wahlbeobachtung.org

Social Media Monitoring
Early Parliamentary Election Campaign
Austria 2019

Final Report

In cooperation with

VDSG
VIENNA DATA SCIENCE GROUP

DEMOCRACY
REPORTING
INTERNATIONAL

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The views expressed in this report are solely the views of
wahlbeobachtung.org and the authors of this report

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Executive summary

Online campaigning on social media platforms has become an integral part of electoral politics in Austria. Two thirds of the Austrian public use Facebook and YouTube, and half of them also use these platforms to inform themselves about political news. It is therefore important to closely monitor the inner workings and dynamics of these new electoral arenas. Wahlbeobachtung.org assembled an international team consisting of election observers, political scientists, data scientists, and social media experts to conduct a social media monitoring project at the occasion of the Austrian early parliamentary elections on 29 September 2019. The goal was to monitor the electoral campaign on the social media platforms Facebook, Twitter, and YouTube.

Based on this research, which covers the campaign period of the 2019 parliamentary elections, the FPÖ is the most dominant Austrian political party on Facebook and YouTube. Although the Greens followed by NEOS are the most active parties in terms of overall posts and tweets, the level of FPÖ Facebook activity combined with their high number of followers and interactions makes them the most dominant party among those engaging in online campaigning, with the SPÖ on second place. Sebastian Kurz solely stands out with the highest number of followers (over 800.000) after the demise of HC Strache's Facebook page, but in comparative terms ÖVP as a whole is a less active party on social media and ranks only third with interactions on Facebook. This mirrors roughly the official spending on Facebook ads, where FPÖ is the lead spender followed by SPÖ. Also, both Greens and NEOS invest more than the ÖVP.
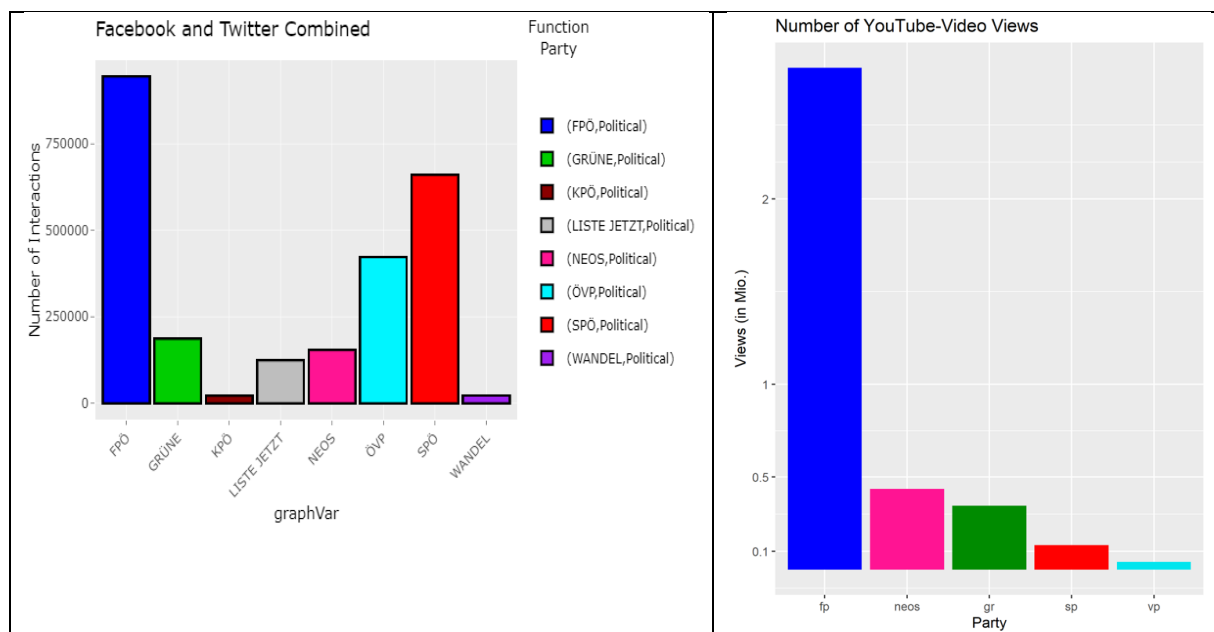
Graph 0 – The left panel shows the overall number of Interactions on Facebook and Twitter, the right shows the number of views on YouTube

The official spending on social media campaigns on Facebook during the month before the elections, as publicised by the new Facebook Ad Library, amounts to €650.000 including all political parties contesting for seats in the Austrian parliament. The possibility to promote posts increases the distribution of online messaging significantly; the parties make use of this opportunity to various degrees. The attention which the FPÖ is able to generate with their posts is out of reach for other parties. The FPÖ's high-ranking place in social media is also underlined by its investments in professional videos. No other party invested at a similar scale and has similar interactions with followers on YouTube.

In Austria no special law or government regulation is yet in force to regulate social network services. Campaign and party finances are regulated but no supplementary instructions about online campaigning have been released. The Court of Audit, as well as several civil society groups, have highlighted the insufficient disclosure requirements and inadequate oversight. The Austrian legal framework to protect the freedom of expression and information in respect of the EU's General Data Protection Regulation (GDPR) protects only corporate media, but not citizen journalism on social media. While social media monitoring involves the collection, storage, and processing of a large volume of data, the GDPR requires a legal basis for the processing of personal data, which currently does not sufficiently exist in Austria.

In terms of methodology, advanced supervised and unsupervised algorithms were used to conduct an analysis of the text that was posted to Facebook and Twitter during the campaign. The research concentrated on a representative sample of the accounts of key political parties and contestants as well as selected media, journalists and social influencers. The generated data was visualised and transferred to an interactive tool, accessible as data4good by VDSG for further analysis. YouTube videos were selected on the basis of the same keywords to gather information about political contents. The technical team of FDV DAPP applied string-lines in a structured-coded internal script to collect information through the platforms' API. The contents of the 25 weekly most-watched videos were double-checked to verify that they fit the sample.
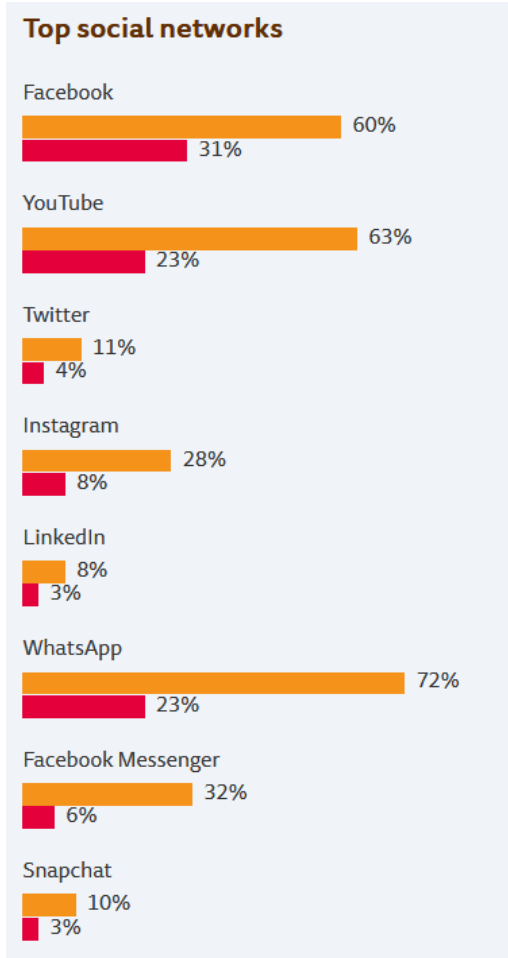
Experiences with this project also reveal how difficult it is to receive reliable data of good quality from the biggest social media platforms. Sudden API changes, problems with the data provided, and restrictions in what is provided at all make election-related social media monitoring a challenging endeavour. Lessons learned can be shared as guidance for future social media monitoring exercises with a call for more transparency in form of better data access.

To effectively promote a level playing field and transparency in campaigns, to protect the privacy of citizens and to safeguard electoral processes against potential manipulation and disinformation, the EU and its Member States such as Austria should provide clear regulations, coherent implementation and independent oversight of political campaigns in social media and online platforms. To enhance effective electoral campaign oversight and better detection and analysis of disinformation campaigns, social media platforms should provide meaningful access to data for election observers and researchers in line with personal data protection rules.

1. Introduction

The use of social media plays an increasingly central role in public discourse. In 2016, Eurostat statistics indicated that social media participation for the EU-28 was already at approximately 50 per cent, while this percentage was much higher for the youth population (19-29 years).[1] The breakdown by social network shows that especially Facebook and YouTube are widely used, with 60 per cent and 63 per cent respectively reporting that they use the network (see Graph 1). These two are also the two social networks which are used the most often for the consumption of news.

In Austria, 88 per cent of the population are regularly online. Every other Austrian uses social media platforms such as Facebook, YouTube, Google+, Twitter, or Instagram. With 62 per cent share of the market, Facebook continues to be the most popular network. In total 3,9 out of 8,8 million Austrians have a Facebook account.[2] The most active 20 per cent of all users generate over 70 per of all political messages.[3] Twitter is less used by the general public. However, many journalists (and some politicians) use Twitter frequently in Austria. Discussions on Twitter therefore influence the dominant narratives of traditional media outlets. This is why it is important to not just monitor Facebook and YouTube, but also Twitter when analysing the impact of social media on politics and elections.

Top social networks

Facebook — 60% / 31%
YouTube — 63% / 23%
Twitter — 11% / 4%
Instagram — 28% / 8%
LinkedIn — 8% / 3%
WhatsApp — 72% / 23%
Facebook Messenger — 32% / 6%
Snapchat — 10% / 3%

Graph 1 - Social media use in Austria, orange bars denote usage for any purpose, red bars indicate usage for news consumption[4]

Austrian citizens have a comparatively high trust in social networks, which increases the relevance and importance to monitor electoral campaigns on social media. Data from the Eurobarometer show that almost a third of Austrian respondents tend to trust social networks, a rate that is unparalleled in any other Western European country.

Political contenders can no longer afford to ignore campaigning via online platforms and social network services. They invest considerable resources into advertising on social media and creating online followers. In this context, it is paramount to understand the nature of the online public discourse and its dynamics, the major players, their political impact, as well as the regulatory framework under which these new societal and political developments are taking place.

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[1] Eurostat Statistics Explained: Being young in Europe today – digital world. December 2017.
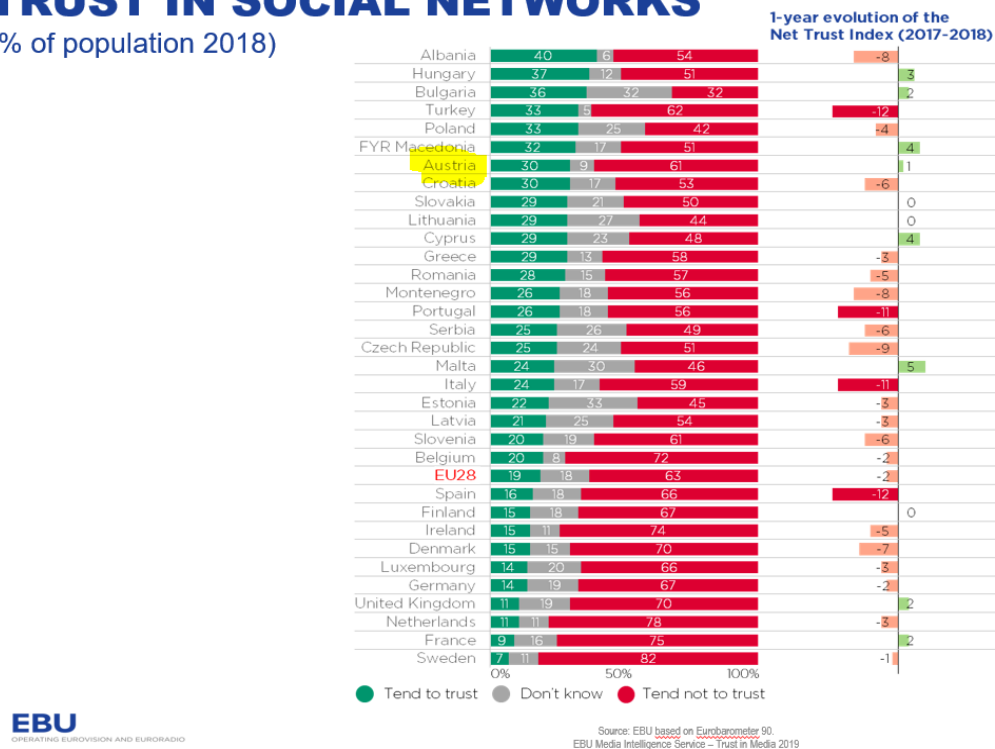[2] Statista 21 June 2019.
[3] Digitalreport 2018: 2 and 12.
[4] http://www.digitalnewsreport.org/interactive/

TRUST IN SOCIAL NETWORKS
(% of population 2018)

1-year evolution of the Net Trust Index (2017-2018)

Country	Tend to trust	Don't know	Tend not to trust	Net Trust Index evolution
Albania	40	6	54	-8
Hungary	37	12	51	3
Bulgaria	36	32	32	2
Turkey	33	5	62	-12
Poland	33	25	42	-4
FYR Macedonia	32	17	51	4
Austria	30	9	61	1
Croatia	30	17	53	-6
Slovakia	29	21	50	0
Lithuania	29	27	44	0
Cyprus	29	23	48	4
Greece	29	13	58	-3
Romania	28	15	57	-5
Montenegro	26	18	56	-8
Portugal	26	18	56	-11
Serbia	25	26	49	-6
Czech Republic	25	24	51	-9
Malta	24	30	46	5
Italy	24	17	59	-11
Estonia	22	33	45	-3
Latvia	21	25	54	-3
Slovenia	20	19	61	-6
Belgium	20	8	72	-2
EU28	19	18	63	-2
Spain	16	18	66	-12
Finland	15	18	67	0
Ireland	15	11	74	-5
Denmark	15	15	70	-7
Luxembourg	14	20	66	-3
Germany	14	19	67	-2
United Kingdom	11	19	70	2
Netherlands	11	11	78	-3
France	9	16	75	2
Sweden	7	11	82	-1

● Tend to trust ● Don't know ● Tend not to trust

EBU OPERATING EUROVISION AND EURORADIO

Source: EBU based on Eurobarometer 90.
EBU Media Intelligence Service – Trust in Media 2019

Graph 2 - Trust in social media by country in the European Union

While there are varying wordings and differing definitions in circulation, this report adopts a definition of social media also referred to by the European Commission for Democracy through Law (Venice Commission)[5] as: "web or mobile-based platforms that allow for two-way interactions through user-generated content (UGC) and communication. Social media are therefore not media that originate only from one source or are broadcast from a static website. Rather, they are media on a specific platform designed to allow users to create ("generate") content and to interact with the information and its source. While social media rely on the internet as a medium, it is important to note that not all internet sites or platforms meet the definition of social media. Some websites make no provision for interactivity with the audience, while others allow users only to post comments as a reaction to particular published content as discussions posts (or 'threads') which are moderated and controlled. While discussion threads can offer a degree of interaction with the source, these are not considered to be social media platforms".

