Online Political Communication Research Methods [1]

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Abstract: *The authors explored the research methods of the manifold studies on online political communication published in nine selected scientific journals over an 8-year period stretching from the beginning of 2009 to March 2017 and systematized the results into a comprehensive, methodological, "state-of-the-art" report. The main findings are that the most frequent method of researching online political communication is the quantitative or qualitative content analysis. Still, recurrent is the combination of methodological approaches, where the quantitative and qualitative techniques complement each other. Moreover, the research of political communication in general, but online especially, has become more an interdisciplinary field. Yet the collection and analysis of data from new media and social networks requires more and more advanced expert skills.*

Keywords: *political communication, new media, research methods, social networks, web 2.0*

Introduction

Political communication research has had a prominent position in the academic fields of both communication studies and political science. In recent years the field has changed significantly as continued technological advancements have contributed to the expanding boundaries of political communication. The

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onset of the internet as a common communication channel may be seen as a "transformational moment in media technology, with implications for the practice of politics" (Mirer – Bode 2015: 454); or simply an "online revolution" (Johnson 2011) that has begun a new era in political communication, the so--called "digital age," in which we are moving rapidly from candidate-centred to citizen-centred campaigns and from mediated to "electric communication" (Gronbeck 2009: 229).

Vast advances in information and communication technologies (ICTs) have been major stimuli for, and one of the most influential driving forces behind, the development of political communication research and methods. ICTs have raised the fundamental issue of the necessity of rethinking what we study and how we do research on political communication in the context of the new media. While scholarly research exploring the use and the role of ICTs has expanded since 2004, especially in the past few years, there is a growing body of scholarly research focusing on the role and use of social media platforms, especially social network sites (particularly Facebook) and microblogging applications (particularly Twitter), in political communication.

Objectives, methods, and research sample

This study builds on the tradition of essays reflecting the state of knowledge and striving to systematize the trends within a specific research field (see Tomasello et al. 2010: 532). However, although we can encounter several inspiring conceptual-theory studies on political communication in the new media environment (which we will refer to as "online political communication"), orientation towards the methodological aspects of the examined topics is infrequent. Thus, the overarching goal of this paper has been threefold: to analyze the latest advances in the methods and analytical techniques in the contemporary online political communication research, to discuss new trends and tools equipped, and to systematize the results into a comprehensive methodological "state-of-the-art" report. To this end, the analysis is guided by the following research question:

RQ: *What are the dominant research methods of online political communication (articulated in selected journals)?*

We built this study on an extensive article review to explore the research methods used in selected scholarly articles on online political communication being published both in American and European journals. The preliminary analysis was conducted by employing Google Scholar which led us to include nine relevant scientific journals in our research (see Table 1); encompassed were both primary journals for political communication (like *Political Communication* or *The International Journal of Press/Politics*) and journals dealing with the issue within their broader thematic focus (e.g. *Party Politics* or *New Media & Society*).

Table 1: Journals included in the research sample

Journal	No. of issues per year	IF$_{5years}$	IF$_{2016}$	SJR
European Journal of Communication	2009–2012: 4 issues, since 2013: 6 issues	2.000	1.408	1.398
Information, Communication & Society	2009–2011: 8 issues, 2012–2014: 10 issues, since 2015: 12 issues	3.617	2.692	1.802
Journal of Information Technology & Politics	4 issues	*ESCI*	*ESCI*	1.212
Journal of Political Marketing	4 issues	*ESCI*	*ESCI*	0.247
New Media & Society	2009–2014: 8 issues, since 2015: 11 issues	4.978	4.180	2.084
Party Politics	6 issues	2.418	1.846	1.754
Policy & Internet	4 issues	*ESCI*	*ESCI*	1.067
Political Communication	4 issues	2.893	2.467	2.211
The International Journal of Press/Politics	4 issues	2.870	1.523	1.982

Because scholars have increasingly focused on online campaigning since 2008 (Vergeer 2012: 11), we concentrated our attention on examining the selected journals over an 8-year time frame stretching from 2009 to March 2017. Such a period enables us to capture the most recent development of the discipline. Based on manual keyword analysis, we chose a total of 175 studies (see the Appendix) corresponding to the objectives of this paper. Subsequently, we analyzed each article in the sample for its research methods. Each article was counted only once, although numerous scholars combined two or more research methods.

