political outcomes with high accuracy, offer an extreme level of interactivity, and "narrowcast" information from political campaigns (Howard, 2005b; Gibson, 2020; Barberá et al., 2015; Dimitrova et al., 2014; Boulianne, 2020). The use of third organizations and analytics naturally lead us to our case study, which is the Leave.EU campaign.

A turning point from our perspective was the concomitant 2016 US election campaign and Brexit Referendum campaign, and the presence of decisive digital political campaigning. Compared to 2008, contemporary political campaigns have a more "robust" system (Montgomery, 2017). Indeed, the 2016 US election campaign can be seen as an anchored case of a political campaign which took advantage of compelling developments in data-driven marketing techniques (Montgomery, 2017; Karpf, 2017). It appears fundamental to document our reader about the state of the literature on these types of contemporary and negative political campaigns not only because Leave.EU is our case study. But it also highlights the intimate link between the use of negative digital political tools and the offline consequences it can have. As Montgomery (2017) points out, a growing arsenal of software and analytic tools enable digital gatekeepers, and incidentally political campaigns, access to valuable personal data. Facebook, Twitter, and Google are now playing a central role in political operations. Political campaigns relied heavily on their digital marketing system to help them reach the desired outcome (Montgomery, 2017; Karpf, 2017; Green & Issenberg, 2016). The digital marketing systems and the digital political tools we just mentioned are highly questionable, as they interfere in people's privacy by discriminating and manipulating their data to their own benefits (Montgomery, 2017; Green & Issenberg, 2016). In the case of the US 2016 election campaign, Trump's digital staff called upon third data science organization, such as Cambridge Analytica, to identify and target users i.e., potential voters, to influence their political opinions (Green & Issenberg, 2016).

This process isn't new. Indeed, it was established as a fact that the Leave.EU campaign made use of fraudulent suggestion, disinformation, and unauthorized personal data during the campaign (The Guardian, 2017; Kelly, 2018; ICO, 2018; DSMCS, 2019). As we decided to use Leave.EU campaign as a case study, this specific point will be developed more broadly in our analysis.

With that set aside, the question of the digital gatekeepers is still unanswered. This research overlaps with a multitude of fields which, for the sake of time and space, we will not cover in this review. We will cover solely the role of digital gatekeepers within the frame of digital political campaigns. The first author to coin the terminology of "*digital gatekeepers*" was K. Lewin, in his 1947 "Frontiers in group dynamics" article. White (1964) defined a gatekeeper as the "last" and the "terminal" gate in the complex process of communication, from the production to the

consumption of news. Few years later, Shoemaker (1991) organized gatekeepers into 5 main categories: the individual level, the routines level, the organizational level, the institutional level, and the social system level. However, as Bro & Wallberg (2014) and Barzilai-Nahon (2008) correctly argued, (digital) gatekeepers can no longer be consider as blind power, not connected to their environment. As a matter of fact, the technological progresses endeavored during the first two decades of the millennial created a considerable gap between pre-2000's flow of information and interconnectedness of networks and todays. Barzilai-Nahon (2008) developed the "*Network Gatekeeper Theory*" to compensate the lack of research on the dynamic processes and mechanisms used for gatekeeping within an information context. The early expansion of the internet (or "Web 2.0") placed search engines, internet service providers, high-traffic social networking sites and portal providers in the driving seat of information filters (Laidlaw, 2015). These digital gatekeepers can filter and selected the (political) information users view, and therefore act as surrogates or shortcuts for individual people's decisions (Shoemaker, 2009), which has dramatic implication for democratic processes, and culture in general. Laidlaw (2015) addresses in length the companies' responsibilities (i.e., the digital gatekeepers') for the democratic processes which they now, to a large extent, facilitate.

In addition, there has been a steady shift from public entities, such as the state, to private actors to regulate the internet (Laidlaw, 2015). Let's note here that a state of the literature from a legal standpoint will be made after this section. In her book *Regulating speech in Cyberspace*, Laidlaw (2015) developed a new conceptual framework for containing the digital gatekeepers' power, which she called a "*Human Rights Framework*". Her framework appeals to our research and adds a relevant context to the existing literature by questioning the ethical characters of the actual power of private corporates and their responsibilities regarding human-rights in a democratic related culture. She links it to the corporate social responsibility, which is that businesses are responsible for human rights within their sphere of influence (Laidlaw, 2015). Laidlaw (2015) stresses the question: "*how does one as a gatekeeper have a greater or lesser impact on participation in democratic culture?"* (49) and offers a two-ways answer 1) when the information has democratic significance and 2) when the communication occurs in an environment more closely akin to a public sphere. She concludes by arguing that digital gatekeepers can either "*facilitate or hinder deliberation and participation in democratic culture*" (Laidlaw, 2015, p. 57).

Having discussed digital political campaigns and digital gatekeepers in this section, the following section will explore the legislative stances of how these matters are currently regulated in a European context. This will allow us to explore our case study, as it will give us context and an understanding of how digital media platforms have been regulated and legislated in Europe.

Legislation strand

The emergence of social media platforms in recent years has shifted the trends and patterns of globalization. Social media platforms, such as Facebook and Twitter, have accelerated information flows and facilitated new connections between individuals across the world (Mauro & Asimina, 2017). While this accessibility has had numerous benefits for their users, such as creating awareness, building connections, and encouraging political participation, a sizable evidence from scholars, such as Helberger (2020) and Bart et al. (2018), have suggested that overall, social media has been harmful to global democratic processes. This is evident and demonstrated in the first section of this literature review. This has initiated research into steps to protect citizens and traditional democratic processes. The danger of social media platforms to our democratic processes are evident in controversies such as the Brexit Leave campaign and Donald Trump's presidential campaign in 2016. This section of the literature review will explore the findings of scholars who have examined the impacts and consequences of social media platforms in a European context and how the European Union and member states have tackled the issues created by the phenomenon.
Facebook has over 2.6 billion users. If Facebook was a country, it would be the largest on the planet. However, unlike governments, social media platforms, like Facebook, with a global reach, are operating in a global environment with an absence of legislation (Helberger, 2020). Helberger (2020) argues that the platforms are used to encourage political participation by spreading information to its users, which is not always factual in order to influence their democratic practices. There must be some form of regulation on these forums, and they should not be viewed as just "social media" platforms. The failure in the current attempts to regulate misinformation on digital media platforms is that the current and ongoing attempts have been viewing social media platform as '*intermediaries'* of the opinions of others and a facilitator of their perspectives (Helberger, 2020). There are various political campaigns in European member states that were created on social media platform. Helberger (2020) argues that digital media platforms should be viewed as active political actors, as they have a significant power in the way their users understand and

participate in political processes. Due to this power the EU has a huge responsibility to regulate digital media platforms in its member states this includes policies and legislations that are transmitted to ensure that member states adhere to legitimate and democratic processes (Mauro & Asimina, 2017).

Similar, to Helberger (2020), Mauro & Asimina (2017) argue that social media platforms should be viewed as 'communication spaces' that involve politically relevant discourses. Essentially, they argue that the EU has a responsibility to create legislations and policies in the same way they do for any other spaces concerned with the spread and transmission of engaging political actions and participation. Hoofnagle et al. (2019) outline some of the EU's current stances on privacy legislation as it pertains to the use of social media. They highlight that 'The European Union's General Data Protection Regulation' mandates member countries of the EU to sign privacy legislations, which ensures that users' privacy information is handled considering Data Protection Authorities (Hoofnagle et al., 2019). The creation and implementation of policies on digital media platforms across the EU vary across member states, this is due to the political infrastructures in the member states and the existing policies that they have on digital media regulation (Iosifidis, 2011). Iosifidis (2011) found that member states are responsible for the creation of media ownership rules that concern public interested in a European context, albeit the EU has begun to play a crucial role in monitoring these public media creations. This is exemplified in the establishment of initiatives such as the Digital Service Act which was created as a tool to monitor behaviors on digital platforms across the EU. Though there are policies and regulations in place in the European Union they are largely influenced by political and cultural understanding of digital media. As Bart et al. (2018) found the social, cultural, and political differences in EU member states on legislations concerning personal protection enforced by DPA are put into practice differently. In countries such as the United Kingdom and Italy, data protection authorities have provided national guidelines for personal data protection, however these types of guidelines cannot be found in countries such as Romania and Ireland. It is argued that the reason that countries like Romania do not have strong legislation and policies on a national level on digital media regulation is a result of their hardly being any discussions about it in the political discourse (Bart et al., 2018). In contrast, it is found that a member state such as Sweden that has had debates, discussions, and initiatives on the matter, have resulted to greater national legislative changes on digital media regulation.

Custers et al.'s (2013) paper regarding privacy and consent in the light of EU regulation, showcased that a significant amount of personal data from online users of social media platforms was collected. They were aware that this posed an unethical issue as digital media platforms such as Facebook, Google and YouTube have access to millions of personal datasets that they can sell to advertisers to target more customers. They, therefore, carried out research under an EU funded project called 'CONSENT' which recommended that the regulation and definition surrounding the idea of consent needs to be much more explicit. As the current understanding of the matter can be categorized into 'consent', 'unambiguous consent' and 'explicit consent which can be unnecessary technical jargons for average social media users. Similar, to Custers et al. (2013), Sarikakis & Winter (2017) argue that the language around privacy laws and consent needs to be democratized to allow users to fully understand how their information is being used. As they argue, most of the time users that are highly aware of privacy laws have faced privacy violations and have had to take "self-protective" measures and educate themselves on very technical issues.

In 2020, the European Commission (n.d.) introduced two new laws called the 'Digital Service Act' and the 'Digital Markets Act' which has multi-billion-dollar fines to ensure that social media companies such as Twitter and Snapchat comply with regulations that project the confidential information of their users. Compared to the US, the EU is significantly ahead in actively trying to protect its citizens from having their privacy data mishandled (DeLuca, 2019). While there is still a high level of uncertainty when it comes to legislations surrounding how social media companies should approach privacy and the data they collect, the EU has made considerable progress on laws regarding the space. The pandemic has accelerated this, as has become highly apparent what misinformation on social media can lead to. Across Europe and America, an increase in Anti-Asian crime increased, due to false narratives on social media being shared about Asians being the cause of coronavirus has led to a rapid rise of hate crime (Manca et al., 2021).