Monitoring the election campaign on social media networks and online platforms

The misuse by Cambridge Analytica to micro-target voters during the 2016 US electoral campaign has changed global thinking about the role of social media in elections. Russian interference has since targeted several elections with bots and fake news, including in Europe. Online defamation and strategic disinformation have led to many new uncertainties and fears about the relation between politics and the Internet. Globally, where countries introduce new laws to regulate online speech, authoritarian tendencies lead to the shrinking of civic space and to infringements of the freedom of expression online, including state and self-censorship.[6]

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[5] European Commission for Democracy through Law (Venice Commission): Joint Report of the Venice Commission and of the Directorate of Information Society and Action against Crime of the Directorate General of Human Rights and Rule of Law (DGI) on Digital Technologies and Elections, CDL-AD(2019)016, p.3.

[6] Compare for example Freedom on the Net: The Crisis of Social Media. 2019.

Given the rise in importance of social network services in everyday life, it is not surprising that political parties strategically invest in placing their messages on online platforms. There are various ways of looking at the use of social media during elections. "One of the best-known is fact-checking. In many countries, groups are now monitoring digital debates by fact-checking statements by prominent persons or stories that are widely shared. Fact-checking is often done by media or in close cooperation with media. Election observation has a broader focus".[7] Another lens in social media monitoring can be to differentiate between message, messenger, and messaging, that is, the process by which it happens.[8]

Several different aspects of online phenomena can be monitored around elections, for example political advertisements, bots and trolls,[9] hate speech (inflammatory language/incitement to violence), and strategic disinformation, or fake news. The monitoring of hate speech and fake news can require a lot of human resources; in some countries it is done by specialised organisations.[10] Disinformation can come in various forms, including narratives to harm the integrity of the electoral administration. Like bots and hate speech, it is difficult to monitor, and there are limits to the use of technology to detect or prevent it.[11] Deep fakes are expected to take disinformation to yet another level in the future. While taking these phenomena into account, this project focussed on testing algorithms to analyse (both official and unofficial) political advertisements.

International organisations and citizen election observers have developed well-tested methodologies and approaches to observe electoral processes. This involves standard approaches for the monitoring of traditional media. The increasing use of social media, however, poses new challenges for electoral stakeholders as well as for election observers and researchers. Most organisations still lag behind with adequate responses to developments in the digital sphere and their repercussions on elections. Together with others, Democracy Reporting International (DRI) has provided a methodological proposal to monitor social media around elections.[12] European Union Election Observation Missions (EU EOMs) have started recently to observe social media systematically and include relevant findings in their statements. By doing so, they do not only address national electoral stakeholders, but also tech companies with recommendations.[13]

Social media regulation within the EU

Wahlbeobachtung.org / Election-Watch.EU, for the first time, has conducted a comprehensive assessment of the 2019 European elections covering all member states of the European Union. In this context, it was shown that only 5 of 28 of countries in the EU have regulatory bodies for social media and only 4 have a regulatory framework for social media that also extends to the electoral campaign. Austria is not among them.

However, several legal cases involving online defamations of Austrian female politicians have arisen that contribute to redefining the needs for the regulation of online speech (in particular with regards to defamation). In October 2019, the Court of Justice of the European Union has confirmed a ruling of

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[7] DRI 2019b: 7.

[8] DRI 2019b: 23.

[9] "A bot is a software that carries out simple and repetitive tasks that would be very time consuming for a human to perform. They can be used to automate productive tasks, but also for malicious purposes. (…) Trolls manipulate the debate by harassing people distracting and posting inflammatory and digressive messages on posts and groups. Differently from bots, trolls are human beings, but similar to bots, their action is often intended to manipulate attention to give more visibility to a topic or narrative, or to harass other users or public figures online. (…) The third group, hybrids, relates to a human controlling several different accounts, mixing natural and artificial behaviour." (DRI 2019 b: 26)

[10] Compare DRI Report: Disinformation during Portugal's 2019 Elections.

[11] Compare DRI 2019b: 43.

[12] Guide for Civil Society on Monitoring Social Media during Elections. Funded by the European Union, 2019.

[13] See for example the Preliminary Statement of the EU EOM to Sri Lanka 2019.

the Austrian Supreme Court that a host provider such as Facebook has to delete posts that were previously declared illegal globally, not only in the country where they occurred.[14]

TRANSPARENCY & INFORMATION
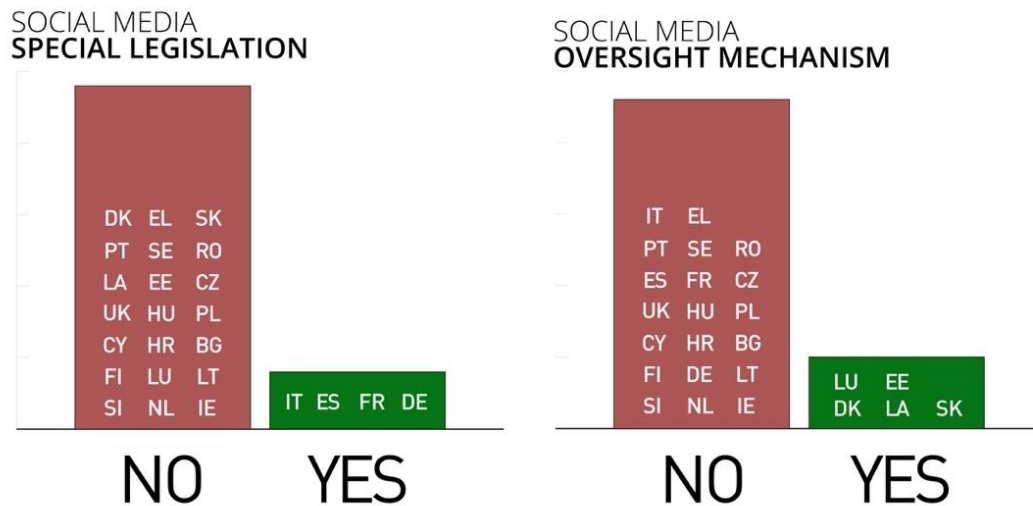
Graph 3 – Presence of special legislation or oversight mechanisms to regulate social media in EU member states (Source: Election-Watch.EU)

The political context of the early parliamentary elections in Austria 2019

Social network services play a key role in Austria's internal affairs at least since the 2017 elections, which were marked by dirty campaigning. In the so-called Silberstein-Affair, a foreign campaign adviser helped to orchestrate negative campaigns including fake Facebook accounts.[15] Less than two years later, on 17 May 2019, the Ibiza scandal hit Austrian politics. A video of then vice chancellor Heinz-Christian Strache revealed an inclination to corruption, the circumvention of political party financing rules, and interests to take over the biggest Austrian daily with the assistance of foreign investments.[16] The secretly recorded video had already been produced in 2017, prior to the early parliamentary elections of that year, but it was only released in the run-up to the 2019 European elections. As a result, Strache resigned as vice-chancellor and stepped down from the leadership of the Austrian Freedom Party (FPÖ).

While the scandal did not immediately affect the Austrian results of the European elections, the political landscape was shaken profoundly. The coalition government between the conservative Austrian People's Party (ÖVP) and the right-wing FPÖ broke apart. Chancellor Sebastian Kurz lost a motion of no-confidence in the national assembly. President Alexander Van der Bellen, for the first time in Austrian history, inaugurated a caretaker government, and snap elections were called to take place on 29 September. In the electoral campaign that followed, the fallout from the Ibiza-scandal, the climate crisis, as well as political and campaign finance became prominent topics.

The 2019 parliamentary elections concluded with a victory for the party of former chancellor Sebastian Kurz, the ÖVP, which managed to hold on to their first-place finish and gained 6 per cent for a total of

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[14] Court of Justice of the European Union: Press Release No 128/19, 3 October 2019.

[15] Profil. In 2019, defamation campaigns occurred to a lesser degree. The ÖVP also suffered from a cyberattack on its server.

[16] Key scenes of the Ibiza video were released by Süddeutsche Zeitung and Spiegel online.

37.5 per cent of the vote. This came at the expense of their former coalition partner, the FPÖ, which lost 9.8 per cent and fell back to 16.2 per cent. Post-election commentary attributed this loss not only to Heinz-Christian Strache's involvement in the Ibiza scandal, but also to a scandal around the misuse of party funds, which was released few days before the election. The Social Democratic Party (SPÖ) was not able to profit from their role as the biggest opposition party and suffered a historical decline to 21.2 per cent of the vote. Against the background of the increased salience of environmental issues, the Austrian Greens, who missed the 4% threshold to parliament in the previous election two years earlier, managed to return to the national assembly with the highest vote share in party history, with 13.9 per cent. The liberal party NEOS increased to 8.1 per cent, consolidating their role as a permanent player in the Austrian party landscape. The green splinter group Liste JETZT, who had contributed to the electoral defeat of the Greens in 2017 and had entered parliament just above the threshold, was not elected to return to the house.[17]

2. Methodology

Many initiatives to monitor the use of social media around elections focus on disinformation.[18] This project seeks to widen the scope and look at the dynamics of online election campaigning more holistically. The focus is therefore not on disinformation in particular, but on how politicians use social network services to campaign online. The project gathered and analysed data from three social media platforms during the election campaign period: Facebook, Twitter, and YouTube.[19] For Facebook and Twitter, a list of relevant public accounts of political parties and candidates, as well as of media, was assembled (see Annex).

Research questions

Since social media monitoring is a new approach to assess the level playing field of electoral campaigns, this project offered an opportunity to explore what can be analysed from the huge bulk of data gathered with the chosen methodology. The questions posed were answered to different degrees. Questions that can deliver meaningful results and point to future research include:

- How do political actors use social media during election campaigns?
- What strategies are used to be electorally successful or to differentiate from political counterparts?
- What are the reasons behind the choices for Facebook or Twitter?
- What is the impact of visual content on YouTube? Which parties make use of it to what extent?
- How are politicians' online activities changing as Election Day draws near?
- What is the role of advertising on Facebook and what can be learned about the political parties' strategies? Who makes use of it and to what extent?
- How can the use of emojis as reactions to Facebook posts be interpreted?
- How did online attention develop during the campaign period?
- What were the most prominent campaign themes that produced reactions on social media?
- How can advertisement and promoted posts on Facebook be interpreted?

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[17] Austrian Ministry of the Interior: Election Results.
[18] DRI 2019b.
[19] Hammer/Brodnig (2019:2) have also looked into Instagram at the occasion of the 2019 European elections.

Sample

The sample of social media accounts as well as of contents to be analysed in this study was developed in a four-step process. First, a list of political actors was established using the criteria of
   a) being a candidate to the national assembly elections, classified by lead candidate or lower ranked candidate;
   b) being a political party (official accounts of national and regional parties); or
   c) being an official partner organization / support page of a political party (youth organizations, unions, party TV channels).

Second, a pre-monitoring of the Austrian social media landscape (from July 28th to August 30th) was used to identify additional actors which played a significant role in the political discourse prior to the official electoral campaign. The criteria for including them to the list of monitored accounts were extended to
   a) being an active Facebook or Twitter user who has a significant impact on the campaign, but is not on a candidate list (e.g. former vice-chancellor Strache),
   b) being a media outlet or journalist with a significant number of followers (above 50,000).

Third, the most prominent keywords of the pre-monitoring phase were assigned to a sentiment analysis and used to identify and analyse topics that were anticipated to have an impact on the electoral campaign. In a final step, each Facebook and/or Twitter account of the political actors on the established list was screened to meet the requirements of data protection regulations / public content, and were included to the sample on that basis. In total, 146 social media accounts were for this study.

Timeframe

For both Facebook and Twitter, the timeframe studied was 8 September until 30 September, the latter being the day after the election. According to DRI[20], most EOMs focus only on the pre-election period, but it was suggested to include the post-election timeframe as well. In line with previous endeavours, this project focused strongly on the pre-election period and only included one day after the election in the timeframe under consideration.

Data collection / access to data

All postings on Facebook and Twitter were downloaded in the foreseen timeframe, and accompanying data was collected. In the case of Facebook, this pertains to the number of likes and all other reactions to the relevant Facebook post, such as the number of shares, the number of comments, as well as their content. The same data was collected on Twitter (with shares being retweets and likes being favourites). For Facebook, the analysed posts are differentiated in promoted posts and not promoted posts, that is, posts that were paid for via paid political advertisements. On this basis it is possible to identify the different effects of promoted and non-promoted Facebook posts. Overall, this results in a dataset of more than 25.000 posts from politicians, political parties and the media, and more then 1.1 million comments by users.

While access to Twitter data is fairly open, with a quick access to their Application Programming Interface (API)[21], getting access to Facebook data comes with significant challenges (see chapter 5). DRI used to recommend CrowdTangle to gather data from Facebook due to restrictions to the public API. These programs might be difficult to adapt to a different context, or Facebook has restricted the

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[20] DRI 2019b: 32.

[21] In the words of a researcher for this project, "an API is like a backdoor made available by websites and services so we can collect datasets as authorized by each company with a specifically written computing-language script. For example, Twitter allows us to collect tweets and meta-data associated with tweets, such as geolocation. YouTube allows to collect information about any available videos based on textual descriptions." (Information provided by email on 23 September 2019)

access more recently. Following conversations with Facebook, wahlbeobachtung.org and VDSG received a Facebook API access that allows the gathering of post-by-post statistics. Therefore, no other specific tool was needed to access the data.

For YouTube, the analysed videos were selected on a keyword basis to gather information about all political videos during the campaign period. The technical team, composed of statisticians, linguists, programmers, data scientists and mathematicians, applied the string-lines in a structured-coded internal script to collect information on the video descriptions and titles from YouTube through the platforms' API. Following this step, the videos were filtered by the meta-data according to the number of views, likes, comments, and dislikes. Video-contents are double-checked to verify the video fits the sample.

The same keywords were used for YouTube as were for Facebook and Twitter; the timeframe, however, differed by a week. For each week starting from 2 September, the 25 most-watched YouTube videos were selected. After the election, on 1 October, the data for all the videos was downloaded. This includes most importantly channel names and view counts, but also likes, dislikes, comments, video titles, video description, and a link to the video for later reference. However, unannounced changes to the YouTube API on 24 September caused a major disruption in the data collection. As a consequence, instead of 1 October, 24 September had to be used as the cut-off point in time instead.[22]

The new Facebook Ad Library was used as an additional data source. This is a database where Facebook reports information about the advertisements that are published on their platform. It allows to see how much money was spent on the different sites of political actors that were in use during the campaign period. Ad libraries collect all ads of national importance and make it accessible so that researchers can have a better picture about how campaigns are spending money on social services networks. This project is one of the first that monitors paid political advertisements online and therefore realises one of DRI's recommendations for social media monitoring of electoral processes.