Table 2: Distribution of the number of articles in the sample over time and journals

Journal	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
European Journal of Communication	0	1	2	0	2	2	2	3	0	**12**
Information, Communication & Society	1	0	3	0	9	5	4	2	3	**27**
Journal of Information Technology & Politics	5	7	2	4	7	7	10	7	0	**49**
Journal of Political Marketing	0	0	4	2	2	1	2	3	0	**14**
New Media & Society	2	2	1	4	8	4	3	9	0	**33**
Party Politics	0	1	0	0	3	0	1	3	1	**9**
Policy & Internet	0	1	3	1	3	0	1	2	0	**11**
Political Communication	0	1	2	0	1	0	1	1	5	**11**
The International Journal of Press/Politics	0	1	0	0	1	1	0	5	1	**9**
Total	**8**	**14**	**17**	**11**	**36**	**20**	**24**	**35**	**10**	**175**

Figure 1: Distribution of the total number of articles in the sample over time
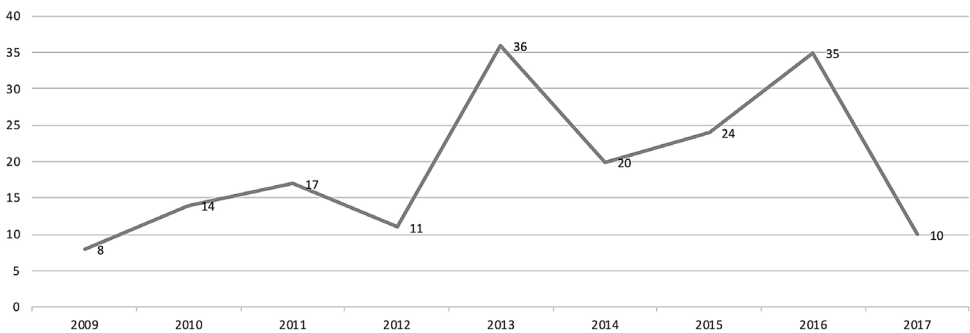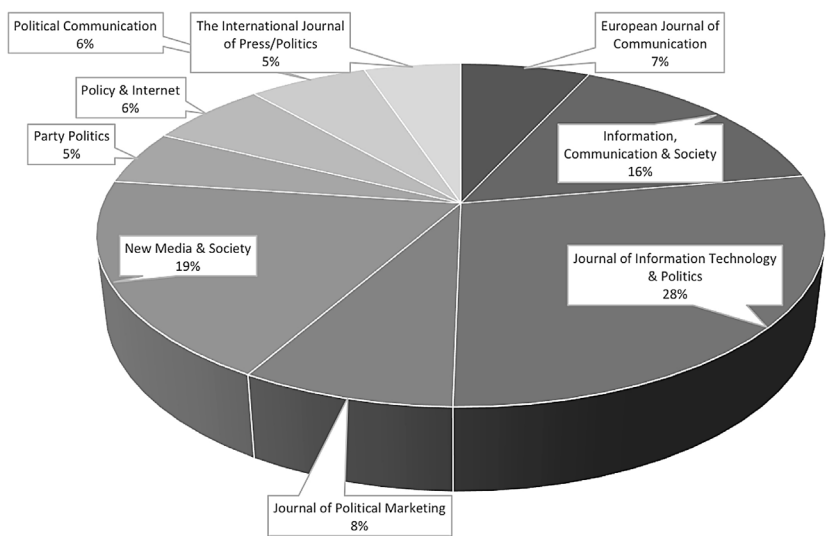

Figure 2: A composition of the research sample regarding the shares of articles in particular journals

Studies are, for the sake of clarity, classified according to the prevailing research method. Although the research methods are frequently combined, organizing the scrutinized studies according to the predominant concepts appears to allow for better systematization. Following segmentation is thus a supportive aspect, arranging examined articles with regard to which researched methods are preferred, what topics are researched and whether the studies are working with an existing dataset or are creating new ones.

The rest of the text is structured as follows. First, the new media under review are briefly introduced. The subsequent section presents and discusses the main findings of our research, including both a concise outline of the most frequent methodological approaches and techniques of online political communication research and specific software tools enabling analysis of data from websites, social network sites, weblogs etc. In discussion, attention is also paid to the limitations of the research of online political communication in general. The paper concludes with an outlook for further research.