As mentioned above, social media can be a great tool to promote overall wellbeing amongst ordinary citizens, as it gives them access to communities, connects them to their loved ones and allows them to find representation. However, in the past decade, a significant amount of research has highlighted that social media has a correlation with depression, anxiety, and body dysmorphia (Schønning et al., 2020). The psychological effects of social media usage have been discussed in a previous section of this literature review; however, it is interesting to explore how the EU has

addresses the matter. The EU has set agendas to address the links between social media and the wellbeing of its users, especially the young ones (Boers et al., 2019). The EU has therefore commissioned several research initiatives into the correlation between social media use and mental health. This research has recommended utilizing screen time which are features on smartphones that allows users to set the amount of time they spend on apps before they are locked out from those apps (Boers et al., 2019).

The EU is working hard in strengthening and securing the current legislations in place. These platforms hold the power to influence political agendas, impacts public discourses, and thus may pose a huge threat to citizen both in the European context and on a global level (Helberger, 2020). The literature reviewed above demonstrates a need for effective measures to safeguard the information shared and collected to avoid the manipulation of their users which pose a threat to all democracies. The findings of this section of the literature review suggests, that the EU has proposed and enforced legislations to regulate digital platforms, however it could be argued that these efforts have not been pragmatic, as we have experienced great controversies in European democratic processes that will be further examined in later chapters of this paper. This is evident in the case of Brexit, and how information was gathered and distributed. The case and findings of this review pose a question, that we might need to rethink EU politics in the digital era that we are living in.

3. Problem Area

Protecting human agency and democratic principles (free will and free speech) from digital gatekeeper's (social media platforms) exploiting human psychology for profit: A case study of the blind spots in the European Commission's digital strategy.

As we highlighted in the introduction and literature review, the steady rise of digital platforms goes hand in hand with the concern that they may have a solid impact on traditional democratic processes. Indeed, the active and questionable usage of human psychology on these platforms in order to achieve political agenda has been in the mind of many scholars. It hasn't only been in the mind of scholars, but also governments and public administrations, such as the European Commission. The 2020 Digital Services Act and the Digital Markets Act represent the most significant legislative developments in defining the rules and responsibilities regarding digital

stakeholders within the EU (European Commission, n.d.). The digitalization of all conceivable human activity during the last decade poses new and unresolved challenges to traditional democratic society. While digital platforms, like Facebook and Twitter, have emboldened democratic political movements around the world, they have also amplified the reach of conspiracy theorists and fake news. Here lays the real dilemma on whether digital gatekeepers have a positive or negative influence over traditional democracy, as the questions of free speech, data exploitation, or disinformation remain unanswered. As we have highlighted in the introduction, recent political campaigns have been infamously thrown in the spotlight for their suspicious usage of social media platforms. Consequently, this research aims to answer the following question:

How do political campaigns exploit social media platforms and human psychology to challenge traditional democratic processes?

Answering this question, as our reader would assume, would be a large task going beyond the scope of this paper. That is why we decided to focus our time and resource on one case, which is that of the Leave.EU political campaign during the Brexit referendum. Our literature review, as well as our theoretical framework, narrowed down our focus area. Indeed, we realized quite early on the large number of psychological tools political stakeholders could use on digital platforms. For example, scholars such as Tiggeman et al. (2018) found empirical evidence suggesting that social media platforms have real psychological consequences for its users.

This case study illustrates how political stakeholder can leverage these psychological tools, developed and refined by prominent data consulting companies such as Cambridge Analytica, in order to collect personal data of social media users to design messages to accurately target potential voters. In addition to psychological tools, we saw in the literature review the vast loopholes that are characteristic to digital platforms, such as echo chambers, algorithmic technology, and so on. On a theoretical standpoint, the heuristic model tends to focus on how messages of this kind gain credibility on social media (Ali & Zain-ul-abdin, 2021). Zuboff's (2018) intrumentarianism concept help us to coin down to growing power the digital gatekeepers hold not only on the tools at the political stakeholders' disposal, but also on users. Indeed, as we will see in more details in the theoretical framework, instrumentarianism comes with an implicit assumption that digital

gatekeepers consciously use their technology to alter users' behavior (Zuboff, 2018). Ergo, our reflection led us to ask the following hypothesis:

The Leave.EU digital campaigning relied significantly on negative messaging and data exploitation to influence voters and the UK referendum.

4. Theoretical Framework

In this chapter we will introduce our theoretical framework. The selection of the theoretical concepts was done based on the literature presented in the literature review. Having encountered a range of theoretical concepts when researching the field of study, we proceeded with a discussion of the theoretical concepts applicable for our research area. Firstly, we present and define our key theoretical concepts. Secondly, we discuss the limits and links among these concepts. Finally, we will home in their role within our analysis.

The more time you spend, the more power they get: How digital gatekeepers theoretically get their power

"Instrumentarian power knows and shapes human behavior toward others' ends. Instead of armaments and armies, it works its will through the automated medium of an increasingly ubiquitous computational architecture" (Zuboff, 2018, p. 14).

The nature of power and the shape it takes within our social reality is always of interest to social scientific studies. Kozyreva et al. (2020) and Lewandosky et al. (2020) work categorize common digital challenges. Elements of these challenges are all found in our case of Leave.EU. While Kozyreva et al's (2020) classification gives a concrete overview of the challenges, it lacks` theoretical concepts explaining how and why these technologies pose issues to democratic societies. Here we look to Shoshana Zuboff's (2018) theoretical notion of instrumentarianism as a meso-level theory developed to explain what Zuboff calls "surveillance capitalism". This study subscribes to the same idea of how digital gatekeepers are enabling political stakeholders to wield new forms of power. This is the reasoning for choosing Shoshana Zuboff's concept of instrumentarian power.

The concept was coined in her 2018 book, "The Age of Surveillance Capitalism". Before we lay out the nuances of the concept, we will do a basic translation of how Zuboff's (2018) general conceptual framework corresponds to ours. We will not use her key concept of Surveillance Capitalist, since it would create confusion with our concept of digital gatekeepers. However, without being identical, Zuboff's (2018) surveillance capitalist and EU's digital gatekeepers share similarities in how they are addressing and describing the behavior of the same American tech firms.

With this general point set aside, we present what instrumentarianism is and how it is different from another famous form of power, namely authoritarianism. Digital gatekeepers, or surveillance capitalists as Zuboff (2018) calls them, have built their business model around the nudging, coaxing, and tuning of users into spending more time on their platforms (Zuboff, 2018). The profit motive for these digital gatekeepers is to devise more effective ways to keep users engaged, so that they will see more advertisements, maximizing profits. Zuboff (2018) describes a competitive pressure between the digital gatekeepers in developing the best attention-grabbing technologies, created a shift from collecting the data to actively using it to change users' behaviors.

Instrumentarianism comes with an implicit assumption about digital gatekeepers consciously using their technology to alter users' behavior. We will subscribe to the same assumption in the usage of the concept. However, it is important to clarify that the motive of these gatekeepers shouldn't be assumed to be any more nefarious than generating profits for their shareholders. In this way, the concept resembles Marx's critique of capitalists. Zuboff (2018) labels the shift a reorientation from knowledge to power. The goal is to automate the users, rather than automating the information flows (Zuboff, 2018). Inspiration from Marx is also found when Zuboff uses "means of behavioral modification" to describe the source of power in instrumentarianism (Zuboff, 2018, p. 14). Zuboff describes instrumentarianism as new species of power, in line with totalitarianism, formulated by Hannah Arendt in "The Origins of Totalitarianism" (Zuboff, 2018). Although totalitarianism is exercised through violence or force, instrumentarian power is exerted through nudges. B. F. Skinner's radical behaviorism serves as the psychological basis for instrumentarianism. Skinner perceived the idea of freedom to be ignorant, rather it was a result of human incapability to understand and predict the outcomes of social interactions. In the mid-20th century, Skinner yearned for a technology which would allow for a sophisticated and comprehensive way of observing behavior and enabling the analysis of aggerate behavior.

Data science of the 21st century made this dream possible and gave birth to instrumentarianism. Prior to the dominance of digital gatekeepers controlling the means to behavioral modification, the discipline of behavioral economics has long been interested in understanding how humans make choices. Economic incentives in the labor market have been an effective means at modifying human behavior (Zuboff, 2018). Early on, Skinner understood the risk that such methods pose to the rights of individuals and the norms of democratic societies (Zuboff, 2018). Instrumentarianism is reductionist in dealing with the human experience. Radical indifference explains how human experience can be whittled down to data points (Zuboff, 2018, p. 233). We will assess whether this can be found in our case of Leave. EU's digital political campaigning.

The appearance of instrumentarianism is a strength in how it exiles the individual from their own behavior (Zuboff, 2018). The comfort and convenience of these technologies is a key factor in making instrumentarianism a sustainable source of power. This logic is closely related with how behavioral economics regards the human reasoning abilities as fragile and easily malleable (Zuboff, 2018). This idea is linked with how digital gatekeepers and their practices is referred to as an attention economy. The stealth movement of instrumentarianism is what erodes democracy from within (Zuboff, 2018). Again, we will attempt to establish empirical evidence pointing in this direction.

The objective of the instrumentarian power of digital stakeholders is a form of automation, through a steady flow of profitable user-generated information. One way of doing this is built on Skinner's idea of stimulus-response-reinforcement methods (Zuboff, 2018). What is of interest to us is how a digital political campaign, in this case, Leave.EU, deployed these forms of social persuasion and influence in the run-up to the Brexit referendum. Skinner experimented with "schedules of reinforcement" to understand how you could condition human to behavior in a desired manner (Zuboff, 2018, 269). Kozyreva et al. (2020) also included these schedules as part of the challenge she calls "distracting environments" (125).