Since the data encompasses not just the meta-statistics about a post, such as likes, shares and comments, but also includes the actual text that was posted, it is also possible to investigate the content of the campaign. This project attempted to conduct a sentiment analysis and conducted a topic modelling analysis[23], using both supervised and unsupervised algorithms. DRI suggests training artificial intelligence (AI) tools to identify disinformation. The usage of supervised and unsupervised algorithms can be understood as using AI and thus reflects this approach, although its application was changed from monitoring disinformation to conduct a sentiment analysis and topic modelling.

For the sentiment analysis and the identification of negative campaigning, a random sample of about 1.500 comments were manually evaluated by Election-Watch.EU (wahlbeobachtung.org) and volunteers. This sample was then used to train and test several algorithms for sentiment detection. Both a traditional, dictionary-based approach was used, as well as more advanced neural network methods to test this methodology. However, both approaches showed unsatisfactory results.[24]

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[22] All the videos published in the platform until September, 23rd, 23h59 (UTC) have the views updated until September, 24th, 17h50 (UTC). All the videos published in the platform from September, 24th, 00h (UTC) onwards have the views updated until October, 1st, 07h00 (UTC).

[23] Topic Modelling

[24] The dictionary-based method failed due to inconsistent data. This was exacerbated by the fact that existing sentiment dictionaries are based on German as spoken in Germany, which can be significantly different from the Austrian German vernacular, particularly as expressed in social media. The neural network methods, on the other hand, requires more data in order to perform well. In order to overcome these difficulties, better quality data is needed, and much more of it. There are two possible approaches to improving data set quality: One is to have a small group of highly trained evaluators, with clear instructions on how to evaluate comments. The second option is to "crowdsource" the comment evaluation, i.e. having many people evaluate the same comments, and take an average. However, crowdsourcing the evaluations entails giving data

Online tool

An online tool was developed to make the data, and the analysis of the data, available for the wider public. It allows anyone to investigate the data on their own and find more conclusions about the campaign than are possible to present here.[25]

The user could choose between six different data sets: aggregates for the entire campaign, average values per post, data from the Facebook reactions, comparative data of promoted and not-promoted posts, a general overview over advertising budgets, and the topic analysis. On all pages (except the topic analysis), users could further specify their interest by selecting which accounts they want to look at: party leadership, other politicians from the party, the national party account or regional party accounts, and additionally the main media outlets and selected journalists; whether they want to look at daily data, weekly data or for the entire campaign; a selection of the timeframe that should be taken into account; and for daily data, the possibility to smoothen the data by applying a rolling average.
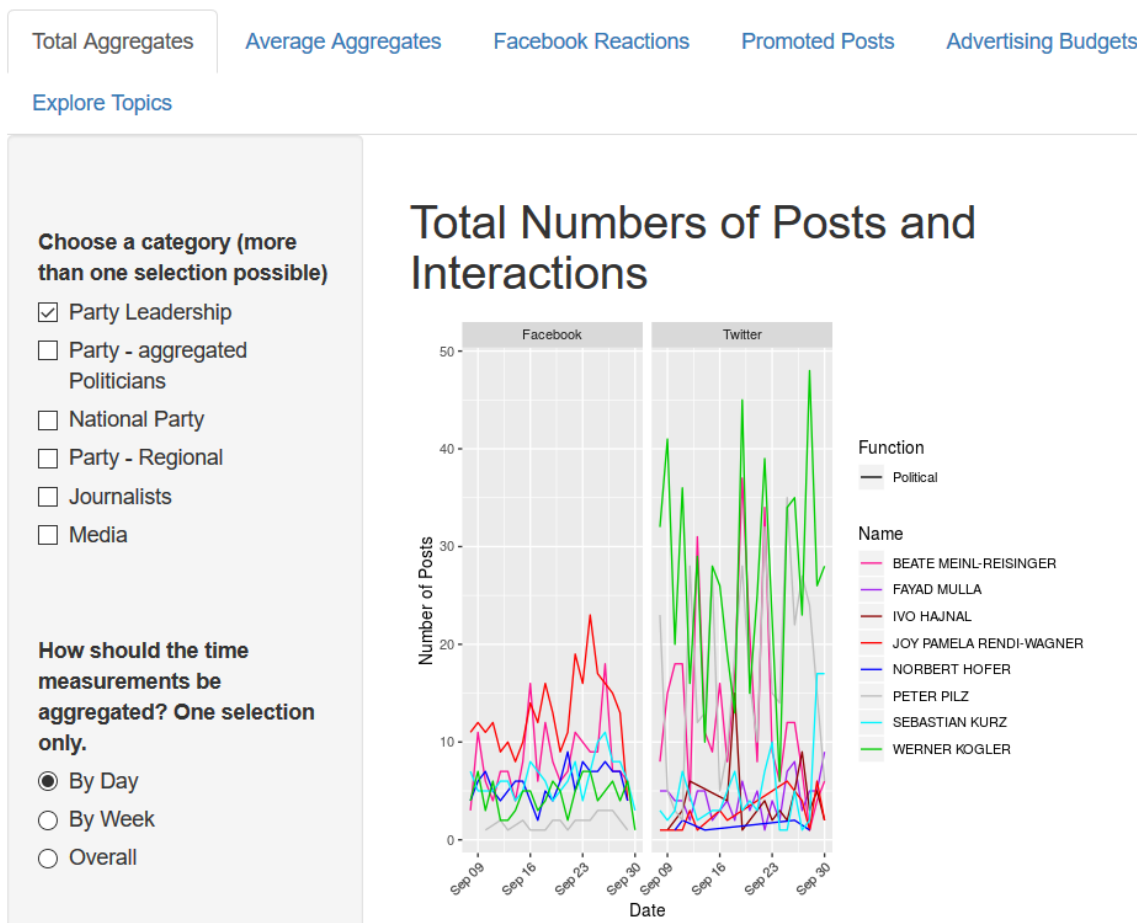

Graph 4 – Screenshot from the publicly accessible data analysis platform: https://viennadatasciencegroup.at/data4good/

Some findings have been assembled from this platform and presented in the main findings section in this report. However, due to the big size of the dataset, many more questions could be answered. This report is therefore also a call to the public to further analyse the data.

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access to a large group of people; this requires vetting for data protection compliance. Furthermore, in order to increase the amount of data available for training and testing sentiment detection algorithms, a repository of shared data could make it possible for civil society organizations to pool resources and create a functioning algorithm.

[25] https://viennadatasciencegroup.at/data4good/
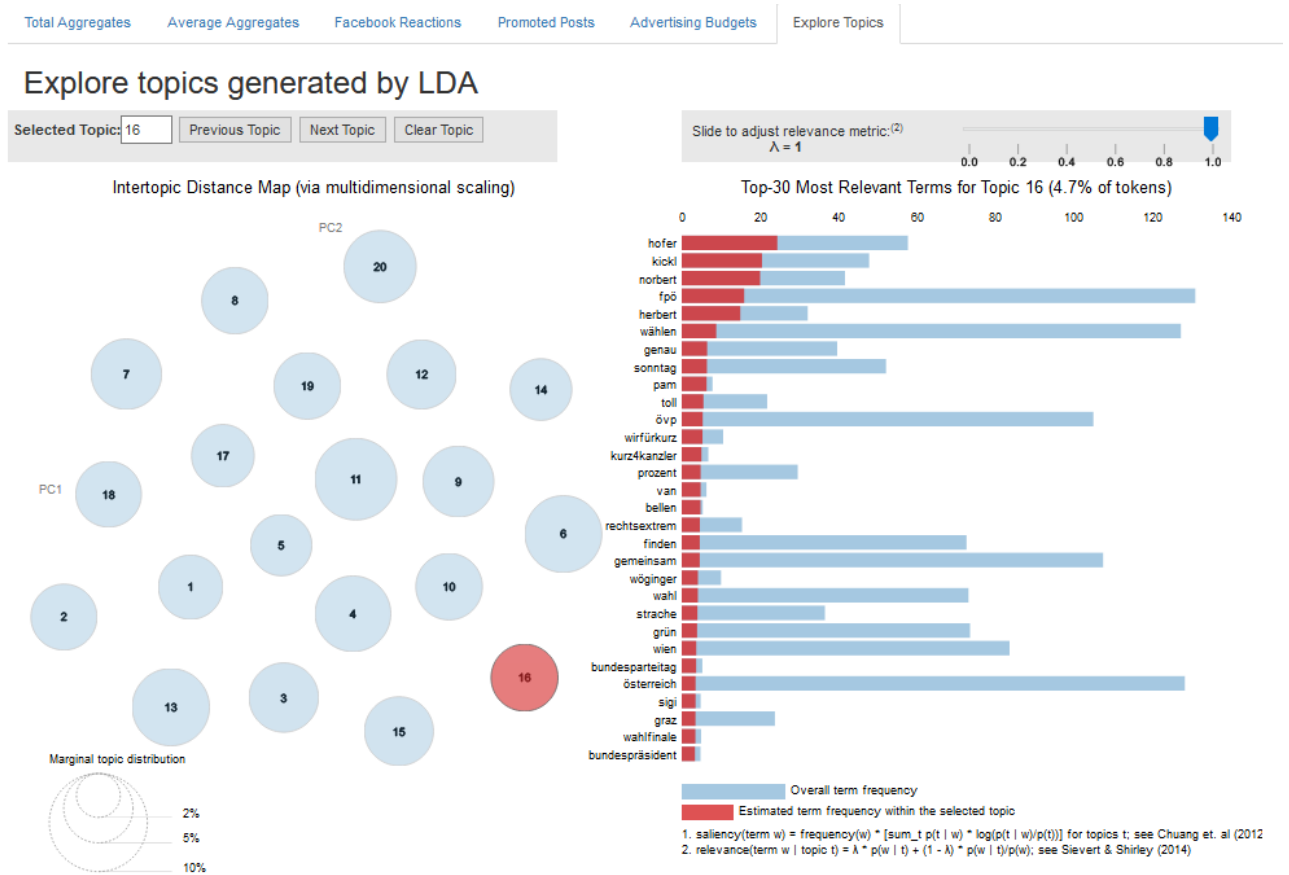
Graph 5 – Screenshot from the public data analysis platform (LDA - Latent Dirichlet Allocation)

3. Legal framework of social media monitoring

In Austria no special law or government regulation is yet in force to regulate social network services. Social media monitoring, however, involves the collection, storage, and processing of a large volume of data. For the purpose of this research project the Austrian legal framework was checked to ensure legality of the conduct of social media monitoring and publication of its results. A key concern in such cases is the appropriate protection of the data – what to collect and store, where and how to store it, who can access it, and what analyses may or may not be performed in order to maintain the privacy of the individuals whose data have been harvested. In the European Union, the General Data Protection Regulation (GDPR) legally mandates many of these protections.[26]

The Austrian legal framework to protect freedom of expression and information in respect of GDPR extends only to corporate media, but not to citizen journalism or published results like a social media monitoring project. According to the GDPR the processing of personal data requires a legal basis.
In Austria three laws are considered providing possible legal guidance. These are the Data Protection Act, the Research Organisation Act (Forschungs-Organisationsgesetz) and the Data Protection Regulation (Datenschutz-Grundverordnung).

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[26] General Data Protection Regulation 2018.

The assessment of the data protection legal framework concludes that two of three possible laws do not provide a sufficient legal basis. Only the Data Protection Act, which could be considered as a legal basis, poses substantial risks for wahlbeobachtung.org as a civil society organisation in its purpose to provide transparency to the democratic process of elections.

The data processing is necessary in order to reconcile the right to protection of personal data with freedom of expression and freedom of information. Only by publishing the research results, the findings can reach the public. On the one hand, the largely unexplored effects and functioning of social media in election campaigns and the understanding of this is ultimately essential for ensuring democratic elections. On the other hand, the privacy rights of politicians, who published their opinion and are persons of public interest, cannot override the interest of the general public in democratic elections and related information. Yet it is not clear how the Data Protection Authority (DSB) would decide in case of a complaint. An appeal would have to be decided by the Austrian Constitutional Court as last instance, and there are good reasons to assume that the Court would follow the ECJ. However, § 9 DSG has to be amended to secure basic democratic information rights for all.

With regard to the social media monitoring's sentiment analysis, potentially data on the political opinion of single users are processed, which resemble special categories of personal, that is, sensitive data. In the case of possibly published data regarding politicians, this would require special safeguards.

The overall intention of the GDPR is laudable. However, it leaves many grey areas to be regulated. The GDPR has not been in effect long enough for a practical code of action to become established. There is further not a sufficient body of legal experts who can provide guidance to emerging questions. This situation can lead to a lack of policy-relevant research results, with civil society organizations limiting their scope of study for fear of overstepping their legal boundaries. Research efforts are difficult to reproduce, as organizations are reluctant to share their data. CSOs might also not be able to bear the cost of secure storage and hence have to delete data upon project completion.

The legal aspect of campaign and party finances are regulated by the Federal Act on the Financing of Political Parties (Political Parties Act 2012).[27] The Court of Audit has published a section with frequently asked questions on its website.[28] No supplementary instructions about online campaigning have been released. A number of recommendations to address weaknesses and gaps concerning the scope of the regulation, insufficient disclosure requirements and inadequate oversight have been highlighted in an evaluation produced by several civil society groups.[29] The president of the Court of Audit has also called for a mandate to audit parties' finances.[30]

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[27] Political Parties Act.
[28] Court of Auditors.
[29] Breitschopf, Huter, Sickinger, Skrabal: Fünf Jahre "Transparenzpaket" – Eine kritische Bilanz aus zivilgesellschaftlicher Perspektive. 2017.
[30] Der Standard, 27. Dezember 2018.

4. Main findings

This chapter presents findings about how parties and politicians are using social media during election campaigns. Starting with a general overview, it becomes apparent, which actors are active on Facebook and Twitter, and whether they prioritize one platform over the other. It is also detectable how politicians' online activities are changing as Election Day draws near. Three additional themes were discussed: Emotional reactions (emojis) to posts on Facebook, insights into the role of advertising on Facebook and political parties' strategies in that regard. Our look to YouTube analysed, which of the observed accounts were successful in gathering views.

4.1. Overview

Online campaigning on social media platforms has become an integral part of electoral politics in Austria. Facebook is the most dominant platform, which political parties and candidates use for voter outreach and to stage their online campaign, followed by Twitter and YouTube. Twitter, although not used as a broad campaign vehicle, is used in particular by journalists and smaller parties.[31] Although limited in scale, dynamics on Twitter can have an impact on the discourse on traditional media and on Facebook. The influx of information (and disinformation) through platforms is of high importance when investigating social media impact on societies and political processes, as all the platforms exist in a unified digital "ecosystem", in which different strategies, themes and influencers act. It is not unusual for a specific content or message to be first published on Twitter, for instance, and afterwards ending up shared by channels and pages in Facebook, YouTube and, especially, WhatsApp.