New media under review

Within the field of political communication research, the term "new media" is being applied to various media based on digital coding, and characterized by its interactivity, hypertextuality, and communication taking place in a virtually simulated environment of the internet (see Lister et al. 2009: 13). Although there is a plethora of these media, the research of political communication focuses primarily on the following media (ordered alphabetically):

1) blogs, "the twenty-first-century version of a diary" (Hendricks – Denton Jr. 2010, 9), dating back to the 1990s; their purpose is mainly to share content, most commonly in a text form of journal entries, usually written by one author and with the addition of pictures and hyperlinks; they allow for the implementation of interactive and connective functions, the most important being commentaries posted below the articles;

2) Facebook, founded in 2004 as an internet platform with a private membership for Harvard University students (and from 2006 for the general public), is the social network with the most active users – more than 1,87 billion (Statista.com 2017); Facebook allows users to share a variety of content including unlimited text posts, photos, videos and links; additionally, it offers many different tools and applications such as online mini-games, fund-raising tools or targeted advertisement;

3) Twitter, originated in 2006, is an online news and social network allowing users to post and share short messages (originally limited to 140 characters and from November 2017 to 280 characters), which is used by approximately 317 million users (Statista.com 2017); in contrary to Facebook, Twitter allows following any users, if the account is not protected;

4) YouTube, founded in 2005, enables users to watch videos whose wide range of content includes everything from music to television to debates and even political and educational topics; although it is necessary to register to post videos, watching them is practically unregulated; since YouTube is connected to commercial activities of Google, posting content may be a profitable activity;

5) web pages, through which political parties can present themselves, do not serve only as informational sources anymore, they facilitate microblogging,

opinion polling, organization of gatherings and presentation of audio-visual content, parties can create members-only sections, interconnect their web pages with social media sites and allow for newsfeed subscription.

Although it could be argued whether blogs and internet pages should be considered "new media," for this study we have included them in our research sample as the authors of the examined studies treated them specifically as new media or focused on features linked with new media and web 2.0 (commentaries, links, audio-visual content, linkage with social media etc.). The reasoning behind this is that textual content on blogs or informative aspects of web pages are more associated with "traditional media." Nevertheless, the discussions in the comment sections, employment of web 2.0 features, and the interactive and connective aspects of this platform are definitely part of the new media.

Methods of researching online political communication: findings

Our research confirmed the earlier conclusion of Graber (2004) that, despite the technological advancements and the gradual changing of research tools, the focal point of political communication research is still about what Lasswell (1927) put in ninety years ago, i.e. who says what, in which channel, to whom and with what effect (Graber 2004, 46). Apparently, not even the arrival and more extensive use of new communication channels, in the form of new media, could change that.

What follows is a brief introduction of the most frequently employed research methods when analyzing online political communication. The most frequent method is the content analysis (in many variations and both in its qualitative and quantitative form). However, the methodology has begun a transformation towards the employment of combined approaches and utilizing complex analytical software tools, especially in the last couple of years.

Content analysis

Content analysis focuses mainly on the exploration of the content aspect of communication through the identification of specific characteristics of messages. It allows for the depiction of the transformation of media content over time. This method is widespread, especially when researching the way in which the new media are being used for political communication and the frequency and intensity of their utilization during political campaigns. By means of content analysis, it is possible to analyze a wide array of topics, from the impact of the new media on political participation, through the democratization aspects of online communication, to issues connected with the exploration of the influence of political communication, political leadership and the flow of political communication itself.

Quite often, content analysis is applied to the research of political communication on social media platforms, especially Facebook (Geber – Schrer 2015; Larson 2015; Borah 2016) and Twitter (see e.g. Graham et al. 2013; McKelvey et al. 2014; Ceron 2017). With Twitter, the study of a certain *hashtag* (#) is also prominent (see e.g. Small 2011; Christensen 2013; Raynauld – Greenberg 2014). Content analysis is also applied when researching the web pages (see, e.g. Jackson – Lilleker 2009; Vaccari 2013) and their interactive aspects (van Noort et al. 2016) or political blogs (see e.g. Meraz 2015). However, the research of the content, which has been published on web pages and in the commentaries on blogs, is less frequent.