A recent addition of the psychological strand of instrumentarianism comes from MIT director Alex Pentland (Zuboff, 2018). Pentland outlines a principle of "social influence" as a desirable way to make individuals mimic each other. A second principle for Pentland is "social efficiency," which explains that participation in the social networks should be beneficial to both the user and the

system (Zuboff, 2018). Pentland envisions an instrumentarian society that disregards traditional social categories such as class, history, power, and politics in favor of a society as a statistically defined population (Zuboff, 2018). In Pentland's vision, social learning is crucial to achieve the desired predictability of behavior (Zuboff, 2018).

> *The social hive is meant to reproduce the machine hive, and to this end Pentland advocates methods by which social learning "can be accelerated and shaped by social pressure."* (Zuboff, 2018, p. 270).

The deployment of tunes and nudges are arguably a way of deploying social pressure. Bond et al. (2012) found that showing users which of their friends voted in an election was highly effective at motivating voting behavior in the users vote themselves. This study has also been conceptualized as a study of how behavior is contagious on Facebook (Zuboff, 2018). In the instrumentarian ideal, social pressure is the highest good, since it prevents unpredictable behavior (Zuboff, 2018). Elements of social comparison are commonplace on social media platforms (Zuboff, 2018). Social comparison is a sub-conscious process.

As we go through life being exposed to other people, we naturally compare ourselves along the lines of similarity and contrast—I am like you. I am different from you— subliminal perceptions that translate into judgments—I am better than you. You are better than I. (Zuboff, 2018, p. 289).

While this concept is difficult to operationalize, it is worth mentioning in order to communicate the link between human psychology and the power. While instrumentarianism and its sub-concepts is of great relevance to us, measuring them is a demanding task. Therefore, we below introduce a heuristic model which will help us get better and more concrete indicator for some of these more abstract psychological concepts.

Establishing credibility of Digital Political Campaigns through heuristic processing

While misleading or manipulative political messaging is nothing new, political campaigns on social media have the benefit of near total reach, allowing them to craft targeted, tested messages. With the technology and algorithms behind social media platforms, as well as the sheer volume of information that users are exposed to, it encourages users to scroll idly through their feeds. The pervasiveness of fake news can be understood through the psychological processes that help

humans process information. While the volume of messages can be explained by the technology of the platforms, their acceptance by users can be explained by how humans determine credibility. Rather than spending the time to engage critically with the messages shared and the content promoted on one's feed, users rely on mental shortcuts, or heuristics, to simplify information processing (Bellur & Sundar, 2014). Social media users are nudged to stay online through features like continuous scrolling and generated promoted content. Facing a continuous bombardment of content from unknown sources, users, with finite attention spans and information processing abilities, fall back on mental tools to maximize engagement while minimizing cognitive effort (Chaiken, 1980). Heuristic processing, in contrast with high-effort, more rigorous systematic processing, helps automate how humans determine credibility and become persuaded.

Political campaigns, regardless of their medium, are designed to mobilize and persuade voters. Content online, whether they are images, advertisements, or articles, are subject to looser standards than traditional media sources (Metzger et al., 2010). In this online landscape, it is up to individuals to determine credibility for themselves. The success of recent profile political campaigns, such as the 2016 Trump election and Leave.EU campaigns, in mobilizing citizens online with polarizing messages that promote fear and outrage, demonstrates that insight into how human psychology can be exploited by political campaigns is readily available. These campaigns have utilized messages that highlight negative or polarizing content because they are more likely to be shared (Brady et al., 2017). The effectiveness of this content is determined by its acceptance by the target audience, which is in turn determined by its perceived credibility.

The theoretical model put forth by Ali & Zain-ul-abdin (2021) provide the basis for understanding how messages of this kind gain credibility on social media. Synthesizing the work of Black (2001) on propaganda theory with existing research into heuristic processing, the authors investigated "fake news" stories in the 2016 US presidential election for certain elements designed to persuade individuals through misleading, deceptive, or otherwise manipulative tactics. These included rhetorical devices such as reductive cause and effect relations, reliance on authority figures, in-group/out-group dichotomies, and emphasis on conflict over cooperation (Black, 2001). With content that relies on these devices rather than encouraging critical thinking, political campaigns have successfully persuaded citizens by designing content that activates efficient, low-effort

heuristics to determine credibility. That is why we chose these same elements as indicators in our own research. We strongly believe these elements capture the full spectrum not only of our conceptual research, but also on our empirical research.

Political messages don't need to be accurate to be convincing. Instead, they can be designed to trigger the heuristics, or mental shortcuts, that enable individuals to sift through the flood of information online. As we have seen, political campaigns have the capacity to do these very things. In a 2015 presentation for the Leave.EU campaign, Cambridge Analytica outlined the strategy that they would use to segment UK voters and micro-target citizens with unique political communication. Their work relied on novel data-science approaches, as well as input from psychologists and political messaging specialists. Although Cambridge Analytica was perhaps the most high-profile political consulting firm to rely on social media and user data, many other employ similar tactics.

While their analysis centered on the propagandist features of "fake news" stories and why they were so prevalent, our study takes a narrow view and focuses on the heuristic processing of political messages published by Leave.EU during the Brexit campaign. The core propositions of Ali & Zain-ul-abdin's (2021) model provide the framework for analysis of the content of the Leave.EU campaign. After identifying the rhetorical devices utilized in a political message, we can point out the specific heuristics that allow disinformation to be transformed into credible and convincing advertisements.

5. Methodology

This chapter will present a deeper background into Leave.EU, our case study of the modern, digital political campaign. It will outline our analytical strategy, data sources, and strategy for operationalization.

The Case

On June 23, 2016, after years of negotiations and months of campaigning, British citizens voted to leave the European Union. With a 72,2 % voter turnout, one of the founders of the EU made

history and became, after 47 years of membership, the first to leave the supranational union. Brexit, as coined by campaigns and echoed by media, had convinced and persuaded 51,9 % of British voters to make history, for better or for worse (Clarke, Goodwin, Whitely, 2017). Although Brexit was lobbied for by many different actors, the Leave.EU campaign played an undeniable role in securing the outcome. The founding members of the Leave.EU campaign had significant experience in political campaigning and were engaged with ethically questionable third organizations and wealthy supporters (ibid). The reasoning for selecting Leave.EU as an interesting research area lies in how the campaign was built up and conducted, and the ensuing controversies.

The Leave.EU campaign was mostly based on Facebook and Twitter. With a vocal digital presence and posts utilizing the same subliminal strategy of "simpler, emotional, narrative-driven messages reinforced by visuals and image-text memes," the Leave.EU online political campaign became one of the first European representations of a rising trend (Chadwick, in Skopeliti, 2019). Dr. Lisa-Marie Neudert found that "those putting out disinformation are often highly digitally literate — they know what will get a viral reaction, both in terms of content and form. We see [these pages] sharing memes, images — generally concise content loaded with controversy." (Skopeliti, 2019). Highlighting those results from such campaigns lies in their ability to create engagement. Regardless of whether the engagement is for or against the message, stakeholders can use the reactions of individuals to drive engagement and raise the profile of a campaign(ibid).

The Leave.EU is a political organization, which makes them a political stakeholder in this research study. On their homepage, they describe themselves as having: "played a decisive role in the British public's historic vote to leave the EU in 2016" (Leave.EU, n.d.,). Although this case study will only focus on Leave.EUs campaigning during the referendum, it is important to note that Leave.EU is still a running political stakeholder, "[remaining] active as the British government negotiates its full exit from the failing European bloc following the country's legal withdrawal from the EU" (Leave.EU, n.d.).

As a campaign for Leave, Leave.EU played a role in the referendum's success. Questions surround their methods first emerged after the conclusion of the referendum. The Information Commissioner's Office (ICO) launched a formal investigation into Leave.EU and related campaigns, intention to understand the link between Leave.EU campaign and big corporate data companies, such as Cambridge Analytical and Facebook. They were suspected by multiple

offences such as data mining, exploitation of private data for micro targeting and illegal allocation of campaigns spending. It is important to mention that various whistleblowers that once held working titles for the Leave.EU campaign spoke out about troubling activity that took place in the campaign (The Guardian, 2018). A common concern during the investigation was the question of data, micro targeting and the messaging throughout the campaign's digital presence. There were claims that the Leave.EU campaign had ties to data companies, that "brought psychology, propaganda and technology together in this powerful new way," (The Guardian, 2018). The following research will take place in this sphere.

We were initially puzzled with a desire to understand the power these companies hold and how they affect our traditional democracies. Our research revealed diverse interactions between different types of actors, including digital stakeholders, digital gatekeepers, and political stakeholders during the Leave.EU campaign. We find it an important and informative case to understand the bigger picture, because the entities previously mentioned seem to all have parallels to this specific case. This research aims to understand how these digital gatekeepers' psychological influences are changing the processes of traditional democratic elections. We have conducted a case study of multiple elements of the Leave.EU campaign, enabling us to examine examples of the direct link between the individual and democratic elections. An analysis of the concepts of psychological influence found in the digital Leave.EU campaign on primarily Facebook and Twitter is also conducted.

Our findings will be explained and understood through the lenses of theoretical findings and statements from digital gatekeepers, official reports and existing statistics on the matter. Using this process will allow us to examine the generalized findings. The case study uses the concept of triangulation to achieve a strong argument, also aiming to minimize the inherent weaknesses of doing a single case study (Flick, 2015). By using a diverse range of data, the study can provide an in-depth analysis of the Leave.EU campaign. In order to make up for the characteristic lack of generalizability, we will lean on existing research in our discussion to contextualize the findings with other scholars (Flick, 2015).

The Analytical Strategy

In order to sufficiently answer our hypothesis and research question, we will use a content analysis to study our set of data. Our main data is comprised of social media posts from the Leave.EU campaign, and documents and reports from the British Parliament (2019), Electoral Commission (2018), Cambridge Analytica (2015), and Information Commissioner's Office (2018). We will also analyze statements made by representatives of digital gatekeepers, political stakeholders, and other key players of the Brexit referendum. We also aim to analyze data composed of existing statistical findings, which will be used to back up the analysis and findings from the other collected data. By using different types of data, our final analytical aim towards a triangulation.