The graph below shows how political actors use social media to campaign and whether there are preferences for one of the two observed text-based platforms, Facebook and Twitter.
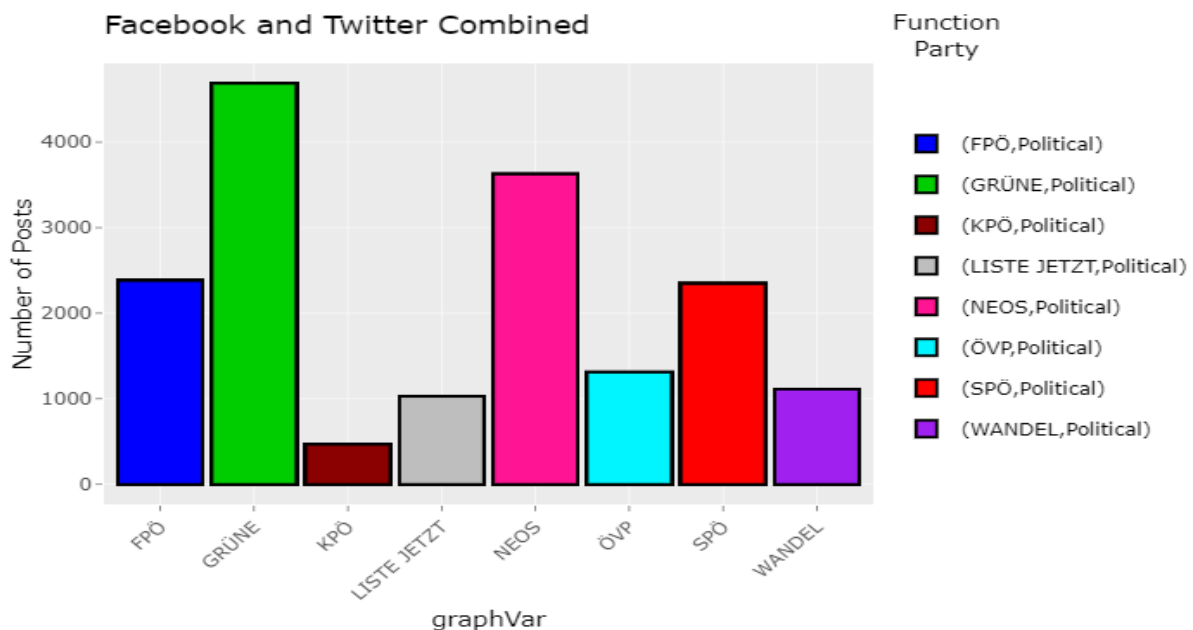
Graph 6 – Total number of posts on Facebook and Twitter combined

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[31] In other words, Werner Kogler (Greens), Peter Pilz (JETZT) and Beate Meinl-Reisinger (JETZT) tweet much more than Sebastian Kurz (ÖVP) or Norbert Hofer (FPÖ). Joy Pamela Rendi-Wagner (SPÖ) hardly tweets, but is the most active leader of a political party on Facebook.
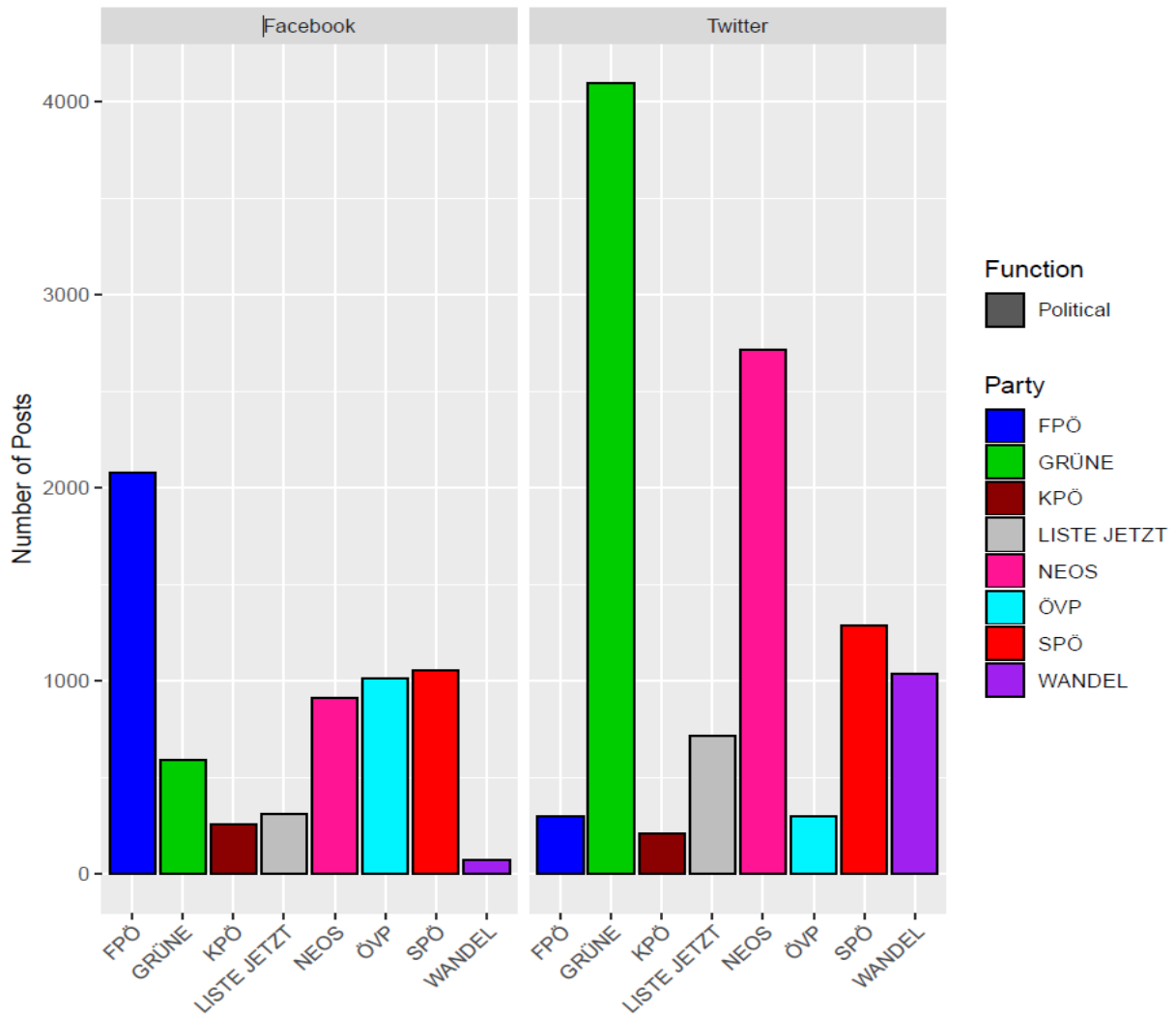
Graph 7 – Number of Posts/Tweets overall (sum of party leader, account of national party, regional party accounts and selected politicians from the party aggregated)

The number of posts from the parties[32] revealed that NEOS and the Greens were much more active on Twitter than the other parties. FPÖ on the other hand focused much more on Facebook and showed hardly any activity on Twitter.

It is also possible to look at voters' interaction with the parties' posts or tweets. For long the FPÖ has dominated Facebook.[33] This has changed in recent years[34] as other parties caught up and former FPÖ leader H.C. Strache's personal Facebook page has been taken offline. However, in 2019 the FPÖ was still the party with the highest number of overall interactions. In the following graph, the number of interactions for a post accounts for the sum of likes (favourites), comments, and shares (retweets).

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[32] „Parties" means that data from the account of the party leader, the account of the national party, regional party accounts and other politicians from the party were aggregated.

[33] Neue Zürcher Zeitung Die Medienmacht der FPÖ, 5 May 2018

[34] Digitalreport 2018: 2.
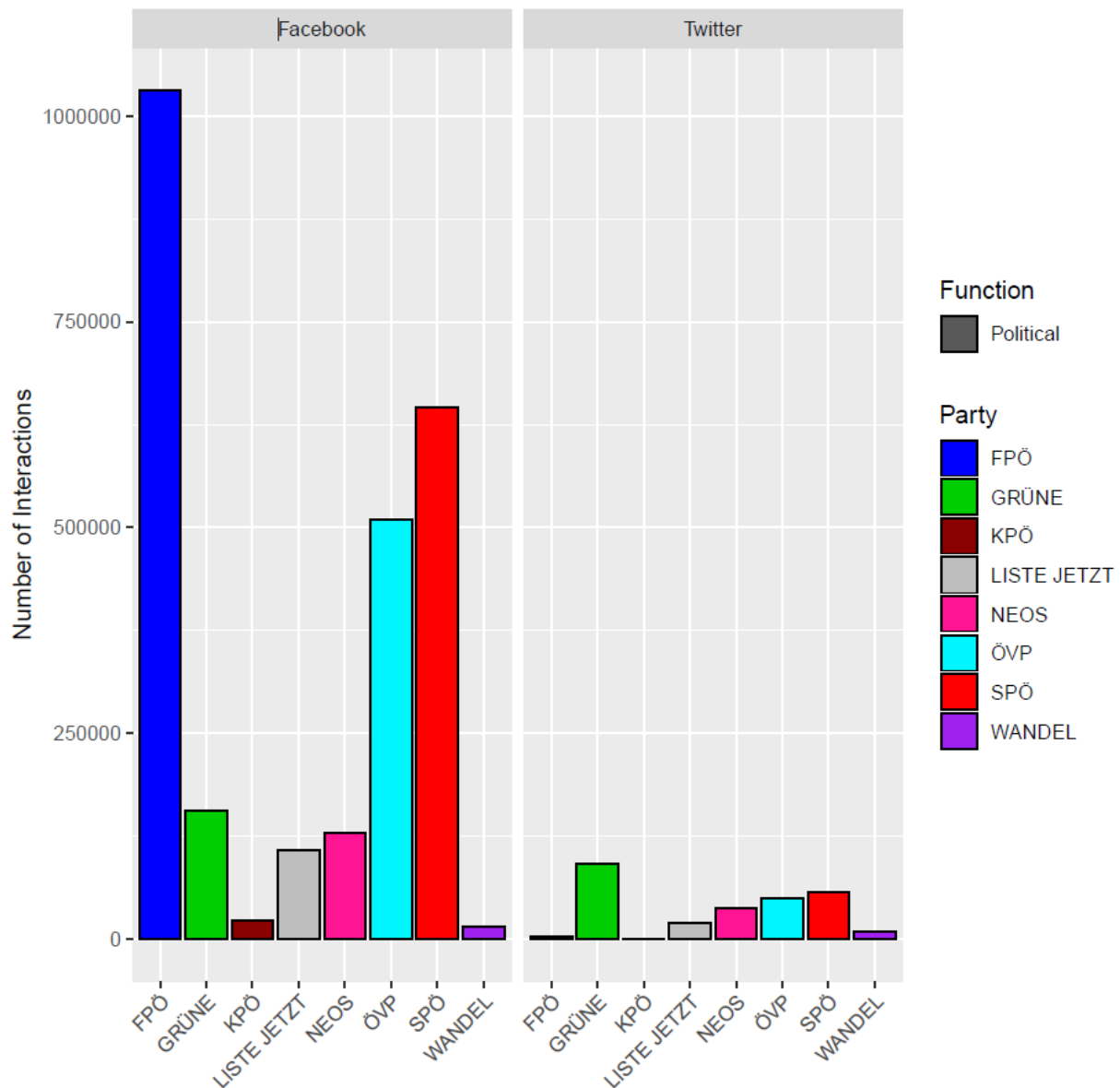
Graph 8 - Number of interactions (= sum of likes/favs, comments and shares/RT) overall (party leader, account of national party, regional party accounts and selected politicians from the party aggregated)

First, there was a massive discrepancy in the usage of the two platforms in Austria. Facebook is much more popular, and therefore accounts got significantly more interactions on Facebook than on Twitter. The top party on Facebook, the FPÖ, received approximately one million interactions during the electoral campaign in 2019.[35] The SPÖ comes second. The party with the most successful Twitter accounts in terms of interactions during the campaign were the Greens, gathering almost 100,000 interactions over the three weeks before the election.

Second, there was a clear hierarchy on Facebook that assigned the parties into three tiers: the three main parties – FPÖ, SPÖ, ÖVP – received most user interactions, with significant differences between each other. The three parties that were trying to maintain or regain representation in parliament – NEOS, GREENS, JETZT – lied in a second tier. Two left-wing parties that never polled above 1 per cent lied on the bottom. The hierarchy of these tiers correlated roughly with the electoral strength of the parties in the tiers. However, this is very different on Twitter: There, the Greens were the most

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[35] The FPÖ interactions lie just below one million during the campaign period before election day. If data including election day and the day after is included, their interactions surpass one million.

frequented party, leading ahead of the SPÖ, and followed by NEOS who appeared larger than the ÖVP. Also, the WANDEL (a small newcomer party) had more than twice the interactions of the FPÖ on Twitter.

4.2.   Campaign over time

Elections have helped to increase the number of followers of permanent Facebook sites and Twitter accounts over time.[36] When looking at how online attention developed during the campaign period, the results are at first not very surprising. People increasingly interacted with posts from politicians as Election Day approached.

