Europeanization, Democratic Legitimacy, and Cleavage Structures in Networked Public Spheres

The Example of the #EP2019 Debate on Twitter

Dissertation

in partial fulfillment of the requirements

for the degree of doctor philosophiae (Dr. phil.)

Submitted by

Vivien Benert, M.A.

Freie Universität Berlin

Department of Political and Social Sciences

Institute for Media and Communication Studies

Berlin, 2023

Advisor: Univ. Prof. Dr. Barbara Pfetsch
Institute for Media and Communication Studies, Freie Universität Berlin
Garystr. 55, 14195 Berlin

Co-Advisor: Univ. Prof. Dr. Christoph Neuberger
Institute for Media and Communication Studies, Freie Universität
Berlin Garystr. 55, 14195 Berlin

Date of defence: 09 February 2024

Summary

The emergence of a European public sphere as a shared communication space for European citizens in different countries and its importance for the democratic legitimacy of the European Union have long been subject to scholarly debate. The existence of a European public sphere is usually discussed in terms of the Europeanization of national public spheres, which includes the synchronicity of issue agendas in various countries and the degree of communicative interactions between actors from the European and the national level (vertical Europeanization) as well as in different member states (horizontal Europeanization). Over time, two key developments have contributed to increasing Europeanization of national public spheres. First, political and economic crises have served as catalysts for politicization and consequently the visibility of European issues in recent years. Second, digitalization has led to the emergence of networked public spheres as interconnection of different platforms and issue publics online. Specifically, the advent of the internet and the rise of social media platforms have fostered new communication infrastructures that allow direct communication between different actor groups and across national borders. Europeanization can thus be conceptualized as increasing density of communicative interactions between various actors in communication networks.

These developments lead to a more diverse set of voices in online debates, because actors formerly dependent on journalists as gatekeepers can now directly address others online. More diverse actor constellations might in turn increase the variation of (European) issues discussed in networked public spheres, which would provide the possibility for (communicative) input to the European level from citizens and civil society actors as an important precondition for the Europeanization of networked public spheres as well as for the democratic legitimacy of the EU on the input and the output level. Problems related to the legitimacy of the EU and European institutions such as missing accountability and growing Euroscepticism have been addressed by the institutions and scholars alike. Overall, favourable context conditions regarding the communication environment on the one hand (i.e. easy direct and transnational communication) are met by unfavorable context conditions for Europeanization and democratic legitimacy (i.e. growing Euroscepticism, crises) on the other hand.

Furthermore, when different actor groups can communicate directly on social media platforms, strategic decisions and communication contexts of these actor groups need to be taken into consideration. It is assumed that actors use the different communication options of social media platforms (e.g. addressing other users, sharing and forwarding contents, replying to others) for different strategic purposes. The actual outplay of communicative interactions and the resulting

network structures are a result of actor-specific strategies. Consequently, an actor-centered approach to Europeanization, democratic legitimacy, as well as the salience of conflict lines is necessary when social media platforms are at the center of attention.

These contemporary developments raise the question in how far networked public spheres and social media platforms with their potential for direct and transnational communication may lead to increasing Europeanization of communicative interactions and new (European) issues being discussed by diverse actors online. Specifically, this dissertation focusses on three concepts related to the scholarly debate about European public spheres and the impact of contemporary communication infrastructures and networked public spheres on these concepts. First, vertical and horizontal Europeanization are discussed against the background of changing communication environments and actor-specific communication strategies. Second, the potential of direct communication between citizens and (European) politicians as precondition for increasing democratic legitimacy of the EU is discussed. Third, the salience of Eurosceptic voices and consequent calls for newly emerging political conflict lines on the European level will be addressed.

Conceptualizing communication flows in networked public spheres as communication networks with the communicating actors as nodes and communicative interactions between these actors as edges, all three concepts can be investigated using network analytical measures. To analyze Europeanization, direct communication as a precondition for democratic legitimacy as well as the salience of European level conflict lines, a combination of different methods from computational communication science (i.e. Exponential Random Graph Modelling, Structural Topic Modelling) is combined with a manual content analysis. The debate about the 2019 European Parliament elections on Twitter as discussed under the official election hashtag (#EP2019) in April and May 2019 is used as a case study for several reasons. First, European Parliament elections are times of increased importance of European actors and issues. Second, Twitter is a particularly important platform for political communication. Third, hashtag-based data sampling via Twitter's Rest API allows to analyze the corresponding debate without prior selection of countries, issues, or actors that should be included in the analysis.