As previously mentioned, our primary data will be analyzed using content analysis. In order to explore this further, it is vital that we define content analysis. A content analysis is understood as "a systematic, objective, qualitative analysis of messages and characteristics" (Neuendorf, 2017, p. 2). Because our research covers a wide range of research areas including psychological individual traits, democratic outcomes, and political inputs, a content analysis methodology appears attractive. Content analysis can be used in various setting, such as discovering psychological characteristics, patterns of cooccurrence of words or phrases, and political communication (Neuendorf, 2017). Therefore, one should not reduce the relevance of our results, as this method is not simply counting the words occurrences (Neuendorf, 2004). We would like to note the adaptability of content analysis to our specific strand of research, being the analysis of not only traditional textual documents (reports, political statements), but also the interactive characteristics of social media. We will analyze posts harvested recently from the Leave.EU Facebook page, which is also utilized on their Twitter page. Therefore, the strengths of traditional content analysis will not be lost in large questionable data sets. Our research aims to draw the attention of our reader to the challenges of using data derived from social media. Both the interactive character of social media, and the content analysis itself offer a theoretical ease, in the sense that it can be combined with many conceptual postures (Comon et al., 2016). As mentioned above, we chose user-selected content (i.e., already existing media products posted and shared online) (Neuendorf, 2017). In addition to social media posts, we selected 4 reports (ICO, DCMSC, EC and CA) that cement the questionable practices of the Leave.EU campaign and its use of digital tools during the Brexit campaign. An analysis of statements will also be conducted, collected from

online sources who reported them. To conclude the analysis, we will highlight secondary statistical data to back up our qualitative analysis.

Operationalization

In order to test our hypothesis, we must conduct the operationalization of our concepts, that is to measure them concretely and empirically. As we highlighted in the theory chapter, we are going to employ two types of complementary conceptual frameworks in order to develop the complexity of the research: heuristics and instrumentarian power. Both frameworks will allow us to unfold the systematic concepts of our research, social media platforms, the exploitation of human psychology, and how these trends challenge traditional democratic processes.

The systematic concepts of social media platforms and human psychology exploitation will be mostly examined through the heuristic model of Ali & Zain-ul-abdin (2021). We allocated indicators inspired from this model, which are: simplistic cause-effect relationships, division between in-groups (friends) and out-groups (enemies), abstract terminology, and emphasis on conflict rather cooperation. In order to provide our readers with a better understanding of the indicators, we are going to briefly define and link examples to them. By simplistic cause-effect relationships, we understand a reduction of complex situations (e.g., reducing the Brexit to over-simplistic reasons) (Ali & Zain-ul-abdin, 2021). By division between in-groups and out-groups, we understand the role of political stakeholders in reinforcing pre-existing biases in users' mind (e.g., using negative connotation in order to transpose the negative feeling of the user) (Ali & Zain-ul-abdin, 2021). By emphasis on conflict rather than cooperation, we understand the active use of negative connotation towards other political parties or supranational entities (e.g., any kind of hostile messages towards the European Union) (Ali & Zain-ul-abdin, 2021). These systemic concepts will be analyzed through the instrumentarian framework (Zuboff, 2018), using the following indicators: use of technological tools to predict behavior, and exploitation of data. The second systematic concept, that is, 'challenged traditional democratic processes', will be examined through the instrumentarianism framework (Zuboff, 2018). We will use two types of indicators: recommendation of the creation of use of big data algorithms, absence of strong legal framework, ownership of digital platforms, lack of transparency, established breach of election processes.

6. Analysis

This chapter will present our analysis of four different types of data. The results of this analysis will be the basis for accepting or rejecting our hypothesis.

H: *The Leave.EU digital campaigning relied significantly on negative messaging and data exploitation to influence voters and the UK referendum.*

First, we will look at posts from Leave. EU's Facebook page and conduct a content analysis of each of the posts, using the theoretical model of heuristic processing to better understand the link between rhetorical strategy and message credibility. The analysis will then turn to statements made by key digital gatekeepers and political stakeholders. Finally, the analysis will investigate summary documents and reports from hearings and investigations into Leave.EU and Cambridge Analytica. These three elements will be assisted with statistical findings from other studies into the Leave.EU digital political campaigning.

Posts

For analysis, we have selected five posts published by Leave.EU on Facebook. The posts were selected at random, so long as the fit the base criteria of a brief message or image with a clear message. While this data was selected from the Leave.EU Facebook page, and still remains visible to the public, it is also indicative of content publish on the campaign's official Twitter page. While a politically-biased news story and a captioned image can differ, they may both rely on similar persuasive strategies. Although the analysis of Ali and Zain-ul-abdin (2021) focused on 'fake news' stories, defined as 'fabricated information that mimics news media content in form but not in organizational process or intent,' during the 2016 US Presidential Election, the propaganda typology and corresponding heuristics model still hold true (Lazer et al., 2018, p. 1094). Propaganda, for the sake of this analysis, is 'a form of strategic communication that uses rhetorical devices and cognitive heuristics to bypass the need for evidence when making claims, and that extends generalizations from those claims' (Ali and Zain-ul-abdin, 112, p. 2021).

Leave.EU, operating as an unofficial political campaign, was unique among all of the political campaigns, official or otherwise, in its use of "audience profiling and targeting," "[resulting] in [the] propagation of deceptive messages using coercive tools" (Bakir, 2020, p. 8). As a result, they could be more varied in their messaging technique. An analysis of word frequency in tweets leading up to the referendum by Leave.EU, Stronger In and Vote Leave, two official campaigns, showed that the Leave.EU campaign was much less consistent regarding their core message (Usherwood & Wright, 2017, p. 17).

Political messages take many forms. Editorials, TV commercials, print ads and social media posts all represent different forms of media, through which political actors spread their message, in order to persuade and mobilize potential voters. Advertisers on social media, particularly political ones, aren't held to the same scrutiny as other forms media. Thus, political actors can invest in advertisement campaigns on social media platforms, which utilize strategies to convey misleading or potentially untrue information, as credible. The Leave.EU campaign utilized this as one part of their digital media strategy, and five of their posts will be subject to analysis according to the theoretical model put forth by Ali & Zain-ul-abdin (2021). Particularly, this is analysis will center to understanding how content on social media.

First, we will assess the content of the posts in terms of Black's (2001) propaganda typology, and then interpret the posts according to the heuristics that they rely on to be perceived as credible. In most cases, multiple of Black's (2001) rhetorical strategies are utilized, as are heuristic cues. Finally, these findings will be contextualized in terms of the veracity of the claims made, or the facts implied by each post.

Post 1: "Love the NHS? Then protect it. Vote Leave.EU" (Source, Leave.EU Facebook Page)

The first post plays into concerns, amplified by the Leave.EU campaign, that trends in immigration within the EU could overwhelm the NHS. The image employs anxieties surrounding immigration to play into divisions between in-groups (concerned UK citizens) and out-groups (i.e. Turks, or unwanted immigrants), as well as simplistic cause-effect relationships. In other words, if the UK remains, *then* immigrants will come and drain health care resources. Together, these messages resonate with individuals that are already concerned about immigration and the impact if could have on something that is 'theirs,' the NHS. The self-confirmation heuristic outlines how arguments of this form are particularly effective if it conforms with existing opinions and biases (Metzger & Flanagin, 2013). For others, this post would be ineffective, and otherwise ignored. The benefit of a digital media strategy that relies on quantity, rather than consistency, of posts, is that eventually, a message might resonate with a potential voter. Although the conclusion of the argument in the post, that remaining in the EU will allow 75 million immigrants to move to the UK and overwhelm the healthcare services, could be easily debunked with empirical data into immigration flows throughout Europe, for certain susceptible individuals, that mental effort is lost.

Post 2: A brief video clip with the caption: *"If the Government cannot control the number of people coming here, they are not in control of a key aspect of the economy. Migration can boost the economy but uncontrolled immigration results in a downward spiral on jobs, GP waiting times and housing. The ONLY way to adequately control immigration is to vote Leave on 23 June."* (Source, Leave.EU Facebook Page)

Again, we encounter the migration narrative, heavily and successfully utilized by both Leave campaigns. Multiple heuristics are at work in the video - self-confirmation, affect and effort heuristics can all be activated by this use of language. It's a strong example of using divisive language about two group distinct groups, the British and the immigrants seeking access to the UK via Europe. This form of logic is also clearly relying on simplistic causal-effect relationships. The statement that the government cannot control the flow of migrants implies conflict, and the downward spiral on jobs qualifies for abstract language. This post is not self-confirming, but also with likelihood stirrers up affect in the receiver. Lastly, the message is singular in it time perspective, because it does not address what migration will look like after Brexit or how Brits might be able to migrate to other European countries.

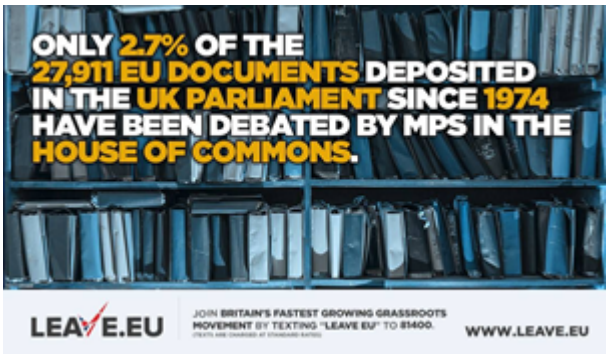
Post 3: *"The vast majority of people are against the UK becoming part of a fully integrated EU. The EU have published a report outlining their vision for a fully integrated EU over the next 10 years. The only way to stop this is to vote to leave the EU."* (Source, Leave.EU Facebook Page)

In the third post, we see another popular narrative across the Leave campaigns, the loss of sovereignty narrative. Here we again see division among EU and the UK, according to this post having completely different desires about the future of the European Union. Again, the simplistic causal relationship here, is that only by completely leaving the EU can UK sovereignty be restored. Which is of course simplistic because of the multitude of membership agreements within the EU. While we do not want to thoroughly fact-check the claim of 86% British being against, since it is not clearly stated what they are against. But one would assume it to be membership of the EU. From the result of the referendum, it is clear that the statistic used by Leave.EU is untrue. By that we claim it to be an example of abstract language, which would lead to effort heuristic also being at play.