Overall, researchers apply content analysis above all the textual messages on social media networks, while research focusing on audio-visual content is less prevalent. Gerodimos and Justinussen (2015) included visual posts, but they analyzed only the text part of the visual content (titles or word messages in pictures, sketches, or drawings etc.) and some explicit visual aspects (e.g. the appearance of specific figures in pictures). Edgerly et al. (2013) took into consideration more detailed characteristics of visual content; they conducted an in-depth analysis of visual posts, including photos, charts and infographics, videos, links and posters with text. Lee and Cambell (2016) carried out a long-term analysis of the organizational and persuasive appeals of online digital posters in the UK. Audio-visual content is in most cases studied when it comes to the analysis of YouTube (see, e.g. Church 2010; Klotz 2010; Vesnic-Alujevic – Van Bauwel 2014), although this does not apply absolutely. Nevertheless, only a few of the studies focused on the structural aspects of this type of political communication.

While researching the online political communication, it is important to analyze not only how many users will read the content, but also how powerful these messages are, or how many users will share it with their followers. To this end, Bode and Epstein (2015) employed a sophisticated and daily updated platform *Klout* that ranks social media users according to their online social influence.

Most frequently, scholars choose to explore and compare a smaller number of cases in the context of one country or region. The analysis of a more significant number of countries is less common since more extensive content analysis can be technically challenging as well as time-consuming. Nevertheless, some studies do compare a larger number of cases or states (see, e.g. Ceron and Curini 2016).

As an objectionable aspect of content analysis, we could point out the tendency to focus extensively on the individual content, instead of the context in which the political messages are delivered. Moreover, the possibilities for automatized processes and implementation of specific software tools are still somewhat sporadic. More extensive employment is being complicated as such software is tailored for the English language, making the possibility of research

conducted in other languages limited to manual or more qualitative-oriented analyses or technically challenging and expertly demanding.

Surveys and interviews

The second most frequent research method is through interviews and surveys, which allows for the exploration of not only active political participants but also individuals with a more passive approach to political communications ("consumers"). Crucial for this kind of research is the use of internet surveys, which is a very effective method of data collection.

In particular, interviews make it possible to explore the motives, experiences, and thought processes of the participants in political communication. Direct questioning through interviews enables the researchers to understand the deeper meanings, opinions, and beliefs of the participants. Verbal communication between the researchers and the respondents, however, depends on their need to share not only a common language but the same understanding of terms that are being used as well. Nevertheless, this qualitative approach makes it possible to understand the researched topic in more depth, including unveiling the motivations for online political communication, as well as its impacts (Johnson et al. 2008: 340). Another useful approach in this line of research is the employment of focus groups (see, e.g. Gustafsson 2012)

Very often, the data from surveys and questionnaires complement the outcomes from the interviews, since they allow researchers to acquire information through standardized sets of questions to explore the reactions of a selected sample of a population. Surveys can be conducted online, on the telephone, or in person, as well as delivered via e-mail (Johnson et al. 2008, 302). While many scholars use previously conducted surveys, for instance, Skovsgaard and Van Dalen (2013) created their own sample survey. Sample surveys like these are then commonly combined with other research methods (see, e.g. Druckman et al. 2010; Ceron – Curini 2016; Karlsen – Enjolras 2016). Questionnaires are also employed frequently while conducting experiments or as a preliminary source of information for future research. Researchers, most frequently, then process the data collected through these analyses by employing some form of a regression analysis.

Network analysis method

Less often, we encounter network analysis of data (see, e.g. Larsson – Moe 2012; Ausserhofer – Maireder 2013; Himelboim et al. 2013; Bentivegna – Marchetti 2015), although this approach has gained more attention lately since it makes it possible to identify the key participants and clusters within a more extensive number of strategic locations through graphic visualization. This type of analy-

sis focuses mostly on the relationships between the researched units; it explores the connections between individual actors and their mutual relationships in the context of new media (especially social networks).

This type of analysis aims to point out the interconnections of users or published content. The relations between actors are then typically depicted with visualization tools, showing different nodes and their connections (edges). This method is significant for research on both inter-party and system-wide relationships, as well as for the research on the impact of political messages on the social networks or the mutual relationships between actors (see Garrett et al. 2012: 215).

Statistical analysis method

To research the adaptation of political parties to online communication, statistical analysis focusing on the quantitative exploration of the structures of the new media (i.e. the web 2.0 features on web pages), is the most frequently used method. This approach, often misleadingly called the *structural analysis*[2], is based on the collection, examination, and presentation of a larger portion of data with the aim of pointing out specific prevailing trends or patterns. When it comes to the research on the online political communication, this approach is often applied when conducting quantitative research on structural aspects, which is not concerned with the message itself, its content, or the mutual relationships between researched units.