The results provide optimistic outlooks for the Europeanization of networked public spheres and the inclusion of different voices in political online debates, but they also leave room for improvement when it comes to direct communication between politicians and citizens as a precondition for increasing democratic legitimacy of the EU. It also become apparent that different actor groups play different roles when it comes to the Europeanization of networked public spheres and political as well as media actors are still the most important receivers of

attention in terms of incoming communicative interactions. First indicators for European level conflict lines do emerge in the network structures of the debate regarding, for example, European integration and environmental protection. However, it remains to be seen in how far these conflict lines may turn into fully-fledged cleavages in the future. The dissertation provides a detailed discussion of these results and their impact for further scholarly debates as well as practical implication for Europeanization, democratic legitimacy, and conflict lines.

This dissertation contributes to the scholarly literature in several ways. First, it provides one of the rare examples in which Europeanization of networked public spheres is analyzed in terms of actors and their interactions as well as issues discussed online while previous research has mostly focused either on actors or issues in a debate. Second, by including actor-specific context and communication strategies into the theoretical considerations, it becomes clear that different communicative interactions are indeed used for different purposes and thus lead to different network structures and varying level of Europeanization. Third, the combination of computational methods and manual content analysis allows for profound descriptive and inferential analysis of networked structures and provides information about which actor characteristics increase the likelihood that actors will establish communicative interactions with each other. Taken together, this provides important insights into the emergence of transnational communication networks, politician-citizen interaction online, as well as emerging conflict lines.

Zusammenfassung

Die Entstehung einer europäischen Öffentlichkeit als gemeinsamer Kommunikationsraum für europäische Bürger*innen in verschiedenen Ländern sowie ihre Bedeutung für die demokratische Legitimation der Europäischen Union sind Gegenstand langjähriger wissenschaftlicher Debatten. Die Existenz einer europäischen Öffentlichkeit wird meist im Kontext der Europäisierung nationaler Öffentlichkeiten diskutiert. Dies umfasst die Synchronizität von Themenagenden in verschiedenen Ländern sowie das Ausmaß der kommunikativen Interaktionen zwischen nationalen und europäischen Akteuren auf (vertikale Europäisierung) sowie zwischen Akteuren aus verschiedenen Mitgliedstaaten (horizontale Europäisierung).

Zwei Entwicklungen haben entscheidend zur Europäisierung nationaler Öffentlichkeiten beigetragen. Erstens haben politische und wirtschaftliche Krisen in den letzten Jahren als Katalysatoren für die Politisierung und damit die Sichtbarkeit europäischer Themen gewirkt. Zweitens hat die Digitalisierung zur Entstehung von Netzwerköffentlichkeiten durch die Verknüpfung diverser Kommunikationsplattformen und thematischer Online-Issue-Publics geführt. Insbesondere mit dem Aufkommen des Internets und der steigenden Relevanz sozialer Medien sind neue Kommunikationsinfrastrukturen entstanden, die direkte Kommunikation zwischen verschiedenen Akteursgruppen und über nationale Grenzen hinweg ermöglichen. Europäisierung kann daher als die Verdichtung kommunikativer Interaktionen zwischen verschiedenen Akteuren in Kommunikationsnetzwerken konzeptualisiert werden.

Diese Entwicklungen führen zu einer Vielzahl von Stimmen in Online-Debatten, da Akteure, die zuvor von Journalist*innen als Gatekeeper abhängig waren, nun direkt mit anderen online kommunizieren können. Eine vielfältigere Akteurskonstellation kann wiederum die Vielfalt der diskutierten (europäischen) Themen in vernetzten Öffentlichkeiten erhöhen, was die Möglichkeit für kommunikativen Input auf europäischer Ebene von Bürger*innen und zivilgesellschaftlichen Akteuren als wichtige Voraussetzung für die Europäisierung von Netzwerköffentlichkeiten sowie für die demokratische Legitimität der EU auf Input- und Output-Ebene bietet. Probleme im Zusammenhang mit der Legitimation der EU und europäischen Institutionen werden von Institutionen und Wissenschaftler*innen gleichermaßen thematisiert. Insgesamt stehen somit günstige Kontextbedingungen für Europäisierung einerseits (einfache direkte und transnationale Kommunikation) ungünstigen Kontextbedingungen für demokratische Legitimation (wachsendem Euroskeptizismus, Krisen) andererseits gegenüber.