Post 4: "*The European Union is in chaos. The Eurozone is crippled, its borders have been breached and its citizens are growing ever more Eurosceptic. If we were not a member, would you vote to join the EU? Join Britain's fastest growing grassroots movement by registering online at https://leave.eu/en/get-involved*" (Source, Leave.EU Facebook Page)

The fourth post employs a call to action, hoping to convince the audience with the self-confirmation, the affect and effort heuristics. The picture describes a number different internal and external conflicts facing the EU. There the affect heuristic is very much to be activated here by the emphasis on conflict. Further, why these are lumped together and the postulation of the EU being in chaos qualifies as abstract terminology. What seemingly are a stable in Leave.EU communication is to create division among the Brits and Europe. This finding is usurping as the nature of Brexit makes is perfectly logical for political stakeholder to create two groups and emphasis the division and conflict among the two. Doing this also enables the use of simplest causal relation group A, causes group B harm, therefore group A is evil. Without questioning if group B in facts had part in the harm itself and also in the case of Brexit it is not really clear that leaving the EU, would enable the UK to effectively ignore all these conflicts. Lastly, its most likely the case the UK would have to engage in some form with these conflicts despite not being an EU-member, so the post to ignore this we say that it singular time perspective and enables the effort-heuristic to be activated. Lastly the call-to-action element and precisely the appeal to join Britain's fastest growing grass-root movement is clearly a way of Leave.EU positioning themselves as an authority on this matter i.e., the reputation heuristic is also present in this post.

Post 5: *"Vote to leave the EU to ensure law-making power returns to our sovereign national parliament. Join Britain's fastest growing grassroots movement at https://leave.eu/en/get-involved*" (Source, Leave.EU Facebook Page)



Again, in the last post, we see the loss of sovereignty narrative. The divisive-group rhetoric is also present, and the causal relationship is implied between leaving the EU and gaining more *"law making power"*, the self-confirmation heuristic has been present in all five posts. As in the previous post we also here have a call to action and reference to Leave.EU as the fastest growing grassroot movement. Based on this the reputation heuristic is also found here. The veracity of the claim made in the picture is not for this study to decide, we are more interested in understanding what language Leave.EU relies on in persuading their audience.

This very limited analysis of five post is not in any way generalizable as its lack of representability of Leave.EU's overall online communication. However, it does provide a qualitative insight into the toolkit of persuasive strategies available to a digital political campaign like Leave.EU utilizes. From this limited analysis, we do see the findings corresponding both with the of notion heuristic processing information as credible. Further, there is an indication of Leave.EU utilizing the same narratives in their communication which could enable the illusory truth effect. Lastly, it is hard to argue how Leave.EU is gaining strength and credibility by borrowing the instrumentarian power embedded in the digital platform they are using. We will address this in later sections of the analysis.

By utilizing insight into how humans process information in a digital environment, Leave.EU designed effective and persuasive content, which relied on simplistic and easy-to-digest captioned images to mobilize and persuade voters. Although much of their arguments and claims may not stand up to further scrutiny, heuristics provide a framework for understanding the mental processes that can pass off false or otherwise misleading information as credible. Like the illusory truth effect

described by Pennycook et Al. (2018) in how the continuous exposure to the same message increases the credibility, even if it is false.

Statements

"The connectivity that is the heart of globalisation can be exploited by states with hostile intent to further their aims. [...] The risks at stake are profound and represent a fundamental threat to our sovereignty." Alex Younger, head of MI6, December, 2018

In the following part of the analysis, the reader will be introduced to this research's "smoking guns". Provided will be a content analysis of various whistleblowers, stakeholders and prominent individuals speaking out about the Leave.EU digital campaign. These statements have been deemed important for the research seeing that they stem from reliable sources who have been in the sphere set out to research. The sources or whistle blowers as some of them has been referred to has a perceived credibility due to their former positions within data companies, which were linked to the Leave.EU campaign. Therefore, these statements function as part of a triangulating data set, hoping to provide a nuanced case study, which either accepts or debunks the set forth hypothesis. The quote from Alex Young is a strong empirical indication of how the threats from the online information environments should be taken very seriously. Both the covert operations by foreign actors and the domestic political stakeholders who has recognized the power which lays in collecting data and utilizing the services of the digital stakeholder who control the means of behavioral modification.

This research selected multiple statements made by individuals formerly affiliated with the Leave.EU campaign directly or the digital or political stakeholders identified. The statements share in nature that they point out actions and tendencies within the Leave.EU campaign. Which all has made these individuals question whether what they were doing was legal, ethical, or even known to the voters who they influenced. When researching the matter, it is impossible not to stumble upon Chris Wylie, "*He's the one who brought data and micro-targeting [individualized political messages] to Cambridge Analytica. And he's from west Canada. It's only because of him that AggregateIQ exist"* - Paul former employee at Cambridge analytical (The Guardian, 2017).

Chris Wylie is the founder of a company and software called AggregateIQ, which in its simplicity combines micro targeting and individualized political messages with the data - with the outcome that you in real time not only can tailor e.g a political message to individuals but also with the use of data and the platforms can distributed the message to a significant number of people (ibid). Such significant numbers of people, Chris Wylie thinks could have changed the outcome of the referendum. In March 2018 Chris Wylie spoke out about his role at Cambridge Analytica and what ties it had to the Leave.EU campaign and UK referendum in general. "*They were targeting a very specific cohort, they posited that if x per cent of these people turn out, they can win. I think it is incredibly reasonable to say AIQ played a very significant role in Leave winning."* - Chris Wylie, (BBC, 2018). Suggesting that Leave.EU campaign not only understood the power of personalized negatively thematic messages but that they used data to directly target audiences online which they knew would resonate their messages in numbers. "*I think it is completely reasonable to say there could have been a different outcome of the referendum had there not been, in my view, cheating."* - Chris Wylie (BBC 2018). Disclosed as a part of the press conference, the notion that AggregateIQ has been questioned for its legality after its usage of data and politics in various countries, all before the Leave.EU was introduced to the technology (ibid). Taking Wylie's statements at face value it tells the story of a highly calculated digital political campaign who were well aware of how they only need to win over a certain number of voters to succeed at the referendum. This strongly corresponds with Zuboff's (2018) notions of the defining element of instrumentarianism being the use of advanced computer data modelling to influence and predict behavior of users. In Wylie's mind the effect of these forms of influence played a significant role in the outcome of referendum. Whether or not they did is a hard matter to settle, but what is clear is the know-how to run such operations existed and where present in the network around Leave.EU

As previously mentioned, Chris Wylie introduced the software of AggregatedIQ to Cambridge Analytica where he says: *"We exploited Facebook to harvest millions of people's profiles. And built models to exploit what we knew about them and target their inner demons. That was the basis the entire company was built on."* - Chris Wylie (The Guardian, 2017). The ambition of targeting the users' inner demons allows to infer that the data companies like Cambridge Analytica and consequently the Leave.EU were well aware of how users on digital platforms were biased towards engaging with what we called the unsettling in the literature review.

This is a notion important to dwell with, seeing it provides a clear understanding of why and how exploitation of data is so powerful and popular these days. Also telling is Facebook's platform and position as a digital gatekeeper where data exploitation by some has been seen extra easy to access "*It brought psychology, propaganda, and technology together in this powerful new way, and it was Facebook that made it possible. It was from Facebook that Cambridge Analytica obtained its vast dataset in the first place"* - David ex Cambridge Analytical employee (The Guardian, 2017). In this quote it becomes even more evident how the notion of instrumentarianism is very much a good concept for understanding the form of power being exercised in this form of digital political campaigning. The combination of psychology, propaganda and technology are in line with Zuboff's idea what instrumentarian power means. Enabling us to reliably claim with reference to empirical findings that instrumentarianism can help to provide understanding for why a digital political campaign like Leave.EU uses negative messaging and data exploitation.

With the whistleblower's statements, the analysis arrives at two entities important to further understand when answering the hypothesis: 1) Leave.EU's link to Cambridge Analytica, 2) has any proof been provided to disclose that the Leave.EU in fact did exploit data to influence voters. Multiple official statements tie Leave.EU to Cambridge Analytica, even from within the organization. In 2015 the founder of Leave.EU, Arron Banks, stated in his book that "*his group hired Cambridge Analytica, a company that uses "big data and advanced psychographics" to influence people."* (Reuters, 2018). This was back in October 2015. Few months later, in November of that same year, it was stated on the Leave.EU website that Cambridge Analytica "*will be helping us map the British electorate and what they believe in, enabling us to better engage with voters" (*Reuters, 2018). Suggesting a clear collaboration between the controversial data company and the Leave.EU organization. The indications are vast, in 2016 the director of Cambridge Analytica, Brittany Kaiser, stated as a part of a Leave.EU news conference that her organization would be: *"Running large-scale research of the nation to really understand why people are interested in staying in or out of the EU"* (The Guardian, 2017). Based on these statements suggesting that there are beyond a reasonable doubt to assume there was a link between the Cambridge Analytica and the Leave.EU. Moreover, the empirical evidence uncovered through our research does prove there were relations between key actors and knowledge sharing has taken place.

We move on to the second entity, namely has any proof been disclosed helping us to accept or debunk our hypothesis. Here, it is important to note that the UK parliament initiated a formal investigation into both the UKIP/VOTELEAVE and Leave.EU for its way of campaigning online, fake news and allocation of voter funds. These reports will be analyzed separately and be a part of the triangulation later in the analysis. Noticeable is also how the statements from both actors change, following the investigation Arron Banks stated: *"We did have dealings with Cambridge Analytica – they put forward a pitch that went into the designation document submitted to the electoral commission,"* (Reuters, 2018). The way he represents the link in his book is different from his previous statements, saying that the "hiring" was meant merely an intent to work with Cambridge Analytica, but stressed that no work was actually undertaken "*No benefit in kind, no data, no nothing.*" (Reuters 2018). With the controversy following Cambridge Analytica and AggregatedIQ involvement in the American election, where similar allegations surfaced about the exploitation of data, leading to Cambridge Analytica closing in May 2018 (Chang, 2018).