Russmann (2011) analyzed the web pages of political parties from the structural standpoint and from the user perspective and identified almost 100 functions for online campaigning. Schweitzer (2011) examined web pages over more extended periods, focusing on quantitative structural (but also some content) aspects of the web pages of German political parties, addressing the utilization of web 2.0 tools and functions by individual parties, as well as the levels of personalization and negative campaigning. In addition, Schweitzer researched structural aspects also in the context of formal and function design, i.e. informational, mobilizing, participatory and presentation functions.

Time series analysis

For prediction purposes, the analysis of time series is the most often encountered method, as the prevalent logic of the research lies in the analysis of characteristics development over time. Time series analysis thus represents a way to analyze data with the purpose of the extraction of statistics, characteristics, and trends. This examination allows for the prediction of future developments, in the case

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2   This term however refers properly to an engineering analysis of structures such as bridges, buildings etc.

of online political communication, for example, the prediction of election results. Although this method focuses more on the analysis of data that has been collected beforehand, it constitutes an essential line of research, since it covers a diverse spread of methodological concepts that these time series can analyze.

Time series analysis has been employed for example by Vergeer and Franses (2016) to study in real-time reactions on Twitter concerning a TV debate broadcasted by a Danish TV channel and examine how a set of analyzed phenomena (in this case political issues) develop over time. Authors themselves point out certain limitations of this research though, for instance, the risk of subjective results, as the audience of these political debates as well as the users that comment on these debates on Twitter is somewhat specific demographically. Time series analysis was also used by Nahon et al. (2011) who researched the dynamics of viral information in the blogosphere, or Franch (2013) when researching the prediction of election results in the 2010 UK parliamentary elections.

Experiments

Although quite rare, experiments are also being conducted to explore online political communication. Experiments certainly do have their merit, since they make it possible to test different effects and impacts of various forms of communication as well as examine the influences and effects of particular controlled aspects of political communication towards selected participants, their immediate reactions and preferences.

The experimental approach was employed by Park (2015) when studying the effects of negative political messages on the behaviour and emotional-cognitive reactions of Twitter users during the 2015 local elections in South Korea. Householder and La Marre (2014) conducted an experiment when researching homophily in relation to the connection between the personal perception of trustworthiness of a candidate's resources and the intention to take part in the political support for this candidate. Parkin (2012) researched how the presentation of information with multimedia components influences the perception of content and voting preferences of selected users who visited a web page of a fictional candidate. Towner and Duolio (2011) applied the experimental method to research how web 2.0 functions and tools affect political opinions (the trustworthiness of selected media and the probability of election attendance relating to different types of political communication to which the user is exposed).

Automated Sentiment Analysis

An interesting and innovative approach to the analysis of political communication is automated sentiment analysis. Although quite frequently applied (see, e.g. Aragón et al. 2013; Dang-Xuan et al. 2013), this research method is still in

its infancy (Vergeer 2012: 15). However, we will most likely see its development over the next few years.

Sentiment analysis adopts automatized procedures based on predefined ontological dictionaries. This, however, is a cause for some limitations too. This analysis can have issues while identifying ironic or paradoxical statements; it can also fail when distinguishing strategic thinking or when working with specific language nuances, like the usage of jargon or neologisms (Ceron et al. 2014: 343). On the other hand, the currently employed algorithms are sufficiently able to distinguish the strength of positive or negative emotions in short and informal texts. They can adequately reflect word negations, words that strengthen a meaning, amplifications, typos or other potentially problematic aspects (Dang-Xuan et al. 2013: 802).

One possibility for overcoming the still present shortcomings of this method of sentiment analysis is a semi-automated two-step method; so-called supervised aggregated sentiment analysis (SASA). In the first step human coders, who can easily filter spam messages and evaluate subtle language nuances, read and code a small research sample, from which a training set is created. In the second step, the SASA algorithm can factor in the information delivered by human coders and analyze the remaining data (Ceron – d'Adda 2016: 7).

Multi-method approach

A recurrent trend in the research of online political communication is the combination of several methodological approaches, where the scholars choose to employ quantitative and qualitative techniques in a complementary way. Combining methodological approaches allows for mutual comparisons of data, and it can help to verify the results or to supplement the quantitative results with qualitative examples. While the more substantial portion of the research is primarily based on one methodological concept, to which a complementary technique of data collection and/or analysis is chosen, more and more often we encounter studies that are *a priori* conceptualized as multi-method. A wide array of these studies assumes that the study of "hybrid media" calls for the employment of "hybrid methods" (Freelon – Karpf 2015: 391).