Darüber hinaus müssen bei der direkten Kommunikation verschiedener Akteursgruppen in sozialen Medien strategische Entscheidungen und Kommunikationskontexte der kommunizierenden Akteursgruppen berücksichtigt werden. Es wird davon ausgegangen, dass Akteure die verschiedenen Kommunikationsoptionen in sozialen Medien (z. B. Ansprache anderer Nutzer*innen, Teilen von Inhalten, Antworten auf Beiträge von Anderen) für unterschiedliche strategische Zwecke nutzen. Das tatsächliche Zusammenspiel kommunikativer Interaktionen und die resultierenden Netzwerkstrukturen sind somit das Ergebnis akteursspezifischer Strategien. Daher ist ein akteurszentrierter Ansatz zur Analyse von Europäisierung, demokratische Legitimation sowie der Bedeutung von Konfliktlinien erforderlich, wenn soziale Medienplattformen im Mittelpunkt des Interesses stehen.

Diese aktuellen Entwicklungen werfen die Frage auf, inwieweit vernetzte Öffentlichkeiten und soziale Medien mit ihrem Potenzial für direkte und transnationale Kommunikation zu einer zunehmenden Europäisierung kommunikativer Interaktionen und zur Diskussion neuer (europäischer) Themen durch verschiedene Akteure online führen können. Speziell konzentriert sich diese Dissertation auf drei Konzepte, die in der wissenschaftlichen Auseinandersetzung mit Europäischen Öffentlichkeiten immer wieder im Fokus stehen: Erstens wird das Konzept vertikaler und horizontaler Europäisierung vor dem Hintergrund sich verändernder Kommunikationsumgebungen und akteursspezifischer Kommunikations-strategien untersucht. Zweitens wird das Potenzial der direkten Kommunikation zwischen Bürgern und (europäischen) Politikern als eine Voraussetzung für die demokratische Legitimation der EU analysiert. Drittens wird die Bedeutung euroskeptischer Stimmen und neu entstehender politischer Konfliktlinien auf europäischer Ebene untersucht.

Durch die Konzeptualisierung von Kommunikationsflüssen in Netzwerköffentlichkeiten als Kommunikationsnetzwerke, in denen die kommunizierenden Akteure die Knoten und die kommunikativen Interaktionen zwischen diesen Akteuren die Kanten darstellen, können alle drei Konzepte mithilfe netzwerkanalytischer Methoden untersucht werden. Um Europäisierung, direkte Kommunikation als Voraussetzung für demokratische Legitimation sowie die Bedeutung von Konfliktlinien auf europäischer Ebene zu analysieren, wird eine Kombination verschiedener Methoden aus dem Bereich der Computational Social Science (Exponential Random Graph Modelling, Structural Topic Modelling) mit einer manuellen Inhaltsanalyse von Nutzer*innenprofilen kombiniert. Die Debatte über die Europawahl 2019 auf Twitter, die unter dem offiziellen Wahl-Hashtag (#EP2019) im April und Mai 2019 stattfand, ist aus mehreren Gründen eine geeignete Fallstudie für die vorliegende Arbeit. Erstens sind Europawahlen Zeiten erhöhter Sichtbarkeit europäischer Akteure und Themen.

Zweitens ist Twitter eine besonders wichtige Plattform für politische Kommunikation. Drittens ermöglicht die hashtagbasierte Datenziehung über Twitters Rest API die Analyse dieser Debatte ohne vorherige Auswahl von Ländern, Themen oder Akteuren.