To further understand the link between Cambridge Analytica and the Leave.EU, and how that translate to possible exploitation of data, we turn to the analysis of the reports from both Cambridge Analytica, the UK Information Commission and lastly the British Parliament own investigation of the matter. However, these statements provide a strong account of how digital stakeholders such as Cambridge Analytica and digital gatekeepers such as Facebook enable a data driven political campaign online, with the possibility to interfere with democratic processes.

Reports

> *"Facebook's handling of personal data, and its use for political campaigns, are prime and legitimate areas for inspection by regulators, and it should not be able to evade all editorial responsibility for the content shared by its users across its platforms." (DCMSC, 2019, p 6)*

We chose 4 different reports from 4 different entities to get a full picture of the situation, as we did not want to focus solely on the Leave.EU but also understand the dynamics at play during the Brexit referendum, and possibly replicate this analysis to other political campaigns. Three of these reports come from officials, powerful entities within the UK, which adds to the credibility of the

findings. In addition, the last report directly come from Cambridge Analytica, a digital stakeholder which used to be a pivotal and key actor in the harvesting of data for previous political campaigns.

To analyze the content of the 4 reports, we created an excel matrix, composed of 4 cells: political stakeholders, digital gatekeepers, third organizations, and political and legislative consequences. This first sorting allowed us to extract the first batch of relevant words and core sentences from the 285 pages that made the reports. Next, we analyzed more deeply and rigorously the citations by running them manually through the indicators we previously mentioned in the methods chapter. We are aware that the lack of time and resources prevented us from running a computer automated and aided analysis of the reports, which could have minimized the possible errors and false interpretation. We targeted any words and core sentences bearing in mind our indicators. At first, we looked for any words or synonyms of "breach", "criminal practices", "distort", "disrupt", "regulations", "ownership", "algorithm", "exploitation", "transparency", and "audience". Concomitantly, we selected core sentences which translated the same connotation than the words above mentioned. Let us note that all selected core sentences will be available to the readers in appendices 1 to 4. As we analyzed the reports, we were quite overwhelmed by the amount of data we could find for each of the indicators. We are going to present every indicator, and then bring the analysis back to a general standpoint and infer findings from the analysis.

We discovered that multiple breaches to democratic processes were conducted during the Brexit Referendum. Indeed, the Leave.EU campaign first of all "knowingly or recklessly signed a false declaration accompanying the Leave.EU referendum spending return" (Electoral Commission, 2018). This malpractice from Leave.EU is only one side of the coin. As a matter of fact, Leave.EU campaign was fined £60,000 for "serious breaches of the Privacy and Electronic Communications Regulations 2003 (PECR)" (ICO, 2018, p 9). This "breach was serious because it affected a very large number of individuals and personal data was used for a purpose that those individuals were not aware of and would not have anticipated." (ICO, 2018, p 36). This empirical shows in detail how instrumentarianism, if applicable, in how the Leave.EU were fined for their misuse of users' data.

The established rupture of good democratic processes raises the question of existing law, and if any recommendation has been advocated for new legislation. The DCMSC (2019) report states

several times that “the big tech companies must not be allowed to expand exponentially, without constraint or proper regulatory oversight” (p 5). Moreover “Facebook’s handling of personal data, and its use for political campaigns, are prime and legitimate areas for inspection by regulators, and it should not be able to evade all editorial responsibility for the content shared by its users across its platforms.” (DCMSC, 2019, p 6). Again, we can theorize the that the digital gatekeepers controlling the platform, enabled Leave.EU as political stakeholder to tap into the pool of instrumentarian power. While these practices according to reports are challenging the democratic process of a referendum. The question of responsibility and understanding if it’s the political stakeholders or digital gatekeepers who are to be held accountable for these ruptures the legal system have a hard time assessing.

After analyzing all documents, it appeared clearly that digital gatekeepers “operates by monitoring both users and non-users, tracking their activity and retaining personal data.” (DCMSC, 2019). Moreover, “Digital gatekeepers [Facebook] was willing to override its users’ privacy settings in order to transfer data to some app developers” (DCMSC, 2019, p 90) and “Digital gatekeepers [Facebook] did not take sufficient steps to prevent apps from collecting data in contravention of data protection law.” (ICO, 2018). From this core sentences, we can interpret without a doubt the authority digital gatekeepers have on their own platforms. What struck us was also the extent of that ownership, as the DCMSC (2019) quoted: “Facebook’s handling of personal data, and its use for political campaigns, are prime and legitimate areas for inspection by regulators, and it should not be able to evade all editorial responsibility for the content shared by its users across its platforms.” (6). However, despite the clear need of regulations and legislation, digital gatekeepers maintain a large leverage on what is going on in on their platforms. Due to the technical complexity and the scale of the digital gatekeepers’ platforms. Not only digital gatekeepers, but also third organization such as AgreggateIQ had the power to “handled, collected, stored and shared UK citizen data” (DCMSC, 2019, p 51) during the Brexit referendum. Which suggest the ability for the instrumentarian power digital gatekeepers possess from their control of the means of behavioral modification can be distributed to other actors.

The power digital gatekeepers enjoy over the regulation on their platforms naturally leads to the lack of transparency about their practices as “it still seems unwilling to be properly scrutinized”

(ICO, 2018). Indeed, the Information Commissioner's Office (2018) imposed a fine of £500,000, which is the maximum monetary penalty, on Facebook for "for lack of transparency and security issues relating to the harvesting of data." As they found that "Facebook contravened the first and seventh data protection principles under the Data Protection Act 1998 (DPA1998)." (p 9).

When it comes to the type of audience digital gatekeepers, and incidentally political stakeholders, have access to is extremely large. The Leave.EU campaign, or any kind of political campaigns, can have access to a platform such as Facebook or "the social media company that has over 2.25 billion users and made $40 billion in revenue in 2017" (DCMSC, 2019, p 9).

The last indicator brings us, in our opinion, to the most interesting but vast part of the analysis mostly due to its complexity and large number of actors at play. Indeed, as we have shown in the literature review, the digital gatekeepers' platforms comprehend the active use of algorithm technology to predict human behavior. Before presenting the inputs of the Cambridge Analytica report, among others, we would like to clarify the fact that we acknowledge the formal unestablished relation between Cambridge Analytica and the Leave.EU campaign (Electoral Commission, 2018). However, the accompanying presentation materials for Cambridge Analytica's pitch to the Leave.EU campaign, published later as part as evidence in a hearing, offered an extensive description of the strategy of third organizations digital tools, such as "surveys" which "will collect responses from approximately 40,000 individuals, with the first survey focusing on gathering psychological insights into voters' personalities and decision-making (Cambridge Analytica, 2015). The second survey will focus on gathering information useful in Target Audience Analysis (TAA), which measures political opinions, sociological structures and additional psychological metrics.". In addition, "malicious forces use Facebook to threaten and harass others, to publish revenge porn, to disseminate hate speech and propaganda of all kinds, and to influence elections and democratic processes" (DCMSC, 2019, p 5). Moreover, Cambridge Analytica (2015) offers a "powerful predictive analytics and campaign messaging capacity that can help you [Leave.EU] to segment and message the population according to a range of criteria", and "gathers large volumes of data on key issues and political opinions, as well as underlying motivations for behavior such as propensity for change, normative sociological affiliation and other factors.". The quotes extracted from the Cambridge Analytica shows how the digital

gatekeepers and digital stakeholders work fits with notion of instrumentarianism of reducing its users to a statistical defined population and speculates in how you target them in a way where the phycological tool of social comparison, social proof etc. can be activated in effort to modify the behavior and in this case determine the result of the UK referendum.

Based on the analysis of the reports we can fairly infer the exercise of power, and extensive use of digital tools of digital gatekeepers on their own platforms are the enabling factor for a political stakeholder like Leave.EU to run a democratically questionable digital campaign. In addition, we can also infer that these practices breached democratic processes, in their issues of protecting user's privacy and being investigated by the relevant authorities. Related to the previous type of data we have analyzed before. The reports also support the negative impact of the activities on social media. Indeed, the "proliferation of online harms is made more dangerous by focusing specific messages on individuals as a result of 'micro-targeted messaging'— often playing on and distorting people's negative views of themselves and of others" (11); "negative stories will always be prioritized by algorithms, as they are shared more frequently than positive stories." (DCMSC, 2019, p 12). This quote represents a solid empirical evidence of how a digital political campaign indeed relies on the pitfalls of human psychology. Exemplified in how the heuristic model showed us how Leave.EU uses divisive rhetorical devices to establish credibility of their campaign and further how informal collaboration with digital stakeholders like Cambridge Analytica, led to official investigations of their practices.

Contextualizing our qualitative analysis with quantitative data

Looking back at history David Camron in 2009 referred to the internet as an "*amazing pollinator" which "turns lonely fights into mass campaigns; transforms moans into movements; excites the attention of hundreds, thousands, millions of people and stirs them to action." (Polonski, 2021, p. 94).*

This quote aged differently when considering the result of the referendum. Polonski (2021) points to how Camron ended feeling the power of the internet when he lost the referendum. In line with our study, the instrumentarian power that Camron describes in his 2009 speech as a positive

technological advance, ended up being a powerful tool in the hands of his political opponents (Polonski, 2021).

In this final part of the analysis, we will use the analytical points presented in the three former sections and synthesize them with contemporary statistical findings. To increase the validity and credibility of our findings. Further, the purpose of this fourth leg of the analysis is to display our triangulation of data types. Statistics are at the core of this research topic, and it is the computational data sets which enable our digital gatekeepers to wield their instrumentarian power over political stakeholders, as we have seen in our case of Leave.EU.