These studies strive to overcome certain hindrances of particular research methods by combining various quantitative and qualitative techniques. Since it is necessary to take into consideration the inter- and intra-platform discrepancies between different types of new media, choosing appropriate methodological approaches concerning the structures, function, and types of shared content across these new media, consciously combining distinct techniques while conducting a multi-method is, therefore, imperative.

Magin et al. (2017) combined the quantitative content analysis of Facebook profiles of German and Austrian political parties with qualitative semi-

-structured expert interviews with party secretaries and communication strategy, to explore how and why parties use Facebook (if they utilize it for mobilization, interactive, or informative purposes). Enli and Skogerbø (2013) combined the method of content analysis with interviews when they conducted an explorative qualitative study researching the employment of Facebook and Twitter in political communication during Norwegian elections. A broad array of methods was utilized by Chen and Smith (2011), when exploring the patterns in the adoption of new media by individual party candidates. They combined the content analysis of web pages of political parties with the analysis of campaign videos, as well as a quantification of mentions of party leaders on blogs, and a structural online questionnaire for individual candidates covering their employment of new media in campaigns. They also conducted semi-structured interviews with party personnel to elaborate on the logic behind the selection of media channels and campaign strategies. Koc-Michalska et al. (2014) used quantitative content analysis of candidate webs and pre-election questionnaires and then employed the Poisson regression model to analyze the data when exploring both the supply and the demand in the communication process.

Utilization of the specific software tools

Since social media and the functions of web 2.0 became a standard tool of political campaigning, specific software has become indispensable for scholars focused on the topic of online political communication, particularly for conducting quantitative-oriented research. Modern technologies allowed for processing and analysis of large quantities of data, which are produced by the new media and broaden the thematic possibilities of political communication happening online.

One crucial part of the studies mentioned above are undoubtedly the tools that enable the collection of data from social networks, blogs, and webpages according to specific criteria; so-called *crawlers* or *mining applications* facilitate the obtainment of the content and the relevant metadata as well. To download data from Twitter or Facebook, the Application Programming Interface is most commonly used, as well as programs like *TwapperKeeper*, *Tweepy,* or *Netvizz.* To gain data from YouTube, applications such as *TubeKit* or *ContextMiner* are suitable. More than just collecting and downloading the metadata, analysis is also possible through multifunction programs, such as the monitoring and analytical platform *Crimson Hexagon* (which can be used for both text and visual analysis), Twitter oriented software *DiscoverText*, which allows the clustering of data (posts) with identical content, or *The Archivist*, open-source software for sorting, classifying, and organizing the collected data.

The advancement of both the quantitative and qualitative content analysis is facilitated by the ICTs. For instance, programs like *QDA Miner* allow ana-

lyzing the transcripts of interviews or focus groups, documents, articles and even visual content like pictures or photos and features integrated tools for analysis of statistical data and quantitative content analysis as well. Patterns in the communicative behaviour of participants in a specific online community can be analyzed and visualized by the automated textual analysis through platforms like the online software *Netlytic*. The ICTs also play a vital role in the sentiment analyses and automated text analyses, *SentiStrength*, enables, for instance, automated analysis of up to 16,000 texts in one second. In contrast, *Wordfish*, dedicated to extracting political positions from text documents via word frequencies analysis, makes it possible to access the degree of ideological heterogeneity. Advanced visualization software is also being used with an increased frequency; tools like *Nephi* or *NodeXL* are a crucial part of the network analysis, making graphic demonstration and representation possible not only for the researched data but for their mutual connections as well.

Discussion of findings

The generalized conclusions must be balanced with the general limitations of the dataset. First, we need to point out that the presented study is based on the analysis of "only" 175 studies published across 9 journals since 2009. There are, of course, many other journals within the broader field of media, communication, and political studies publishing articles on this issue. Second, the dataset consists "only" of journal articles, which might be more suited to empirically oriented publications over an elaborate theoretical discussion than other kinds of publications, such as monographs. Even though the authors of this study believe that the research sample adequately represents the current trends in the research of online political communication, depicting the most important techniques and methods used by the scholars, it must be noted that any possible generalizations emerging from this study would mainly be applicable to this research sample and must be drawn with caution.