Die Ergebnisse bieten positive Anhaltspunkte für die Europäisierung von Netzwerköffentlichkeiten und die Inklusion und Sichtbarkeit diverser Stimmen und Akteurskonstellationen in Onlinedebatten, zeigen jedoch auch ungenutztes Potenzial hinsichtlich der direkten Kommunikation zwischen Politikern und Bürgern als Voraussetzung für eine zunehmende demokratische Legitimation der EU auf. Zudem wird deutlich, dass verschiedenen Akteursgruppen unterschiedliche Rollen bei der Europäisierung von Netzwerköffentlichkeiten zukommen und dass politische sowie Medienakteure nach wie vor die wichtigsten Adressaten von Aufmerksamkeit im Sinne von eingehenden kommunikativen Interaktionen sind. Zudem lassen sich erste Indikatoren für Konfliktlinien auf europäischer Ebene in den Netzwerkstrukturen der Debatte hinsichtlich europäischer Integration und Klimaschutz finden. Es bleibt jedoch abzuwarten, inwieweit sich diese Konfliktlinien in Zukunft manifestieren. Eine ausführliche Diskussion aller Ergebnisse und eine Integration dieser Ergebnisse in die bestehende wissenschaftliche Literatur finden in der Arbeit statt.

Diese Dissertation trägt auf mehrere Weisen zur wissenschaftlichen Diskussion über Europäische Öffentlichkeit bei. Erstens liefert sie eine kombinierte Analyse von kommunikativen Interaktionen zwischen Akteuren und der Salienz von Themen als Indikatoren für die Europäisierung von Netzwerköffentlichkeiten während bisherige Studien den Fokus entweder ausschließlich auf die Akteure oder die Themen gelegt haben. Zweitens wird durch das Einbeziehen akteursspezifischer Kontexte und Kommunikationsstrategien in die theoretischen Überlegungen deutlich, dass unterschiedliche kommunikative Interaktionen für unterschiedliche Zwecke genutzt werden und somit zu unterschiedlichen Netzwerkstrukturen und variierendem Grad an Europäisierung führen. Drittens ermöglicht die Kombination von computergestützten Methoden und manueller Inhaltsanalyse eine fundierte deskriptive und inferentielle Analyse von Netzwerkstrukturen und liefert Informationen darüber, welche Akteurseigenschaften die Wahrscheinlichkeit erhöhen, dass Akteure kommunikative Interaktionen miteinander eingehen. Insgesamt liefert dies wichtige Erkenntnisse über die Entstehung transnationaler Kommunikationsnetzwerke, die Interaktion zwischen Politiker*innen und Bürger*innen online sowie aufkommende Konfliktlinien.

Code, data, and additional online materials

The statistical analysis of this dissertation was done with the R programming language (R Core Development Team, 2019) and R Studio (RStudio Team, 2020). Code and anonymized example data for all important steps of the analysis are documented on GitHub[1]. Although the code is not completely reproducible due to privacy reason and anonymizing the data sets, all important statistical decisions and model parameters are documented.

Relevant packages used for the empirical analysis are (in alphabetical order): coda (Plummer et al., 2006) , descr (Aquino, 2021), dplyr (Wickham, François, Henry, Müller, & Vaughan, 2023), ergm (Handcock et al., 2021; Hunter, Handcock, Butts, Goodreau, & Morris, 2008), ggplot2 (Wickham, 2016), ggpubr (Kassambara, 2023), ggsankey (Sjoberg, 2021), googleLanguageR (Edmondson, 2022), igraph (Csardi & Nepusz, 2006), intergraph (Bojanowski, 2016), lubridate (Grolemund & Wickham, 2011), network (Butts, 2015), quanteda (Benoit et al., 2018), spacyR (Benoit & Matsuo, 2020), stm (Roberts, Stewart, & Tingley, 2019), stminsights (Schwemmer, 2021), stringr (Wickham, 2022), tidyr (Wickham, Vaughan, & Girlich, 2023), tm (Feinerer, Hornik, & Meyer, 2008).