A frequent critique of social media data used in political science is the lack of demographic information about the users. This critique is to some extent also relevant to our study, as we do not control our analysis from potential demographic variables. Which is naturally quite hard to do, due to the qualitative nature of the analysis. To our great fortune, in an experimental study, Mancosu & Bobba (2019) set out to test a solution to this critique. They wanted to test the validity of a facial recognition technology in assessing social media users' demographic attributes. They looked at how users had interacted in the two weeks before the referendum, with the three main parties of the UK on Facebook. While the study does not look specifically at Leave.EU, it gives an insight into the behavior of specific demographics on social media at the time of the referendum. Very relevant to our study is how they find that a post from a pro-Brexit page is more likely to gain interactions from older users, consistent with other studies (Mancosu & Bobba, 2019). Also, the older users are more likely to engage with posts that contain a call for action, than younger users (Mancosu & Bobba, 2019). This raises interesting questions about the how the media literacy of digital natives functions in the face of information overload, relative to older users. Moreover, it did not find a significant difference in the way gender interacted with the posts, at least on the measures from this study (Mancosu & Bobba, 2019). We do not have enough empirical data supporting the idea that Leave.EU knowingly included calls to action to target older segments of the UK population. We can however say two of the posts analyzed in the beginning would likely have resonated stronger with older section of the population.

A large-scale statistical analysis of 7,5 million tweets from Euro-sceptics and Remainers found that not only did the Euro-sceptics out-tweet their competition, they were also more contained to echo-chambers (Hänska & Bauchowitz, 2018). The Leave users outperformed the Remainers by a factor of roughly 2 in activity on Twitter, a finding supported by other studies (Hänska & Bauchowitz, 2018). One caveat to this finding, Hänska & Bauchowitz (2018) make is how the just because the Leave users were more active by a significant margin, it did not translate in not a corresponding significantly large win at the ballot box. Predicting outcomes of election based on social media should therefore be met with caution. Hänska & Bauchowitz (2018) explain why the larger activity does not translate in to more votes for the cause in how 83% of Leavers interactions on Twitter were with other Leavers (Hänska & Bauchowitz, 2018). This number for Remainers were much lower at just 46% (Hänska & Bauchowitz, 2018). Remainers were much more likely to engage with the arguments of their political opponents than Leavers (Hänska & Bauchowitz, 2018). A nuance we can add to this statistical finding based on our former analysis is how provided by the quote from Chris Wylie is how they were aware of only having to influence x percentage of the population to win the referendum. Therefore, it is not necessarily a weakness in the Leave.EU's eyes that their Twitter followers almost exclusively interacted with each other. It is potentially a strength and evidence of how they succeed by controlling the narrative within a specific cohort of the population.

A New York Times article at the time cites two other studies supporting the idea that Leavers more active across all social media platform then Remainers (Herrman, 2016). Looking at the top 20 pages around the European Union with most engagement on Facebook at the time of the UK referendum seven of those were explicitly Pro-Brexit, while only two were campaigning to Remain (Herrman, 2016). The seven pro-Brexit pages produced 1,3 million interactions, while the Remain pages produced just 150.00 interactions (Herrman, 2016). Over a span of three months, Leave pages generated 11 million interactions and Remain pages produced a third of this (Herrman, 2016). This is undeniably a significant dominance established by the Leave pages in the information ecosystem that is Facebook. So again, we can strengthen the argument that the Leave campaign in general including Leave.EU successfully motivated their supporters to engage with their content. Having discussed how the Leave campaign outperformed the remain on Facebook and Twitter, it also applies to Instagram. A study found that on average a post associated with the leave campaign would receive 26% more likes and 20% more comments (Polonski, 2021). Another

empirical evidence pointing in the same direction is how the top three hashtags on Instagram were all pro-brexit (Polonski, 2021). It is incredibly hard to assess how many votes were won by the leave campaign dominating the information eco-systems. Polonski (2021) argues that based on his study, votes were won by the Leave campaign's dominance on the social media platforms. A study examining the commenting activity of 2 million active Facebook users in a 18th month period around the referendum wanted to compare the activity on the campaign's sites to that on the traditional media outlets. (Bosetta et al., 2017).

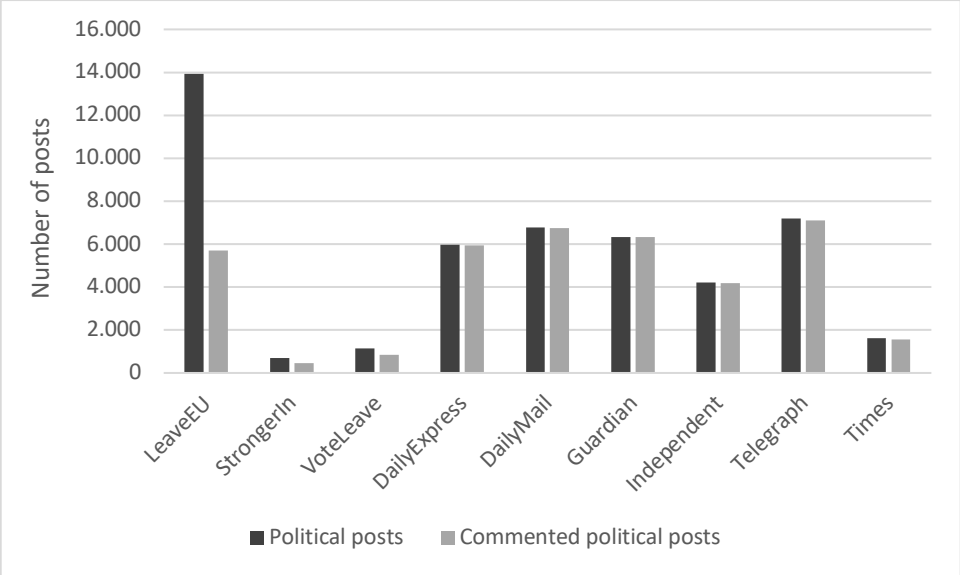


Figure 1. Political posts (aggregate data) (Bosetta et al., 2017).

As we seen in figure 1, Leave.EU outperforms all the other pages in posting, however, they only receive comments on a third of their posts (Bosetta et al., 2017). One caveat is that Leave.EU enabled users to post on their page is the explanation for why Leave.EU is the outlier and it matches their grassroot profile (Bosetta et al., 2017). Further, while they did allow for their users to post on their page, they did receive a significantly larger number of comments on their post compared to the other campaigns.

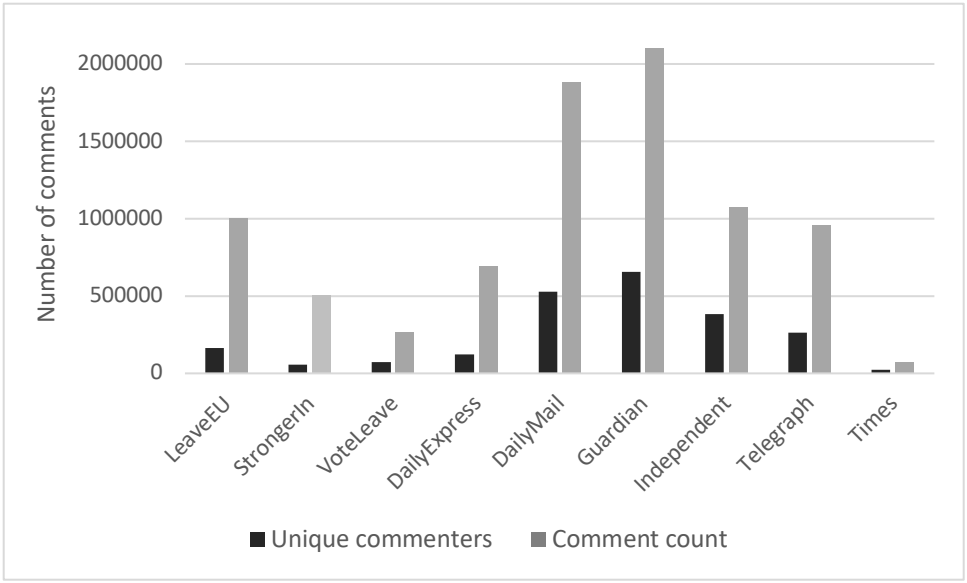


Figure 2. Commenting activity (aggregate data) (Bosetta et al., 2017, p. 8).

Our analysis lacks the ability to adjudicate the effect of social interactional dimensions of this form digital political campaigning, due to the nature of the data types which we have analyzed. However, it can be inferred from the empirical fact that 83% of interactions of pro-Brexit users happen with other pro-Brexit users, that social comparison among user is bound to take place (Hänska & Bauchowitz, 2018). The significant engagement rates among users who like the same political content are bound to experience social comparison. In how they view each other's content and react to it. It becomes the perfect storm or more academically a compounding effect. The amplifying effect of an infinite stream of a self-confirming information flow with the occasional call to action – often administered through emotions of fear, anger etc. (negative messaging) with the addition of the social interactional dynamics. That are enabled and perfected when targeted at specific demographics, who unknowingly have submitted their data, which is now used to tailor messages to them. This provides the stimulus for psychological processes such as social comparison to take place. Powerful vehicles for gaining an audience and political support.

Having conducted our analysis, we turn to our initially proposed hypothesis; *The Leave.EU digital campaigning relied significantly on negative messaging and data exploitation to influence voters and the UK referendum*. Our findings nature results in a dualistic stand regarding our hypothesis. The limited analysis of the posts corresponded both with the notion of heuristic processing also used to understand fake news. Furthermore, there is an indication of Leave.EU using consistently

the same narratives in their communication which could enable the illusory truth effect. As illustrated by the posts the messages used is primarily of a negative nature, leading us to accept the first leg of our hypothesis; *The Leave.EU digital campaigning relied significantly on negative messaging* in this limited scope of research conducted. However, after having conducted a content analysis of whistleblower statements and correlating that to the formal investigation set out by the electoral commission, we are hesitant but forced to debunk the second leg of the hypothesis; *and data exploitation to influence voters and the UK referendum.* Hesitant because even though the analysis is successful in echoing an established link between prominent digital stakeholders and the Leave.EU campaign by both the statements and in the report's findings, we lack hard evidence of a formal and official relationship between Leave.EU and third parties who could have conducted the data exploitation. A finding we will bring further forth in our discussion where we wish to open the sphere of the research to correlating elements in order to conclude on our research question.