However, when looking at this trend for the two platforms separately, another level of difference between Facebook and Twitter became visible. The increase of interactions over time was not equally true for both platforms. While there was a fairly clear rise of interactions on Facebook, the level of daily interactions on Twitter stayed more stable from the beginning to the end of the electoral campaign.
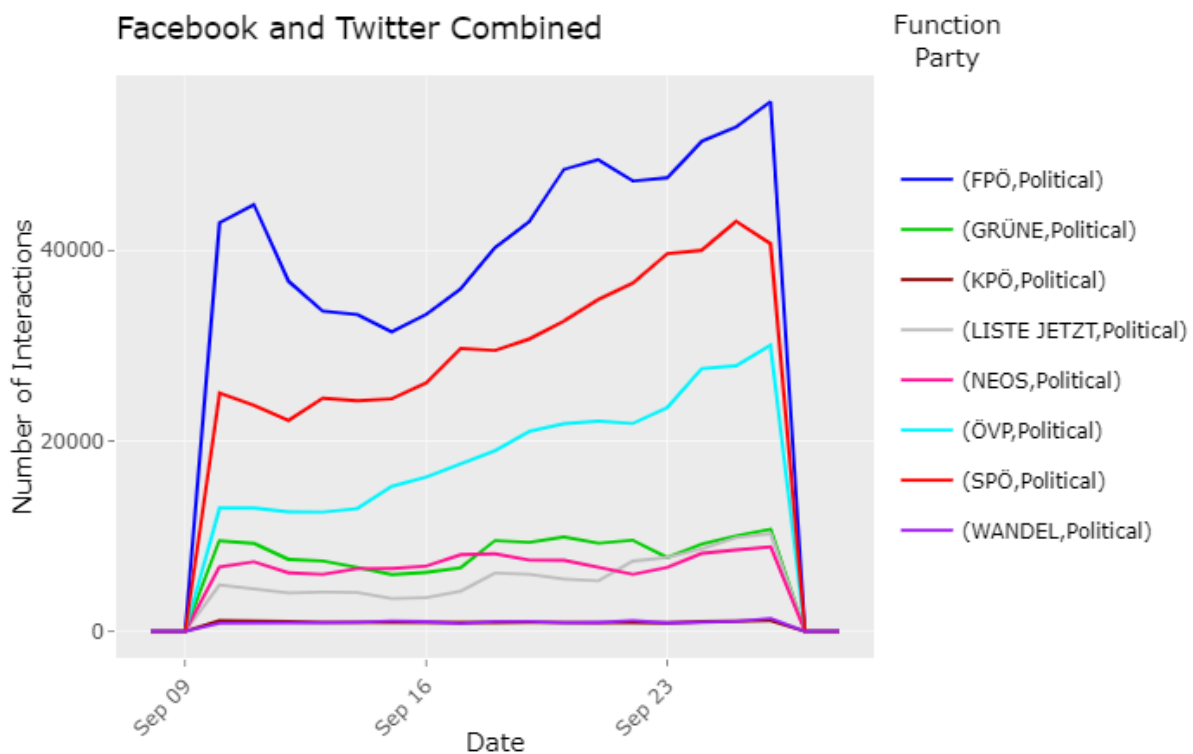
Graph 9 - number of interactions with posts from political accounts ("overall" see text) three weeks before the campaign until the day before election day.
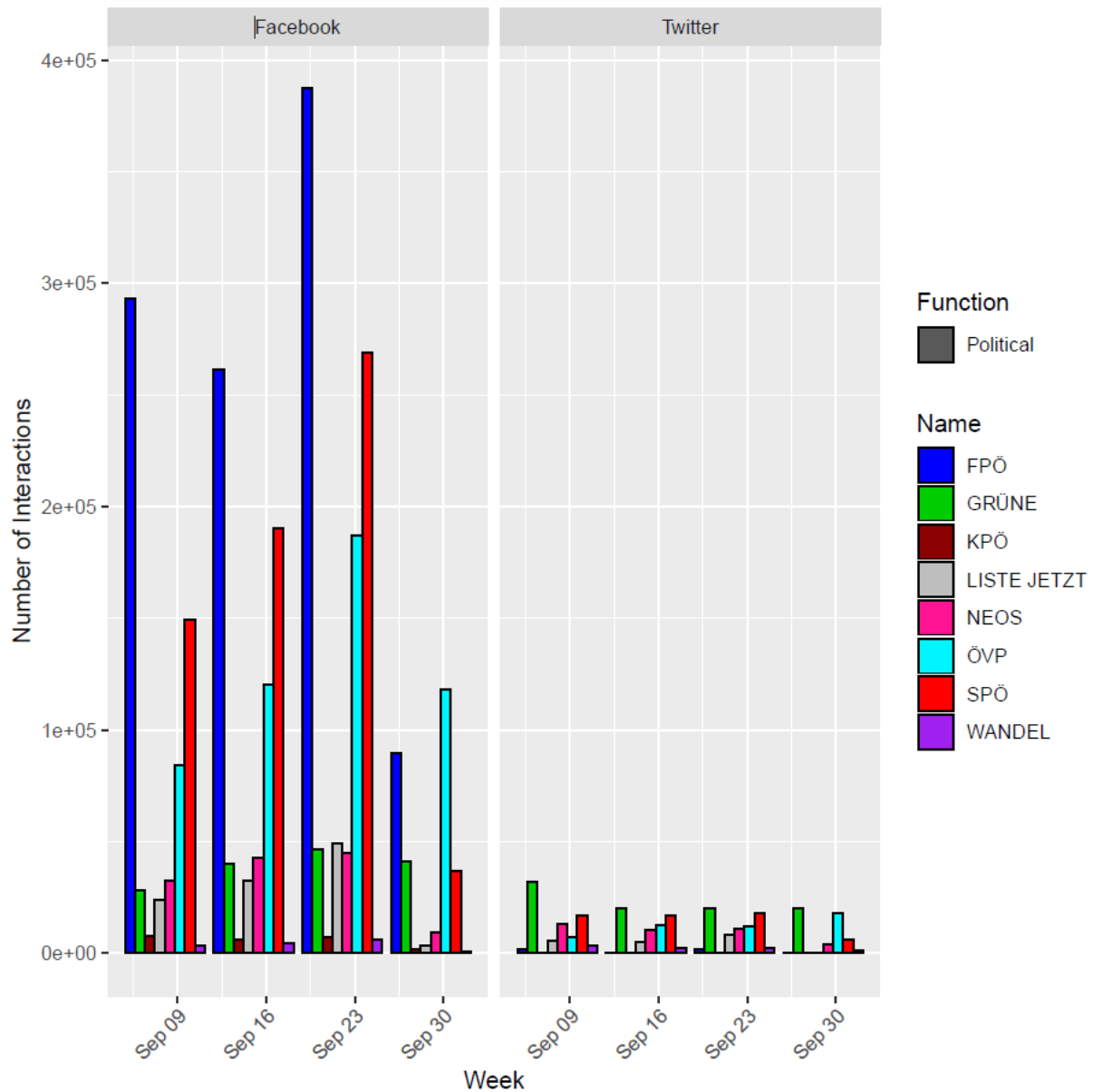
Graph 10 – Total number of interactions (= sum of likes/favs, comments and shares/RT) overall (party leader, account of national party, regional party accounts and selected politicians from the party aggregated) per week; 1e+05 equivalent to 100,000

4.3. Emotions on Facebook

In February 2016, Facebook diversified the ways in which users can respond to posts. Besides "liking" it is also possible to react with symbols for "love", "laughter", "surprise", "sadness", or being "angry". On this basis it is possible to investigate which emotional responses are triggered by posts from politicians and to see, which differences arise between the candidates. In addition, data gathered by the University of Vienna during the 2017 national election campaign was used to compare how the emotional landscape of the campaign has changed since then.

Overall, in 2019 the symbol "love" dominated the interactions with political party leaders during the campaign. More than half (54.8 per cent) of all reactions to posts by the leading candidates used the "heart" symbol. Peter Pilz was the only candidate where "love" was not the most used reaction. On his page, "laughter" was the most common, which overall ranked second with 27.2 per cent of all reactions.

The other large deviation from the mean was Norbert Hofer, the newly designated leader of the FPÖ. Hofer received significantly more "angry" reactions than leading candidates on average (mean: 11.1 per cent, Hofer: 28.2 per cent). No other leader was close to that value; Sebastian Kurz came second with 16.4 per cent. The data does not explain, however, whether the higher amount of negative emotions to posts from Norbert Hofer stems from a more negative FPÖ base, or was promoted through posts that actively tried to tap into these negative emotions.

There are interesting differences between the "reaction-landscape" in 2019 compared to 2017. Thanks to a report on Facebook reactions from the Computational Communication Science Lab at the University of Vienna[37], a comparison of the new data from 2019 with that from 2017 becomes possible.

In 2017, Heinz-Christian Strache as lead candidate for the FPÖ garnered 57.3 per cent angry reactions. Two years later, the lead candidate of the FPÖ, Norbert Hofer, received less than half of that. Two explanations are possible: Norbert Hofer has a different personality than Strache and is more moderate in his language. The FPÖ also used Herbert Kickl as a second lead candidate, with Kickl being more aggressive and Hofer more tailored to appeal to the centre-right voters. The other explanation affects the entire political landscape.

The report from the Computational Communication Science Lab illustrated that Strache received the highest number of angry reactions with postings related to the topic of migration. The overall salience of migration as a campaign theme was lower in 2019 than in 2017. This also correlates with an overall decline of angry reactions across all candidates. The overall share of angry reactions was 28.6 per cent in 2017 compared to 11.1 per cent in 2019. This comparison suggests that the lower salience of migration as a theme correlates to the campaign attracting fewer angry reactions than two years before.

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[37] Computational Communication Science Lab: Emotional Reactions on Austrian parties' Facebook pages during the 2017 Austrian Parliamentary election. University of Vienna, October 2017.

Graph 11 – Share of each reaction to posts from the six leading candidates. The horizontal black lines denote the average share of that emotion across all leading candidates

Graph 12 – Share of reactions to posts from leading candidates during the campaign 2017. Graph from the Computational Communication Science Lab, University of Vienna.

4.4. Campaign advertising

There is an ongoing global debate whether political advertising should be possible on social media. Twitter has announced that all political ads will be banned from its platform.[38] Google wants to limit the possibilities to direct political ads to specific audiences[39], while Facebook has declared that there are no intentions to regulate political speech on their sites.[40] In the meanwhile, Facebook provides guidance on ads concerning social issues, elections or politics on the Ads Help Center on its websites.[41]

Democracy Reporting International has prepared some background analysis on electoral campaign spending online: "Social media companies sell political ads. The way political campaigns buy ad space online has affected traditional campaign finance monitoring. Undeclared sponsoring of content has become easier through unofficial pages paid for by official campaigns. During the 2016 US elections,

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[38] New York Times, 30 October 2019.
[39] New York Times, 20 November 2019.
[40] New York Times, 17 October 2019.
[41] https://www.facebook.com/business/help/1838453822893854

the source and cost, as well as the targeted audience of political advertisements, were not made available (the so-called "dark ads"), but this is changing. Facebook, Google and Twitter have increased the transparency standards behind political ads by making "ad libraries" available in some countries."[42]

In this project the Facebook Ad Library came to use for elections in Austria for the first time.. Facebook introduced its ads library in March 2019 reportedly to introduce new levels of transparency after the platform has been misused to influence the US presidential elections in 2016. At first, the library included only ads related to politics or policy issues, but now it shows active ads about anything, including inactive political and issue ads. It can display page creation dates, mergers with other pages, page name changes, where a page is managed from, and the option to report an ad for its policy. Users can search political and issue ads by keyword or other ads by page name. The library displays pages' total political ads in the past week or since May 2018. There are also downloadable regular ad library reports on offer.[43]

While this is a very useful tool for monitoring political campaigns, it yet falls far short of its potential. First, it is not possible to select the time period of interest; the user is restricted to a choice of past week, past 30 days, or past 90 days. Second, it is sometimes not possible to determine when a purchased advertisement stopped running; third, instead of providing precise payment information for each advertisement, a bin is given. These bins are so large (the smallest bin is €0 - €99; the largest is €10.000 - €49.000) that a proper analysis is not possible. For example, advertisements can target different demographic segments – such as age group, gender or region – to different degrees. With such large bins, it is not possible to determine how much money was spent on various demographics.

Users can interact normally with advertisements (promoted posts) – likes, shares, comments – but interactions information is not included in the Ad Library. This information has to be retrieved from the regular Facebook API, and in order to do this, the post ID of the advertisement is required. However, even though every promoted post has a Facebook ad ID, this ID is not the same as the post ID – making it difficult to match ad with post in order to obtain the interactions data.[44] For all these reasons combined, researchers argued, that while the Ad Library is a tool that shows promise, it yet falls short of its potential and is currently useless as a way to track political messaging.[45]

This section looked into the data about advertising which has been published by Facebook, whereby the overall advertising budgets of political parties are compared with the accounts that received the greatest emphasis. In a second step, the effectiveness of promoting posts on Facebook is investigated.

Overall spending

According to an analysis of the Facebook Ad Library, the FPÖ was the political party, which invested the most in social media during the last 30 days of the campaign with a total of more than €215.000 spent during the campaign period. This was followed by the SPÖ with €150.000. Relative to the size of the respective party, two other cases stood out: The Greens relied heavily on Facebook, spending more than €120,000, while the ÖVP spent comparatively little on Facebook, less than €80,000, and thus invested the least amount of any political party that gained seats in parliament. It was even overtaken by the smaller NEOS party with Facebook expenses around €80,000. All in all, this amounts to €645,000 overall spending declared on the Facebook Ad Library for the general elections 2019 in Austria.

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[42] DRI 2019b: 25.

[43] Facebook launches searchable transparency library of all active ads, 29 March 2019.

[44] Brodnig/Hammer (2019) try this by matching the content of the Ads with the content of the posts in the standard database. While this is theoretically possible it is not exact in all instances and connected to much additional work for the setup.

[45] Ad Tool Facebook Built to Fight Disinformation Doesn't Work as Advertised, 29 July 2019.
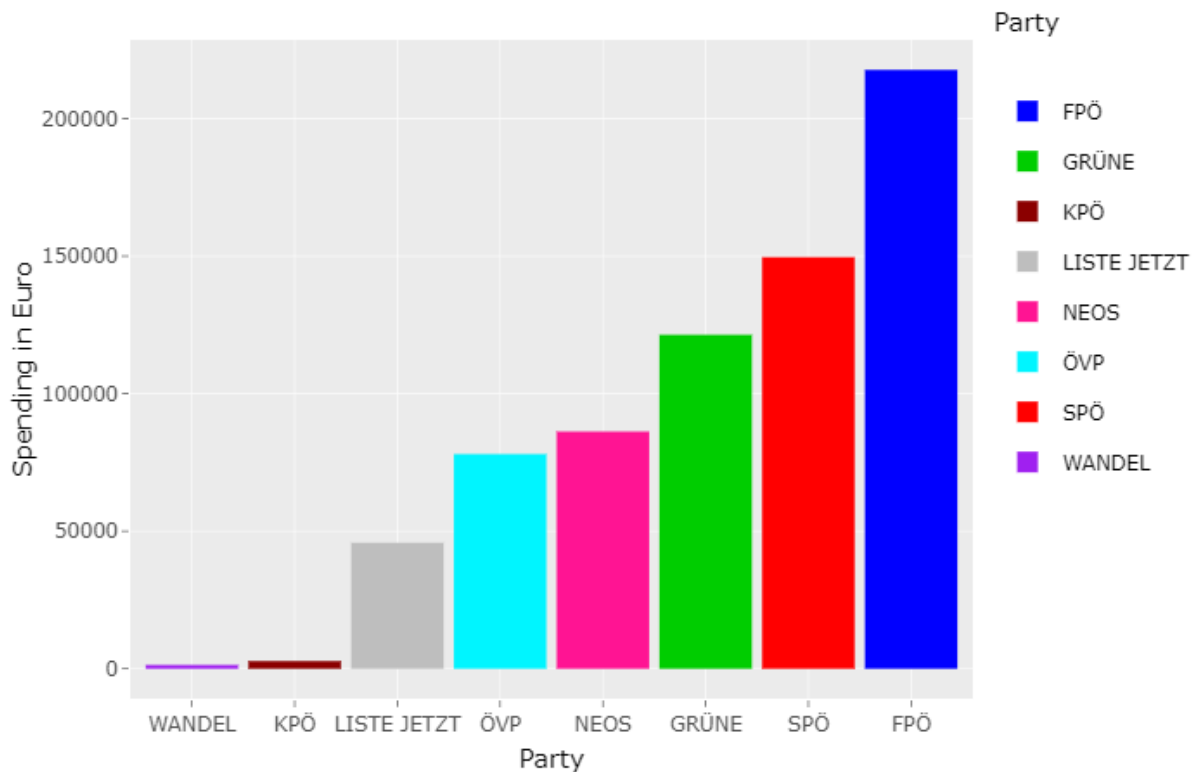
Graph 13 – Total sum spent on Facebook advertising during the campaign for each party

The parties used different strategies for their Facebook investments. The focus on the page of the lead candidate was the most common strategy: four of the six parties that were in parliament before or after the election invested most in the Facebook account of the respective party leader. The most promoted page was the one of Norbert Hofer (FPÖ), where almost €150,000 were spent. The page of Pamela Rendi-Wagner (SPÖ, approx. €100,000) came second, followed by the pages of Beate Meinl-Reisinger (NEOS) and Sebastian Kurz (ÖVP) – both just above €60,000. The pages of Werner Kogler (Greens) and Peter Pilz (Liste JETZT) received much less financial support (approx. €10,000 each).