---

[1] https://github.com/benertv/Europeanization_on_Twitter

Preface and acknowledgement

The EU has often been said to have been faced with multiple crises in recent years (e.g. Euro crisis and Brexit, to name just two). And weirdly, after spending years of writing my thesis about these specific multiple crises and how they have affected communication about the EU, I feel like I can relate. Not only that writing a dissertation comes with multiple crises in and by itself – everyone who has ever tried to write a dissertation will agree. Moreover, we all got to experience some of these crises first hand: the Covid19 pandemic, Putin starting a war against Ukraine, inflation and skyrocketing gas prices, and so on and so forth. Weirdly, none of these recent crises were apparent at the time of the 2019 EP elections, when I started the data collection for my dissertation. Thus, if you will, this dissertation provides a look at in-between-crises times, when some crises had successfully been dealt with, Brexit was still ongoing, and Covid19 and the Russian war against Ukraine were not even in sight. While some of these changes and crises are still ongoing today – in July 2023 – time has actually provided further evidence for the tentative conclusions that I drew from my analyses. One example is the emerging environmental conflict, that became salient in the community structure of the analyzed debate about the 2019 EP elections on Twitter. Since the 2019 EP elections, the issue's importance has increased and stirred up debates in many countries with Germany and the debates surrounding the 'Letzte Generation" only being one example of its politicization. The data described in this dissertation also provide a case study about Twitter communication prior to its takeover by Elon Musk. It is already clear that this dissertation would have turned out differently, if these changes would have been implemented earlier. For example, official government and media accounts are now publicly labeled so that users can better evaluate contents posted by different actors online. This is an interesting feature with regard to spreading disinformation but also for legitimacy related aspects. It will therefore be very interesting to see how these tendencies play out in the 2024 EP Elections which are right around the corner at the time of finishing up this dissertation.

Lastly, all that is left to say is thanks to all those without whom this dissertation would have ended up as the unsolvable life crisis I sometimes felt it would become: first of all, Barbara Pfetsch and Christoph Neuberger, who were the best supervisors I could have hoped for. They provided valuable feedback and constructive criticism when applicable and support and encouragement when needed; Antje Wolters, who answered every stupid and not so stupid organizational question I came up with; David Schieferdecker and Daniela Stoltenberg, whose office doors and ears were always open when I needed feedback or emotional support. I also thank Research Group 15 at the Weizenbaum Institute for the Networked Society for academic

Contents

List of tables

List of figures

List of abbrviations

AfD	Alternative für Deutschland (Alternative for Germany)
AIC	Akaike's Information Criterion
ALDE	Alliance of Liberals and Democrats for Europe
API	Application Programming Interface
BIC	Bayesian Information Criterion
CDU	Christian Democratic Union
EP	European Parliament
EPP	European People's Party
ERGM	Exponential Random Graph Models
EU	European Union
FFF	Fridays for Future
FREX	Frequency and Exclusivity (of words)
GAL	Green, Alternative, Liberal (values)
GDP	Gross Domestic Product
GOF	Goodness of Fit
Greens/EFA	Greens/European Free Alliance
GWESP	Geometrically Edgewise Shared Partners
HPC	High Performance Computing
IEEP	Institute for European Environmental Policy
LDA	Latent Dirichlet Allocation
LGBTQI	Lesbian, Gay, Bi, Trans, Queer und Intersex
MARPOR	Manifesto Research on Political Representation
MEP	Member of European Parliament
NATO	North Atlantic Treaty Organization
NGO	Non-Governmental Organization
PVV	Partij voor de Vrijheid
RQ	Research question
S&D	Socialist and Democrats Group
STM	Structural Topic Modelling
TAN	Traditional, Authoritarian, Nationalist (values)
TTIP	Transatlantic Trade and Investment Partnership
UNHCR	United Nations High Commissioner for Refugees
UK	United Kingdom
UKIP	UK Independence Party
UN	United Nations
URL	Uniform Resource Locator
US/USA	United States (of America)
WSF	World Social Forum

1 Introduction: European public sphere(s) and social media platforms

> *This time it's not enough to just hope for a better future: this time we all need to take responsibility for it. So this time we're not just asking you to vote, we're also asking you to help to persuade others to vote too. Because when everybody votes, everybody wins.*
> – Official slogan of the *This time I'm voting*-campaign (European Union, 2019)

In February, 2019, the European Union (EU) officially launched the *This time I'm voting*-campaign in Rome, Italy (European Parliament, 2019c). Planned as an immense campaign across (at that time) 28 EU member states and 24 official languages, websites, social media presences, and traditional campaign materials such as leaflets were circulated even months before the official launch. Meant to increase knowledge about and interest in the 2019 European Parliament (EP) elections, the campaign spanned all EU member states and tried to mobilize 400 million eligible voters to cast their vote and to persuade peers to do so as well. The campaign came as a new approach to increase voter turnout in the EP elections after previous elections showed consistently decreasing electoral participation among citizens in many European countries. In addition to traditional campaign materials, the campaign mostly focused on various social media platforms, such as Twitter, Facebook, Flickr, LinkedIn, YouTube, Pinterest, Snapchat, Reddit, and Instagram. Official accounts of European institutions posted on all of these platforms for citizens to interact with and corporate design materials were provided for citizens to download and post on their own social media accounts (European Union, 2019).