7. Discussion

Although the impact of the Leave.EU campaign on the success of Brexit cannot be stated with any certainty, it is undeniable that Leave.EU, even as an unofficial political campaign, had a dominant role online (Bosetta et al., 2017; Polonski, 2021; Hänska & Bauchowitz, 2018). They utilized provocative material to target the anxiety of voters and the weaknesses of their opponents. While negative political campaigns are hardly unique, the new, digital arena has changed the rules of the game. Social media technologies can exploit human psychology, and with nearly limitless data sets, digital gatekeepers, like Facebook and Twitter, have a power over citizens that is largely unchecked. In the political sphere, this has enabled the rise of a new type of political campaign – one that thrives on social media. The impact of this shift on political participation and decision making is the topic of ongoing research, and this paper aims to contribute to this sphere. By leveraging insights into human psychology with user data, and how political campaigns have been able to change the way, they communicate to citizens.

Users are overwhelmed with information, and these platforms alter how we perceive and assess information. Polarizing content will reach a wider audience than scientific content, and posts that

target outrage will have more engagement (Brady et al., 2017; Del Vicario et al., 2015). With human attention as the primary source for digital gatekeepers and advertisers alike, the digital ecosystem is characterized by an overload of highly personalized information in a landscape of distorted social clues, exposing users to manipulation and false information (Lorenz-Spreen et al., 2020). Out of all of the political campaigns represented during the Brexit referendum, Leave.EU had the largest digital platform and the most active user base (Bosetta et al., 2017). Heuristic processing provides a way to understand how political messaging can be structured in order to increase their perceived credibility. By combining insight into most effective kinds of content with knowledge of how to structure messages, Leave.EU was able to run a digital campaign that engaged with more users than their rivals.

Our hypothesis, that the Leave.EU digital campaigning relied significantly on negative messaging and data exploitation to influence voters and the UK referendum, was partially confirmed. The whistleblowing of Chris Wylie in 2018 set off a wave of investigations into how user data could be harvested and weaponized without consent. Questions regarding how user data can be used for micro-targeting, a practice that Cambridge Analytica took to the extreme, by psychographic profiles and behavioral micro-targeting, have still gone largely unanswered.

Although citizens are generally unaware of how their personal data factors into the business models of digital gatekeepers, instrumentarianism reveals human attention to be the main commodity. Polls of UK citizens, even after the notoriety of Cambridge Analytica and accusations of Russian interference in recent US elections, show that only 54% are aware of political microtargeting (ORG, 2020). When made aware, a majority of those polls were against the practices during an election (ORG, 2020). People are hesitant to trust social media companies with their data, and the events of recent years have provided citizens and regulators alike with sufficient grounds to be distrustful. While the European Commission has shown a willingness to take on digital gatekeepers, the 2020 Digital Services Act and Digital Markets Acts still leave unanswered the role that user data can play in targeted political campaigns. Although breaches in existing privacy legislation have resulted in sizable fines for digital gatekeepers, no steps have been taken to clearly settle the issue.

The Leave.EU campaign represents an interesting case study of the modern digital political campaign. Although Cambridge Analytica is just the most prominent example, data consultancy firms are the new norm. Through whistleblower testimony, investigations, and subpoenaed documents, the public has new knowledge of how their data can be weaponized against them. Public pressure is on governments and regulators to clearly establish how digital stakeholders, the connections between Cambridge Analytica, a firm that harvested millions Facebook users there are clear links between Leave.EU and Cambridge Analytica.

The need for legal frameworks to regulate political advertising online or digital political campaigning as we call it is immense. Other forms of political advertising are strictly regulated in the EU, but this often does not extend to social media, leaving it up to the digital gatekeepers themselves to self-regulate (Lewandowsky et al., 2020). In the comprehensive EU report from October 2020, four avenues for policy reform were discussed (Lewandowsky et al., 2020).

1. Only official campaigns can post political content in order to limit the interference of disruptive actors.
2. Ban micro-targeting for political content.
3. Establishing a database to store and register all political campaign material.
4. Fact-check content and advertisements from political campaigns

These avenues represent the framework for an important set of conversations that will happen in the public eye. Digital political campaigns had benefited from an absence of regulation, but in the wake of the Referendum and 2016 US Presidential campaign, the need to legislation is immediate.

After that set aside, the different parts of the analysis highlighted, separately, relevant points we can correlate. Indeed, when looking at the posts' analysis results, one of the spearheads of the Leave.EU campaign on Facebook was the issue of migration. They played on the anxiety and stigmatization the UK population usually feels around this topic. The DCMSC (2019) report backs up the usage of such topic by quoting: "Our Interim Report highlighted the methods by which Arron Banks campaigned during the Referendum, which, in his own words, involved creating 'bush fires' and then "putting a big fan on and making the fan blow. He described the issue of immigration as one that set "the wildfires burning". Evidence we received indicated that data had been shared between the Leave.EU campaign — with its strapline of 'leaving the EU out of the

UK — and Arron Banks' insurance company, Eldon Insurance Ltd" (43). In addition, we've found a repetitive use of negative digital tools in the Facebook posts. These same negative digital tools were also mentioned in the ICO (2018) reports. Another pattern we discovered was after analyzing the statements and the content of the reports. Indeed, the multiple statements of Chris Wylie allowed us to fully grasp the roles at play from AggregateIQ and Cambridge Analytica in the Leave.EU campaign that are also highlighted in the reports. The DCMSC (2019) notably argued the role of digital stakeholders as AggregateIQ in the use of negative and harmful digital tools during the political campaign. The Cambridge Analytica (2015) report also states the possible usage of digital tools (e.g., Targeted Audience Analysis, surveys, micro-targeting…) within the UK referendum scenery. However, despite the established breach of good democratic processes by Leave.EU in the Electoral Commission (2018) report, no formal connections between Cambridge Analytica and the UK campaign were established.

On a general standpoint, the connection between our set of data is undeniable. Significant patterns, such as the use of negative messaging or web of actors, have been echoing in the multiple data sets we have analyzed. This now raises questions of whether we can confidently confirm or debunk our hypothesis, and more generally replicate this research to other controversial digital political campaign. Let's recall that our hypothesis is: The Leave.EU digital campaigning relied significantly on negative messaging and data exploitation to influence voters and the UK referendum. After a careful assessment, we can confirm the first part of our hypothesis, that is the significant reliance of the Leave.EU digital campaign on negative messaging to influence voters and therefore the UK referendum. However, we cannot confirm confidently the second part of our hypothesis, that is the significant reliance of the Leave.EU digital campaign on data exploitation to influence voters and the UK referendum. Indeed, the lack of conclusively proved connection between digital stakeholders, such as Cambridge Analytica, and the Leave.EU campaign do not allow us to make such inference. As of the replicability of our research, the lack of cases is not a thing one should be concerned about. Indeed, the Trump 2016 presidential election could be a potential and relevant case. Nonetheless, one should pay additional attention to the methodology, as we ourselves encountered multiple limits conducting it.

As we mentioned in the methodology, given the resources and time constrain, we couldn't follow a rigorous analysis protocol. Indeed, as the analysis was done manually, a research biased can be expected. The design of our research doesn't control all the variables that could influence the results in the analysis of the different data set. It is also necessary to highlight that, given the number of persons who participated in this study, our own personal opinions cannot entirely dissociate when we analyzed the data set. Moreover, the focus on one case only cannot allow us to confidently generalize our findings to other political campaigns.

8. Conclusion

To offer a general conclusion for this research, we found conspicuous correlations within the results of the different data sets. Indeed, the use of negative messaging by the Leave.EU campaign has clearly been established. However, one question remains unanswered: How do political campaigns exploit social media platforms and human psychology to challenge traditional democratic processes? After a careful review of the existing literature, as well as the analysis of the different data sets, we can confidently argue that there is an increase in digital tools accessibility to political stakeholders, such as simplistic cause-effect relationships, emphasis on conflict rather cooperation (Ali & Zain-ul-abdin, 2021), or algorithmic technologies. These contemporary modes of communication offer the possibility to political stakeholders, such as the Leave.EU, to influence political outcomes. The large power incidentally provided by the digital gatekeepers to political stakeholders have clear implications on the traditional democratic processes.

The Leave.EU campaign is just an instance of a modern political phenomena: the digital political campaign. These campaigns are made possible by the asymmetry of power that exists between political stakeholders, who bear little risk when deploying dubious digital tools, and the citizenry. Pairing features of digital gatekeepers that promote fearmongering and polarizing content with a permissive regulatory framework, voters and democratic legitimacy at a large, stand to lose. It would be unjust to the thousands of employees at the American tech giants who largely make up what can be considered digital gatekeepers. To not acknowledge the theoretical understanding of why digital gatekeepers have ended up exacerbating existing societal tendencies. This is due to the classical corporate pursuit of continuous economic growth. The digital gatekeepers remain morally

agnostic (Zuboff, 2018). A core challenge for the digital stakeholder is making sense of the billions of daily interactions, which results in a game of catch up in how they regulate. Lastly the user, you, and I or in percentages, 58% of the world's population, are on social media (Dean, 2020). We do not hold a satisfying understanding of what the increasing registering of data points online can be used to infer about our behavior and psychology. Here we are at root of it – cognitive limits a controversial and ever-intriguing field of research. How are the human brain wired to predictably react in particular ways to specific forms of stimuli and requiring training in media literacy to interpret online content properly? Is a question we are forced to understand and decide morally on how we let influence especially our children to shape their perception of the world through the lens of attention-grabbing emotionally-triggering technology.

As we already mentioned in the discussion, the limits encountered, notably in the theoretical framework and analysis strategy could hampered the replicability of it. However, we think our research could be one among others in exploring the link between digital tools and their impact on democracy. In order to do so, we recommend to future students or scholars to create a new theoretical framework dedicated to this growing field of studies, which would take into considerations all the actors at play, but also their overlapping position. In addition, a more meticulous and controlled analysis of the data set could offer future students or researchers a higher validity and replicability. Also, to simply have a larger number of samples could increase the validity and replicability of the study. Here we would also recommend to both do deep qualitative and quantitative studies of each the of actors perspectives, instead of attempting to assess all the different ones in one study.

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