The balance between the parties looks different with a look at the expenses of the parties' rather than the candidates' Facebook sites: Here, the Greens spent the most of all parties, and most of their Facebook expenditure went to the parties' and not the candidates' pages. They were the only party that spent more on the Facebook page of their national party than on other sites (e.g. candidates' sites). They also spent more on their national party account than any other party, e.g. almost exactly twice as much (approx. €90,000) as the second placed FPÖ. This also holds true for the spending for party pages at sub-national level, where the Greens again spent the most of all parties, over €15.000, followed by the ÖVP on second place with an expense of €5.000.
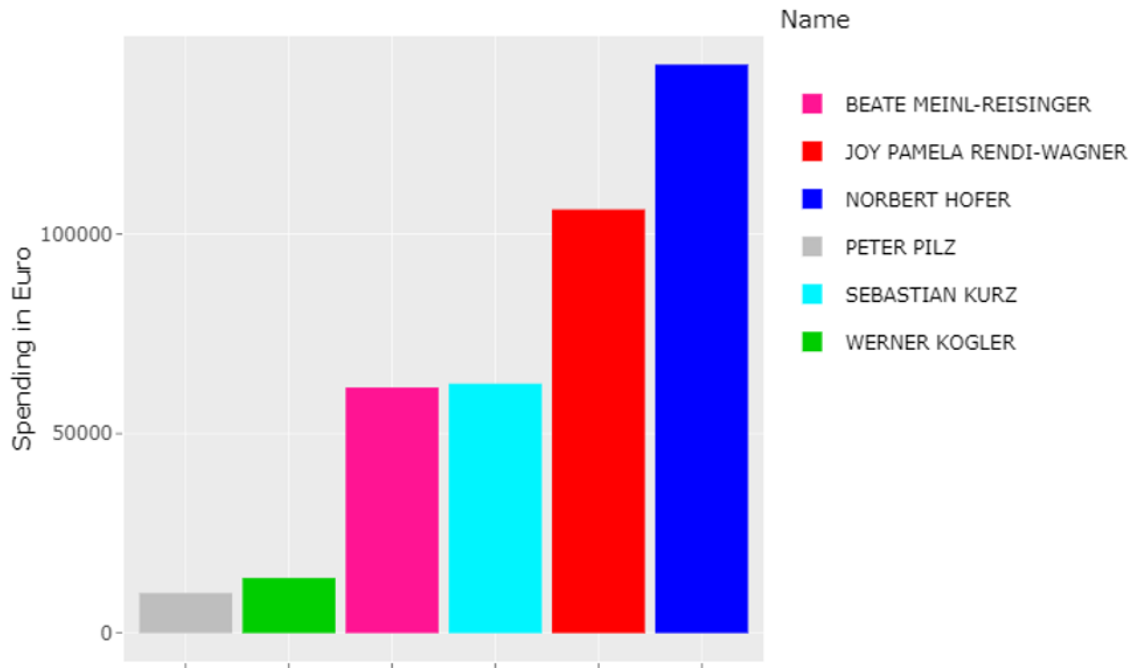
Graph 14 – Total sum spent on advertising on the leading candidates' Facebook pages
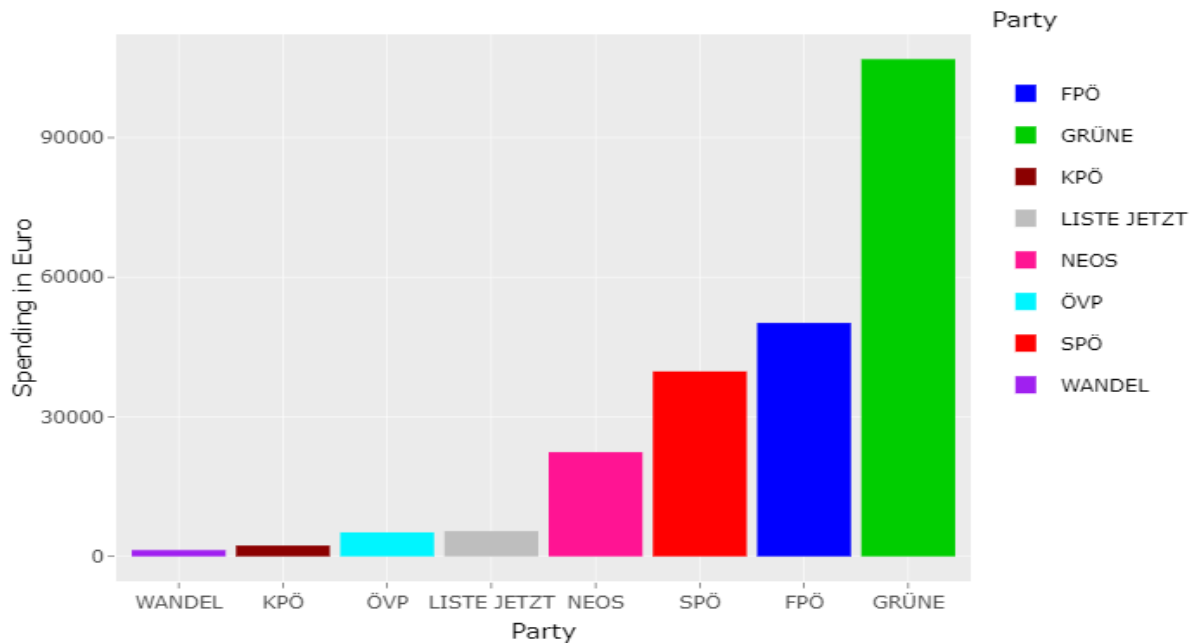
Graph 15 – Sum spent for the Facebook pages of national and sub-national party offices

Liste JETZT spent comparatively most on the individual pages of candidates listed behind the party leader. This not alone, they spent more than any other party on low-ranking candidates – approximately €30,000, compared to the FPÖ at approx. €25,000 and the ÖVP at approx. €10,000. Liste JETZT had a much smaller number of candidates on their list and the low-ranking candidates were little known.

The look at these differing strategies, in particular the FPÖ spending, is interesting given the fact that the Facebook site of former FPÖ-leader Heinz-Christian Strache made headlines as the campaign rolled

out. The Facebook page of HC Strache used to be the most popular political site in Austria, with over 800,000 fans, and was a cornerstone of previous FPÖ campaigns. However, with Strache stepping down from the party leadership, and the ensuing conflict about the ownership of the account – Strache or Party – all the money previously invested to build the number of fans was rendered useless for the party.[46] In a similar vein, investments in building the Facebook pages of previous party leaders Christian Kern (SPÖ) and Matthias Strolz (NEOS), which had been the respective party's main Facebook investment during the electoral campaign of 2017, are of no significant use today.

Promoting posts

The factor of "promotion" on Facebook is difficult to grasp despite an increased level of transparency introduced by the Ad Library. Brodnig and Hammer have analysed the electoral competition ahead of the European elections 2019. Their report noted that some posts receive a high number of interactions because they were specifically promoted.[47] The following graphs compare the ratios of promoted to non-promoted posts between the overall party posts and singled-out posts of party leaders.

It is possible to look at some of the effects of promoting posts on Facebook, that is, increasing a posts visibility and interactions through additional spending. Plotted below is the average number of interactions for promoted posts divided by the average number of interactions for not promoted posts. This ratio is an indicator for how successful the promotion of posts has been. A value of 1 means that both promoted posts and not-promoted posts were equally successful. Values above 1 show how much more successful the promoted posts are compared to non-promoted (e.g. 5 means that a promoted post like the ones of FPÖ, ÖVP and SPÖ got twice as many interactions on average than a non-promoted post).
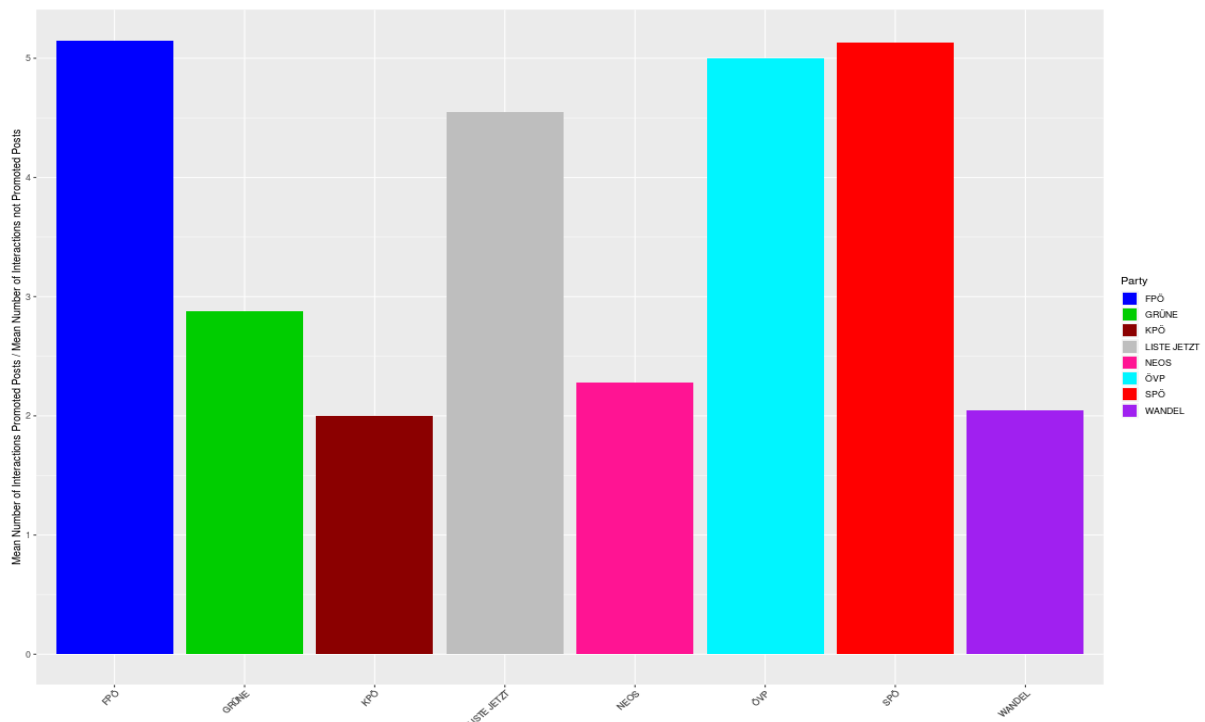

Graph 16 – Ratio of interactions from promoted posts to interactions from non-promoted posts on Facebook

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[46] The ownership of the page was publicly debated and legally contested at the time of writing, see for example Die Presse: 17. Oktober 2019. Strache's new, personal Facebook page has around 55,000 followers (December 2019).

[47] Brodnig/Hammer 2019: 2f.

The following two graphs portray a comparison of not-promoted and promoted Facebook posts between all-party posts (left) and party leadership posts (right). The graph visualises that FPÖ, Greens, JETZT, NEOS, ÖVP and SPÖ all invested in promoted posts to a various degrees, but the Greens invested in particular in posts of party leader Werner Kogler (big green column on the right graph).
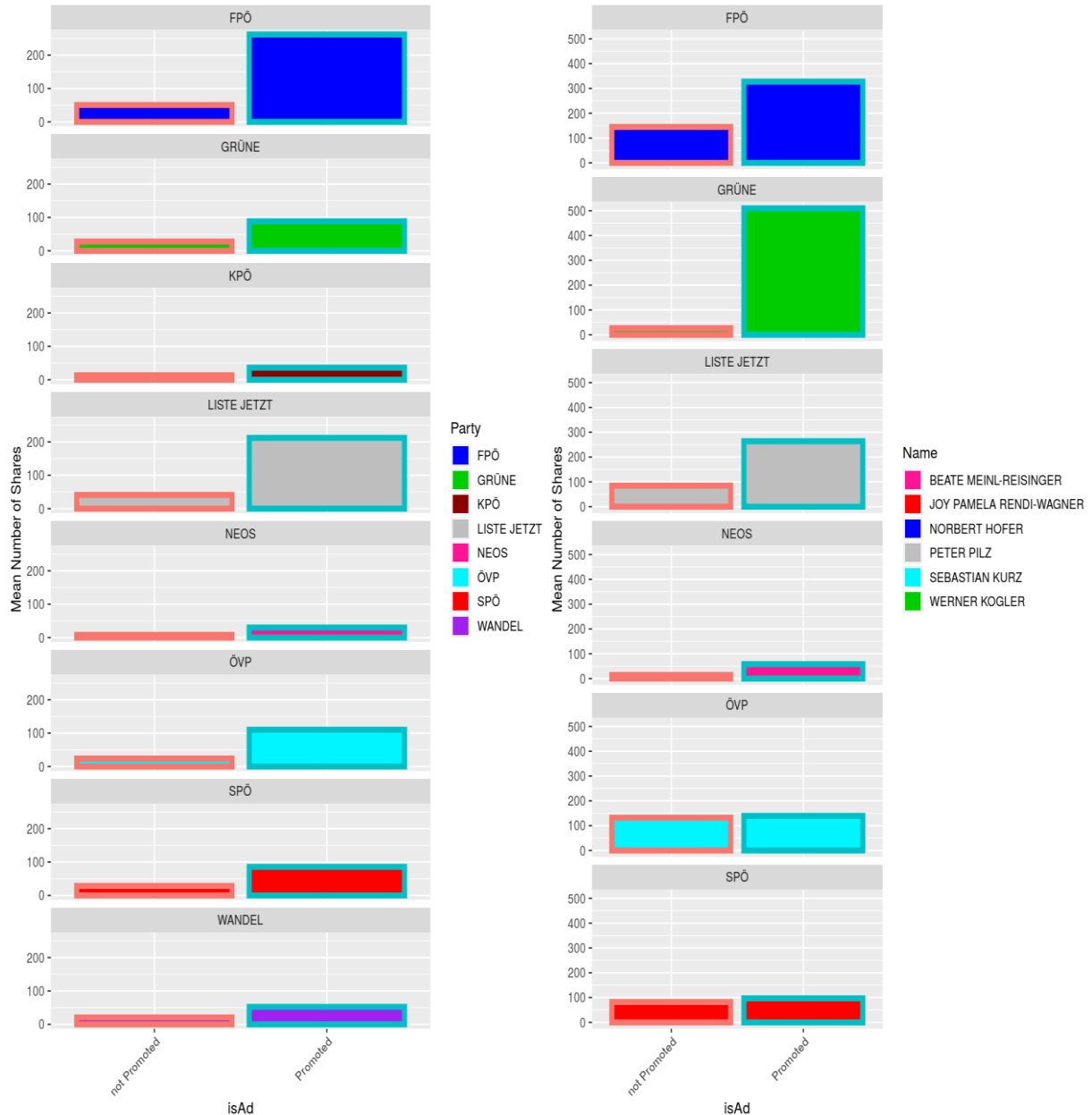