Besides, when accessing the methodological aspects of the research of online political communication, it is crucial to pay attention to the possible limitations and drawbacks, which are linked to this research and which should be taken into consideration when choosing suitable research methods. Above all, it is necessary to take into consideration the technical and the factual differences between specific new media platforms that are being researched (i.e. the *inter--platform* dissimilarity). These platforms have distinct characteristics; they allow for different connective, communicative, and expressive functions and they differ in the provided information about its users and profile details, as well as in the form and structure of shareable content. As a result, possibilities for research also vary and not all the new media are mutually comparable due to their structure, content, and/or the data they provide. Simultaneously, it is

also crucial to factor the structural and content differences within one specific platform (i.e. the *intra-platform* discrepancies) into the research design. For instance, on Facebook, it is possible to create private as well as public profiles, different group and community pages, but each of them is endowed with different settings and specific functions, making the comparison between them arduous (Mascheroni – Mattoni 2013: 226).

The limitations of research also emerge from specific aspects of new media. In the case of Facebook, the research is being limited by privacy settings, as the private accounts allow users to block off specific posts, photos, and other content features from the public. Although the public profiles usually do not employ such privacy settings, this can still profoundly affect the collection of data about commenting users. Generalization of the research result is therefore very limited, if not impossible. Although audio-visual posts (mainly photos and videos) are an integral part of political communication in general, this diversity of shareable content may also constitute a possible complication, due to the associated technical difficulties. For this reason, most researches focus primarily on text-based content (Larsson 2015: 470).

On the other hand, in the case of Twitter, the security and privacy settings are not as much of a complication, even though on Twitter it is possible to restrain people from following an account with an authorization requirement. Yet, generalizing the research outcomes is equally challenging due to the particular demographic structure of Twitter users. In addition, the level and context of analysis of Twitter posts can be problematic, since possible interactions on Twitter vary from @-answers, re-tweets, and re-tweets with comment to different types of audio-visual content that can be shared. If the data is collected through Twitter API, specific information about the type of the posts do not have to be ascertained, and the content can be researched as individual posts as well as in the context of threads.

The issue of selecting data and choosing the level of analysis could become apparent when analyzing weblogs as well. Since there is no universal or central registry of blogs, when selecting relevant cases, the researchers must use one of many databases, whose ranking of the blogs could be based on different criterion. For analyzing the interactive functions of blogs and web pages, it is also necessary to take into consideration that the discussion and comment sections could be subjected to the approval of the author and the comments could be monitored and filtered.

In the case of YouTube, a possible drawback arises from the anonymous setting of this platform, since all the usernames are *de facto* pseudonyms, whose usage is not restricted in any way. Thus, it could be difficult to identify (particularly when researching cases with which the researcher is not acquainted in much detail) which account is the official channel of the researched political subject (even more so when it is not uncommon for parties to have local branches with

their channels or specific channels dedicated to different campaign purposes). Nevertheless, it is usually possible to distinguish the official accounts on YouTube as well as on Facebook and Twitter through the links shared on the official web pages of the political subject under review. Simultaneously, YouTube is quite an ephemeral channel of communication, since without third-party tools it is not possible to download YouTube videos, and these can be taken down any time as well, which complicates efforts for systematic data collection (Church 2010: 140).

This ephemeral aspect of new media is relevant for other platforms as well though, for instance, with a retrospective exploration of political communication (e.g. when researching political campaigns of already finished elections). The process of downloading posts could affect the number and the content of downloaded posts, commentaries, and sharing of metadata. Yet, because of the quick pace and fluidity of online communication, it is safe to assume that the publication of posts related to a specific political event (i.e. one election, political discussion etc.) will cease shortly afterwards (see Magin et al. 2017).

Alongside this, we should mention another critical hindrance to the research of political communication. Together with the expanding exploration of the new media, the researchers must cope with many technical difficulties; the primary one being the extent of data which are downloadable for the analyses. Although the anonymously aggregated data from the new media, especially the social networks, provide a unique possibility for analyses of structural, multilevel, macro and microanalysis, the availability of this data represents one of the most significant constraints for social science research. Aside from the demand for the expert programmer skills required for the collection of data from the social networks, individual platforms increase their protection of proprietary data for preserving the privacy of their users, making obtainment of the data more and more demanding (see Garrett et al. 2012).