The goal of the *This time I'm voting*-campaign was to increase transnational communication about and the legitimacy of the EP after the introduction of pan-European lead candidates has been of limited success (Gattermann & de Vreese, 2017, p. 448; Gattermann & Marquart, 2020, pp. 626–627) and in the light of increasing dissatisfaction with the EU, growing support for Eurosceptic parties, and decreasing voter turnouts:

> As Europeans we face many challenges, from migration to climate change, from youth unemployment to data privacy. We live in an ever more globalised, competitive world. At the same time, the Brexit referendum has demonstrated that the EU is not an irrevocable project. And while most of us take democracy for granted, it also seems under increasing threat, both in principle and practice. That's why we have started building a community of supporters to help encourage a higher voter turnout at the European Elections. (European Union, 2019)

And indeed, voter turnout in the 2019 EP elections increased in 19 member states compared to previous elections (European Parliament, 2019a). The effect was particularly pronounced in

countries, in which voter turnout is traditionally rather low, including Austria, Germany, Poland, Spain, and Hungary (European Parliament, 2019a). The mean voter turnout across all member states was 43 percent in 2014 and increased to almost 51 percent in 2019, which is the highest turnout since 1994 (European Parliament, 2019b). Eurobarometer data shows that 50 percent of voters and 39 percent of non-voters remembered explicit calls to vote in the EP elections by the European Parliament (European Commission & European Parliament, 2019).

The *This time I'm voting-campaign* serves as a perfect example of the potential of social media platforms for political communication between political actors and citizens and how it may be used to try and increase democratic legitimacy. However, not only can social media platforms provide important resources for large scale political campaigns. They also have the potential to drive transnational communication between citizens and politicians in various EU member states and provide the possibility for citizens to directly address political actors with issues of societal importance. This also becomes visible in the strategy of the *This time I'm voting*-campaign to not only mobilize people to cast their votes, but to motivate others to do so as well. This strategy to 'mobilize the mobilizers' (Napierala, 2019) strongly builds on the interactive and direct nature of social media platforms that allow ordinary citizens to communicate directly with others. This begs the question of how effectively different actor groups use social media platforms for transnational and direct communication when communicating about the EU and in how far the potential of social media platforms to increase the democratic legitimacy of the EU through this direct communication may be realized.

1.1 Research interest and aim of dissertation

Contemporary political communication literature identifies two major processes, that have fundamentally changed the context conditions for the emergence of a European public sphere and for the democratic legitimacy of the EU (Benert & Pfetsch, 2022, pp. 364–365; Kriesi, 2013, p. 2). First, digitalization with the advent of online communication and social media platforms have led to the emergence of networked public spheres with changing communication infrastructures and the possibility for direct and transnational communication between citizens and politicians in various EU member states (Bossetta, Dutceac Segesten, & Trenz, 2017; Daniel & Obholzer, 2020). Second, the politicization of European integration has increased in recent years in which Europe was faced with multiple crises such as growing Euroscepticism and increasing support for Eurosceptic parties, the Euro crisis, migration, and the Brexit referendum (de Wilde, Michailidou, & Trenz, 2014; Hutter & Borbáth, 2019; Kriesi et al., 2006). While a common reference point for European citizens is crucial in these times of crises (Koopmans &

Erbe, 2004, p. 98), online communication and social media platforms offer new possibilities as well as challenges for the emergence of a European public sphere and for the democratic legitimacy of the EU.