Graph 17 – Comparison of not-promoted and promoted Facebook posts between all-party posts (left) and party leadership posts (right)

Another way to visualize the impact of promotion on the number of interactions per post is graph 17 below. Each row of boxplots represents one week of campaigning, each column corresponds to one of the parties. Each column is then split into two columns, with the left representing non-promoted posts and the right representing promoted posts. Multiple aspects become visible: The median number of interactions was always higher for the promoted posts than for the non-promoted posts. Additionally, we can gauge the capabilities for parties to achieve high numbers of interactions without the need for

advertisement. This can be seen from the large number of outliers[48] (represented by dots above the boxplot) the FPÖ was able to garner. The social media attention that the FPÖ was able to generate without promoting a post, is out of reach for other parties even when actively promoting their posts.
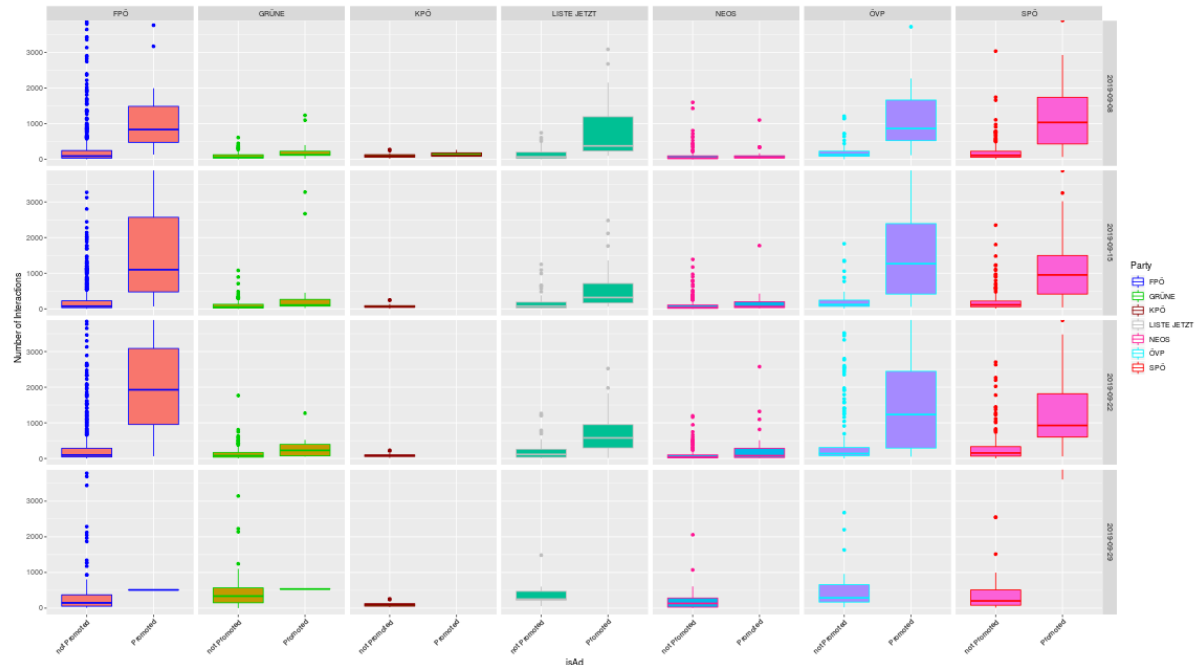
*Graph 17 - Boxplots for **interactions** on party leadership, party -aggregated politicians and party - regional accounts, split by campaign week and by promoted/non-promoted*

4.5.   Campaign on YouTube

This section looks into the most watched political YouTube videos during the campaign period.[49] Based on this analysis, the FPÖ dominated the YouTube landscape during the Austrian electoral campaign. It had over 2.7 million views during the timeframe under consideration, over six times more than the number of views of the second-ranking party on YouTube, NEOS. This is also reflected in the number of videos that reached the top 75 in those three weeks: the FPÖ had 21 videos (16 from "FPÖ TV", 4 from the official channel of the national-level party "Österreich zuerst", and 1 from the regional-level party account in Vorarlberg). In comparison, all other political parties combined had just 8 videos (ÖVP: 2, Greens: 2, NEOS: 2, SPÖ: 1).

This confirms the findings of Hammer and Brodnig from the campaign analysis for the 2019 European elections. They found that right wing populists are dealing with videos in the most professional manner. The FPÖ is the first Austrian political party with a designated video team, for its YouTube channel, which also produces video material for Facebook. Their professional short-story videos on Facebook and YouTube reach millions of viewers.[50]

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[48] An outlier is a statistical concept – when we're looking at number of interactions with a post, you can think of the „herd", that's where the „normal" posts with a „normal" number of interactions lie. The outliers are the "weird" posts – the ones that get much more (or much less) interactions than normal. Boxplots help to identify the outliers visually, and are great for figuring out what is "normal" (that's the box part).

[49] "Most watched" means that the top 25 political videos for each week were registered. Note that this is a different approach than was applied for Facebook and Twitter, where accounts from all selected parties and candidates were monitored equally, not only those with the highest number of posts or interactions.

[50] Brodnig/Hammer 2019: 2f.

No advertising data for YouTube is available, but the very low interaction figures for SPÖ and NEOS indicate that these videos were advertisements that were promoted and shown as advertisement placed before other videos on YouTube.[51] On Graph 19 we can also see that the Greens were especially successful in getting Interactions (likes, dislikes, comments) on their videos. To account for the different number of videos from each party, Graph 19 shows Interactions per Video. In absolute numbers, the FPÖ also received the highest number of Interactions, as could be expected from their massive advantage in terms of views.
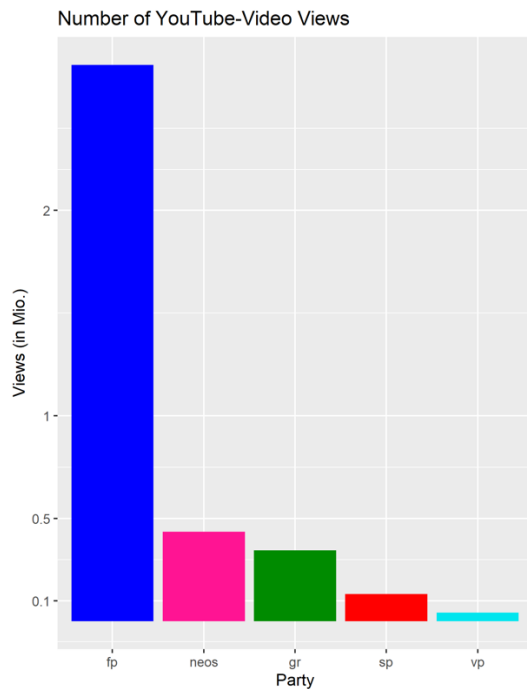
Graph 18 – Number of YouTube Video Views
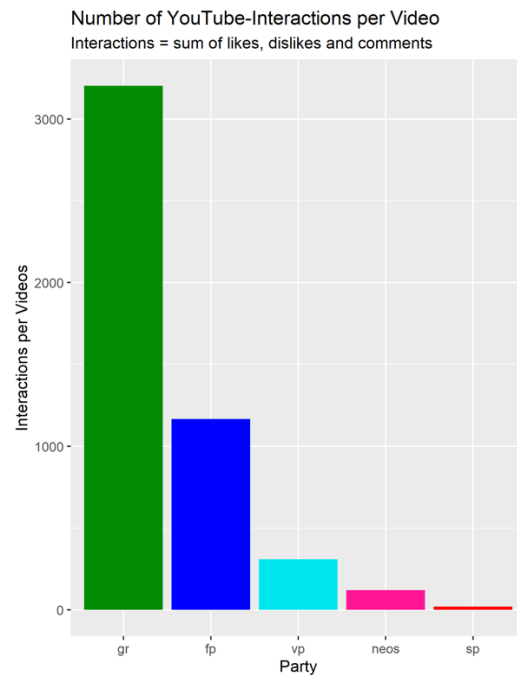
Graph 19 – Number of YouTube Interactions

When looking at videos that were not uploaded by party actors or media outlets, two pages stood out in terms of views compared to other channels: the pages of Gerald Grosz and Martin Sellner. Both are central figures to the right-wing to right-extremist scene in Austria. Gerald Grosz is a former member of both the FPÖ and, after a party split, also the BZÖ, and was an MP in the Austrian Parliament for the BZÖ. Martin Sellner is known as the speaker of the "Identitären Bewegung Österreich", the most prominent group of the Alt-Right in Austria.

Their channels amassed each around a quarter million views during the monitored timeframe. An additional 50,000 views were achieved through two videos that featured interviews with Gerald Grosz, but were uploaded to a separate channel (CCMediaTV). Taken together, these right-wing to right-extremist channels received more views than any party other than the FPÖ. Overall, this demonstrates the massive advantage the political right enjoys in Austria in terms of targeting potential voters directly and without the mediation of typical journalists.

Working with YouTube-data also demonstrated the difficulties in monitoring social media. A quiet change to the API on 24 September altered the data that was reported back from the site, resulting in differences in the data collected before and after 24 September. The view and interaction totals represent the totals up until 24 September. It was impossible to retrieve data for the last days before the election. This limited the possibility to investigate the impact of certain videos significantly. For

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[51] The only video attributed to the SPÖ has more than 100.000 views, but a total of just 20 interactions (16 likes and 4 comments). A typical YouTube video of that size would have thousands of interactions.

example, two videos, which strongly criticized the ÖVP and even attracted the attention of traditional media outlets were posted only on 22 September. [52] They had a large number of views from 25 September to 29 September, but were registered as almost not noteworthy in the analysis because the YouTube API only provided data up until 24 September. This underlines how independent research depends on the provision of reliable data by the platform providers.

4.6. Findings and further research

The analysis of the 2019 early parliamentary elections campaign confirms that the FPÖ still dominates this spectrum, in particular on Facebook and YouTube. Although the Greens followed by NEOS were the most active political parties in terms of overall posts and tweets, the level of FPÖ Facebook activity combined with their high number of followers and interactions made them by far the most dominant party on social media, with the SPÖ on second place. Sebastian Kurz solely stood out with the highest number of followers after the demise of HC Strache's Facebook page, but in comparative terms the ÖVP was a less active party on social media and ranked only third with interactions on Facebook. This mirrors roughly the spending on Facebook ads, where Greens and NEOS invested more than ÖVP.

The official spending on social media campaigns, as exemplified with expenditure publicised by the new Facebook Ad Library, amounted to €650.000 during the month prior to the elections, but actual spending was presumably much higher. The FPÖ's high-ranking place in social media was underlined by its investments in professional videos; hardly any other party invested at a similar scale and had similar interactions with followers on YouTube. However, it must be reminded that the campaign on social media, although highly influential, was not representative of the overall campaign. It reflected specific social circumstances that were not representative of the overall electorate and political debate, but took a dynamic and increasingly influential part in it.

With few exceptions, the rising significance of social media in electoral politics is not yet matched with significant independent monitoring and research. Experiences with this project revealed how difficult it is to receive reliable data of good quality from the biggest social media platforms. Sudden API changes, problems with the data provided, and restrictions in what is provided at all make election-related social media monitoring close to impossible in some instances. Based on the good data received as well as on the difficulties experienced with the collection of data from social media platforms, lessons learned can be extracted and shared as guidance for future social media monitoring exercises with a call for more transparency in form of better data access.

Further research should be encouraged into the relations between traditional and online campaigns, the relevance of relations of selected social media towards each other (in particular between visual and text-based contents), the question of overall campaign spending on social media, as well as on the regulatory and monitoring framework for online campaign spending. Future electoral reform discussions should take these findings and recommendations into account.

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[52] Aschenbrenner, Sophie: Wie zwei Videos vor der Wahl in Österreich die ÖVP zerstören sollen. 27. September 2019, and Österreichische Youtuber attakieren die ÖVP. 27. September 2019.

5. Problems with data from social network providers

The by far greatest hurdle in monitoring social media around the 2019 Austrian snap elections laid in getting access to the data. The data was collected from the Application Programming Interfaces (APIs) of Twitter, Facebook and YouTube directly. Whether social network services offer any data, in what quality, and whether it is free of charge is entirely up to them, as there is no legal framework in place. The main problem with APIs, therefore is that they can easily change, both in terms of access and in terms of capabilities and data-trust, without any specific explanation or brief by the platforms. This leaves analysts dependent on the social network service companies' willingness to cooperate.

The level of access and the quality of data varies over the three monitored social network services companies. This section summarizes the difficulties of working with public APIs and provides helpful pointers for future monitoring activities.

You Tube

YouTube, overall, is the best API to work with. It grants access to almost every video ever published on the platform, given that one uses keywords that are identifiable in the description or the title of the video, and provides meta-data such as on views, comments, likes, and dislikes. It is also possible to monitor specific channels.

There are also difficulties with YouTube. While the team dedicated to this analysis did not have problems in previous projects, there was an issue with the data collection for this project. Due to unannounced changes to the API multiple days of the research timeframe were lost and remained without data.

Twitter

Obtaining access to Twitter data is simple and straight-forward. Within 24 hours of applying for access, this project received API access. Twitter is generous with the amount of data that can be downloaded, and with the meta-data provided (everything from user names and IDs, to the source of the tweet). The Twitter API has a broad and thorough documentation. There are different experiences with the stability of the API. While VDSG reported the Twitter API to be fairly stable, there are reports of other institutions about issues, including the shut-down of access keys without notice, resulting in days of data holes which are difficult to recover.[53] Twitter rarely announces changes to API and server updates on their website, and if they do they do not communicate this via public channels.[54]

However, there were also bugs in the reported data detected, specifically with the retweet-count. As Twitter has not responded to a bug report, the error in reporting wrong retweet-counts continues to exist, and other projects working with Twitter data are subject to these errors if they leave them unaccounted for.