Conclusion

Online political communication has become an essential part of modern political campaigning. Analysis of the new media, therefore, enables us to research the complex dynamics of political communication, including its offline aspects, as it reflects the overall communication strategy of a given political actor. It captures the key aspects of political communication, mirroring what the political actors deem as crucial to share with the electorate, how open they are to feedback and to more extensive dialogue with the public and how efficiently they communicate with it. Although the primary circle of people who follow political actors is somewhat narrow, these users themselves quite often have a large crowd of followers. Through this two-step flow of communication, the political messages reach even the passive consumers of political communication and the broad public.

The research of new media, reacting to the fact that the internet has become an inseparable part of the public's everyday life, carried out with a specific set of methodological procedures, is a highly relevant and still developing sub-field. Even more so, when taking into consideration that communication from politicians, with politicians, and about politicians is happening more and more online. At the same time, this research also faces an increasing level of technical limitations and difficulties related to obtaining and examining private and protected data about social network and new media users, and the research itself puts high demands on the expert knowledge of the scholarly public, the inter-disciplinary becoming an inseparable part of this research. For these reasons, the process of selecting and implementing appropriate research methods of collection and analysis of data is a crucial aspect, worthy of attention in the future.

In this study, we have strived to comprehensively outline which methods and techniques are being used for the research of online political communication, and to which purposes these methods are applied. We also explored the new media itself, focusing on which new media are most commonly examined and what limitations are connected to this research.

Although the methodology of the published research has started to transform towards the employment of combined methodological approaches and the approaches utilizing sophisticated analytical software tools, the most frequent method of researching online political communication is the quantitative or qualitative content analysis. Most frequently, a smaller number of cases are being compared in the context of one country or region, since more extensive content analysis can be technically challenging and time-consuming as well. The second most frequent method of research is through interviews or surveys; less often we encounter the network analysis of data or statistical analysis. On the other hand, for prediction purposes, we mainly utilize the analysis of time series. Although quite rare, experiments are also being conducted to explore online political communication as they allow researchers to examine influences and effects of particular controlled aspects of political communication towards selected participants, their immediate reactions and preferences.

Quite recurrent in the research of online political communication is the combination of methodological approaches, where the quantitative and qualitative techniques complement each other in order to overcome certain hindrances of particular research techniques. Since it is necessary to take into some consideration the inter- and intra-platform discrepancies between various types of new media, choosing appropriate methodological approaches with regard to the structures, function, and types of shared content across these new media, consciously combining distinct techniques while conducting a multi-method is, therefore, imperative.

However, with the multi-method approach gaining popularity and the more frequent implementation of ICTs, it is becoming apparent that the character

of published studies is slowly transforming as well. The research of political communication in general, but especially in the context of new media has become more and more an interdisciplinary field. Yet the collection and analysis of data from new media and social networks, in particular, requires more and more advanced expert skills. For instance, as the pressure to keep user data private and safe increases, obtaining the relevant metadata is becoming more challenging. Moreover, with the implementation of a wide array of techniques from different research fields, scholars with different sets of assets are being called for. As a result, the requirements for expert knowledge in the fields of mathematics, programming, as well as statistical analysis and economics, have grown considerably over past years. Correct implementation of the research as mentioned earlier methods and the subsequent reflection and replication of these studies may prove challenging for the wider interested scholarly public. In its consequence, the complexity of the research and the employment of advanced software tools can limit the size of the "audience" that scholars can address with their research, and it can even reduce the published research to its conclusions, since the understanding of applied methodology and the research process itself could be dependent on whether the readers have the specific technical knowledge, often reaching far beyond their primary research fields.

It must be said though that the increasing interdisciplinarity and requirements for expert knowledge from the more technically oriented fields do not represent *a priori* a negative direction of development. On the contrary, they enrich the social science research with new methods and techniques and broaden the expertise of scholars focused on social sciences and humanities, whether in the political science, sociology, psychology, media studies or other disciplines. We can assume that in the years to come, it will become progressively necessary to expand and strengthen the cooperation between the social-sciences and mathematical-technical fields, for instance, to improve the possibilities of automated analyses, such as the sentiment analysis, to allow for exploration of political communication taking place online in the new media, in the regional languages.

On the other hand, we would like to point out that the research that does not employ new methods and techniques (as the ICTs and advanced software tools or methods inherent to the other science fields do not) are in no way inferior. The fact that some scholars do not opt for these advanced analytical, visualization, or statistical software, or choose topics that do not require the employment of such tools, does not make their research in any way less important or relevant for the scholarly public.

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