Facebook

During the last two years, the data access provided by Facebook has reduced dramatically. Access to all kinds of data has been blocked, and a useful free tool, Netvizz, was discontinued. Facebook works

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[53] This project was not affected by this problem.
[54] Twitter also offers a premium version of their API (GNIP API), which is Twitter-owned and does not have the same problems as the public API. GNIP is targeted at businesses; the costs involved make it inaccessible for not-for-profit initiatives.

with some partners in commercial transactions and provides limited content for selected scholars and researchers.

The team around wahlbeobachtung.org received API access under the new rules and is therefore in a position to testify how difficult it is to gain access to Facebook data. It took two months to get public pages approval, which is needed in order to download data from public Facebook pages. The application procedure is designed for Facebook user apps (the VDSG app, whose purpose is to download data from public pages, is a so-called server-to-server app), and with commercial entities in mind. The documentation for server-to-server apps was incomplete, and sometimes outright contradictory. Facebook developer support often seemed unaware of their own rules regarding server-to-server apps. The project team therefore had to overcome one rejection as well as numerous discussions with business support. VDSG finally obtained access through the intercession of a member of Facebook's Politics and Government Research Team in Berlin.

Moving past the application process, the Facebook API documentation is huge, poorly organized, incomplete, and not always up-to-date. Developer support exists, but it is slow (a bug report submitted in mid-September of 2019 was awaiting response at the time of writing[55]).

The Facebook API is also subject to frequent changes, sometimes announced just few weeks in advance. While this is better than with the other two platforms, where the announcement of API changes leaves more to be desired, and makes some adjustment possible in time before the change, these changes can involve both technical modifications, as well as access restrictions, and result in a constant need to update code. As a result, many off-the-shelf social media analysis tools have become obsolete in the past year. On the positive side, Facebook recently set up an Ad Library, which permits the searching of political advertisements made in a given time period. While this is a useful tool for monitoring political campaigns, it yet falls far short of its potential (see section 6.4).

Currently it seems problematic that data on public statements by politicians could lie solely in the hands of few social media platforms, who could permit or deny access to this public data at whim.

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[55] 1 December 2019.

6. Recommendations

Based on the lessons learned in monitoring social media during the campaign for the 2019 early elections in Austria, some recommendations for the government, industry[56], political parties, media and civil society be made, as well as recommendations for similar social media monitoring exercises.

Government

- To effectively promote a level playing field and transparency in campaigns, to protect the privacy of Austrian citizens and to safeguard electoral processes against manipulation and disinformation, the Austrian government should provide clear regulations, coherent implementation and independent oversight of political campaigns via social media and online platforms.

- Consideration could be given to establish clear guidelines regulating the use of social media data for election monitoring (academic research, human rights) purposes. Further, a common repository could enable Austrian researchers and civil society organisations to securely store and share their data, permitting that research studies can be validated by reproduction, that meta-analyses can be performed, and that the data can be used for the further development of tools and models.

- In order to strengthen and protect the integrity of elections the state could provide funding for research and oversight of political/electoral campaigns via social media platforms.

- To support policy-relevant research and to avoid civil society organizations limiting their scope of study for fear of overstepping their legal boundaries, the Data Protection Law (§ 9 DSG) should be amended to secure basic democratic information rights for all.

- To strengthen accountability of social media and online platforms there could be considerations to establish a clear and effective legal redress system regarding content published via social media.

- To improve the knowledge and awareness of voters about disinformation as well as other challenges of political campaigns via social media the state could accelerate political education initiatives, especially for young and first-time voters.

Social media and online platforms

- To enhance effective electoral campaign oversight and better detection and analysis of disinformation campaigns, social media and online platforms should give meaningful access to data to election observers and researchers in line with personal data protection rules.

- To foster collaborations with scientist and the public social media and online platforms should provide reliable access through APIs. This access should include public announcements of changes to the API before they occur, a documentation that makes working with the API more feasible, and user support to which bugs can be reported and questions be answered.

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[56] This follows a DRI suggestion (DRI, "Social Media Monitoring During Elections", page 33).

- The APIs of social media sites should be much more accessible, transparent, and not be reserved for commercial interactions. This applies especially for Facebook, which has been discontinuing, for the last two years, the access to almost every data available in the platform to independent researchers.

- To provide sound research and oversight of electoral/political campaigns social media and online platforms should provide better, more precise and more coherent data to accredited election observers and researchers.

- As currently many responsibilities lie with the social media and online platforms it could be considered whether watchdog organizations could have full and guaranteed access, especially to algorithms regulating political advertisements.

Political parties

- Political parties could consider a Code of Conduct for electoral campaigns with special emphasis on social media campaigning to agree on basic rules and a possible multi-party mitigation board in case any violation is brought to its attention.

Civil society & academia

- Civil society activists and academics could undertake further research into the regulatory and monitoring framework for online campaign spending, current data protection legislation to provide recommendations for further strengthening electoral integrity.

- Civil society organisations, think tanks and academic researcher could coordinate and exchange more to deepen knowledge and expertise about best practices, ongoing projects, lessons learned to strengthen oversight mechanisms of political/electoral social media and online campaigns.

Technical recommendations for research

- To improve the performance of sentiment analysis and topic modelling tools, posts from media and journalists should be separated from the rest of the dataset (politicians and political parties).

- To achieve a manually coded dataset that can be used for supervised algorithms, a high number of codings are necessary. These can be averaged to improve the performance of sentiment analysis tools.

- To provide research of high quality a thorough data check of extracted data is necessary. Moreover, the platforms should improve the proper channels of interaction with researchers working with the public APIs, so as to verify data gaps and technical issues as bugs from social media APIs are not just possible but likely.

- Ensure that the responsibility for the data and the applicable GDPR provisions are clear from the outset.

7. Key references & further readings

Amnesty International: The Barometer of Hate – European Elections 2019, 2019.

Brodnig, Ingrid (Hg.): Digitalreport. Die politische Debatte auf Facebook. Digitalreport, 2018.

Brodnig, Ingrid und Hammer, Luca: #ep2019 – Die Digitalen Parteistrategien zur Europawahl 2019 – Länderbericht Österreich. Friedrich Ebert Stiftung (FES), May 2019.

Democracy Reporting International (2019a): The EU Framework Against Disinformation: What worked, What changed and the Way Forward. August 2019.

Democracy Reporting International (2019b): Guide for Civil Society on Monitoring Social Media during Elections. Funded by the European Union, September 2019.

Election-Watch.EU (2019): Election Assessment Mission (EAM) European Elections 2019 Final Report. September 2019.

Freedom on the Net: The Crisis of Social Media, 2019.

Grohma, Paul/ Lidauer, Michael/ Rabitsch, Armin (2018): Vorschläge für eine Reform des österreichischen Wahlrechts; 26, 1, 13–24.

Innovative Citizen Participation (ICP): A Study on Innovative Approaches to Democratic Participation in Restrictive Environments. July 2019.

8. Acknowledgements – about us

Under the leadership of wahlbeobachtung.org, and in partnership with Democracy Reporting International (DRI) and MEMO98, an international team was assembled to monitor the electoral campaign on social media campaign during the 2019 early parliamentary elections in Austria.

Wahlbeobachtung.org[57] is a non-partisan, independent and not-for-profit organization of Austrian election observers and experts with international election observation and electoral assistance experience from over 50 countries. In 2013, the initiative has started to observe and assess Austrian electoral processes with the intention of pointing out deviations from international obligations and best practices. Through recommendations and advocacy work, wahlbeobachtung.org aims to contribute to the further development of electoral processes and to strengthening political culture. During the 2019 European Parliament elections wahlbeobachtung.org organized the first ever comprehensive Election Assessment Mission under its European label Election-Watch.EU.

Democracy Reporting International (DRI)[58] is a non-partisan, independent, not-for-profit organization registered in Berlin. DRI promotes the political participation of citizens, accountability of state bodies and the development of democratic institutions world-wide. It helps support local ways of promoting the universal right of citizens to participate in the political life of their country, as enshrined in the Universal Declaration of Human Rights (UDHR) and the International Covenant on Civil and Political Rights (ICCPR). DRI has become a pioneer in election related social media monitoring.

MEMO98, established in 1998 to observe elections in Slovakia is specialist media monitoring organization with extensive experience of delivery media analyses on behalf of international institutions as well as technical assistance to civil society groups.[59]

The Vienna Data Science Group (VDSG)[60] is a non-profit association promoting knowledge about data science. The VDSG connects data scientists in Europe and all around the world. It was founded in 2015 with the goal of establishing a platform for knowledge exchange between data professionals from research and industry, data enthusiasts and other interested parties, enabling them to seize opportunities and gain an understanding of the risks lying ahead. With its data4good initiative, VDSG applies data science for positive social impact and aims to make data science and AI tools useful and accessible to civil society.

The Department of Public Policy Analysis is an applied social research center of the Fundação Getulio Vargas, which aims to promote innovation for public policies through the use of technology, transparency, and data analysis. Created in 2012, FGV DAPP has consolidated itself as a reference in Brazil in research and analyses on the use of social networks, open data and interdisciplinary knowledge. FGV DAPP has developed the Digital Democracy Room to monitor the public debate and impact of disinformation, threats and illegitimated practices on social networks during the 2018 elections in Brazil. Since October 2019, a new Digital Democracy Room has been launched by the department to monitor the political debate in Brazil — for the regional elections of 2020 — and in other Latin American countries, partnered with organizations in Argentina, Colombia and Peru.[61]

This report is the result of a collaboration between different teams with various skills and approaches to elections and their observation, social media, and data research. Armin Rabitsch, Michael Lidauer

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[57] Wahlbeobachtung.org (Election-Watch.EU)
[58] Democracy Reporting International (DRI)
[59] MEMO98
[60] Vienna Data Science Group (VDSG)
[61] FGV DAPP Digital Democracy Room

Table of abbreviations

AI	Artificial Intelligence
API	Application Programming Interface
DRI	Democracy Reporting International
DSB	Datenschutzbehörde – Austrian data protection authority
DSG	Datenschutzgesetz – Data Protection Law
ECJ	European Court of Justice
FGV DAPP	Fundação Getulio Vargas, Department of Public Policy Analysis
FPÖ	Freiheitliche Partei Österreichs – Austrian Freedom Party
FOG	Forschungsorganisationsgesetz – Research Organisation Act
GDPR	General Data Protection Regulation
ICCPR	International Covenant on Civil and Political Rights
LDA	Latent Dirichlet Allocation
ÖVP	Österreichische Volkspartei – Austrian People's Party
SMM	Social Media Monitoring
SPÖ	Sozialdemokratische Partei Österreichs – Social Democratic Party of Austria
VDSG	Vienna Data Science Group

Annex

Facebook und Twitter followers as of 20 June 2019[62]

	Facebook	Twitter
Politische Partei / Politiker		
Sebastian Kurz (ÖVP Spitzenkandidat)	804,000	345,000
Heinz Christian Strache (FPÖ ex-VC)	798,000	61,000
Norbert Hofer (FPÖ Spitzenkandidat)	339,000	21,000
Alexander Van der Bellen (Präsident)	307,000	no
Rendi Wagner (SPÖ Spitzenkandidatin)	97,000	12,000
Herbert Kickl (FPÖ)	83,0000	no
Beate Meinl Reisinger (NEOS Spitzenkandidatin)	42,000	20,000
Peter Pilz (Liste Jetzt Spitzenkandidat)	36,000	51,000
Werner Kogler (Grüne Spitzenkandidat)	18,000	22,000
ÖVP		no
FPÖ	125,000	no
SPÖ	119,000	29,000
Grüne	71,000	29,000
NEOS/ Das Neue Österreich		29,000
Medien:		
Zeit im Bild (Hauptnachrichtensendung ORF)	538,000	no
Der Standard (links liberale Tageszeitung)	321,000	306,000
Die Krone (Boulevard)	319,000	37,000
Österreich (Boulevard)	71,000	no
Heute (Boulevard, Gratiszeitung Metro)	220,000	13,000
Die Presse (konservative Tageszeitung)	191,000	53,000
Kurier (konservative Tageszeitung)	96,000	99,000
Falter (links liberale Wochenzeitung)	62,000	49,000
Profil (Wochenzeitung)	118,000	157,000
ORF (öffentlicher Rundfunk)	140,000	37,000
Journalisten:		
Armin Wolf (ORF ZIB2 Chefredakteur)	299,000	424,000
Florian Klenk (Falter Chefredakteur)	63,000	231,000
Ingrid Thurnher (Chefredakteurin ORF III)		211,000
Lou Lorenz (ORF)		118,000
Corinna Milborn (ProSieben.SAT1.PULS4), TV		122,000
Martin Thür (ORF anchorman)		67,000
Sonstige		
Felix Baumgartner (close to FPÖ)	1,300,000	
Andreas Gabalier (Austrian musician FPÖ symp)	846,000	
Jan Böhmermann (anti-FPÖ TV Comedian)	1,000,000	

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[62] The data has been extracted from Facebook and Twitter accounts by wahlbeobachtung.org.

Notes on the legal framework for media monitoring in Austria

(i) The Research Organisation Act ("FOG"), which transposes the research-opening clause of the GDPR into Austrian law as well §7 of the Data Protection Act ("DSG", research exemption) are not applicable. This because either no personal data as results may be provided (DSG) or the publication of personal data would not be covered (FOG), which both were intended, because the concept was to interpret the reaction on political messages of single politicians and how the audience reacted on that.

(ii) Legitimate interest (Art 6 Abs 1 lit f DSGVO), and the aspect that the special categories of personal data have been published by the subject (Art 9 Abs 2 lit e GDPR), could generally resemble a legal basis, if the interest of wahlbeobachtung.org – that is, to contribute to transparency in the electoral process – overrides the personal interest of politicians in particular, which could be assumed to be the case. However, if the data analysis creates new sensitive data, which therefore have not been published before, Art 9 Abs 2 lit e GDPR cannot be applied. Such sensitive data would be the result of sentiment analysis.

Eventually, (iii) the exemption for media (Art 85 GDPR) remains. Art 85 stipulates, that the "*Member States shall by law reconcile the right to the protection of personal data pursuant to this Regulation with the right to freedom of expression and information, including processing for journalistic purposes* (…)." Austria implemented a section to protect freedom of expression and information in its Data Protection Act (§9 (1) DSG), however the exemption doesn't cover processing for "journalistic purposes" as provided in the GDPR, but only for "journalistic purposes of a **media undertaking** or a **media service**", which means the privilege is exclusively reserved to corporate media. In the *Satakunnan Markkinapörssi and Satamedia* case,[63] the European Court of Justice (ECJ) decided that the media privilege also includes "*citizen journalism, which pursues the purpose of one-sided or reciprocal communication of ideas, opinions and information*". According to literary voices, the narrow interpretation of the media privilege in §9 DSG is contrary to the GDPR. The Austrian data protection authority ("DSB", DSB-D123.077/0003-DSB/2018), which interpreted § 9 (1) DSG in accordance with EU law, has also endorsed this view.

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[63] Judgment of the European Court of Justice (Grand Chamber) of 16 December 2008; https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A62007CJ0073.