Hybrid media systems (Chadwick, 2013) and networked public spheres (Benkler, 2006) provide the possibility for easy transnational and direct communication between politicians and citizens. Social media platforms offer a "transnational promise" (Bossetta et al., 2017, p. 54), because they make communication across borders easy and fast. This applies to professional communication of journalists and media outlets as well as to citizens. Social media platforms also offer a "participatory promise" (Bossetta et al., 2017, p. 54) in the sense that potentially anyone with access to the Internet can take part in online discussions, address issues of importance to them, and directly communicate with political leaders. These developments lead to a more diverse set of voices in online debates, because groups and actors formerly dependent on journalists as gatekeepers can now directly address other actors online (M. Castells, 2008, p. 90; Neuberger, 2018, p. 52). More diverse actor constellations in online debates may in turn increase the variation of (European) issues discussed in networked public spheres, which would provide the possibility for (communicative) input to the European level from citizens and civil society actors. This may provide an important precondition for the Europeanization of networked public spheres as well as for the democratic legitimacy of the EU on the input (i.e. citizen to politician) and the output (i.e. politician to citizen) level – if it is indeed used by those participating in online communication about the 2019 EP elections.

In addition, networked public spheres can be conceived of as an interconnection of various issue publics on the web that are formed and constantly changed by actors' active communication practices (Bruns & Highfield, 2015, p. 61). This puts questions of agency and communication strategies of different actor groups into the focus of analysis: whom to engage in communicative interaction with and whether to address European issues becomes a strategic and conscious decision when anyone can communicate directly (Braun & Grande, 2021, p. 1137; Enyedi, 2005, pp. 698–700). At the same time, existing power relations remain relevant in online settings (Barabási & Albert, 1999; M. Castells, 2008, 2011) and online communication networks are not free from hierarchical structures and (network) mechanisms. Thus, regarding the emergence of a networked European public sphere, the question arises which actors and which issues actually become salient in the debate and succeed in gaining attention for their concerns.

Turning to political context conditions and the politicization of European integration, growing Euroscepticism and its public articulation in online settings are on the rise in the EU (Michailidou,

Trenz, & Wilde, 2014, p. 145). Also, right-wing parties have achieved electoral success in recent elections (Kriesi, 2020, p. 238). In this context of growing electoral success of radical right-wing and populist parties in Europe, a so-called transnational (Hooghe & Marks, 2018) or demarcation vs. integration conflict (Kriesi et al., 2006) concerning the question of more or less European integration has been discussed as an emerging cleavage on the European level. For example, cleavage research addresses conflict lines related to religion (e.g. Minkenberg, 2009), class (e.g., Kriesi, 1998), or regions (e.g. Miley & Garvía, 2019). A recent example of the potential relevance of nationalist anti-EU narratives and sentiments for the democratic legitimacy of the EU and the European project in general is provided by the success of the Brexit referendum. In the context of the campaign about the referendum, two divided conflict lines have emerged – the remainers, i.e. those in favor of EU membership of the UK, and the brexiteers, i.e. those in favor of the UK leaving the EU (Del Gobbo, Fontanella, Sarra, & Fontanella, 2021; Hobolt, Leeper, & Tilley, 2021; Treib, 2021). These conflict lines have even changed the UK party system in so far as they resulted in the establishment of the Brexit Party[2].

Additionally, research has repeatedly stressed the second-order nature of EP elections, meaning that they are perceived as less important than and are thus overshadowed by the national arena (Reif & Schmitt, 1980; Schmitt, 2005). And indeed, the second-order nature of the European level has been shown to result in limited attention to European elections (Steenbergen & Scott, 2009, p. 189). These developments have resulted in a "constraining dissensus" (Hooghe & Marks, 2009, p. 5) on the side of many European citizens and decreasing voter turnouts, which raises problems related to the democratic legitimacy of the EU.

Such problems related to the legitimacy of the EU and European institutions have been addressed by the institutions and scholars alike. For example, missing accountability has been attributed to unelected European institutions such as the European Commission and nationally anchored elections to the European Parliament have been criticized as decreasing the electoral accountability of the EP (Fraser, 2007, p. 8; Gerhards, 2002, p. 135; Rasmussen, 2017, p. 220). Several propositions have been discussed by scholars and practitioners alike to conquer the communication and democratic deficit of the EU as well as growing Euroscepticism. For example, the introduction of European lead candidates ('Spitzenkandidaten') for the position of

---

[2] The *Brexit Party* was founded in January, 2019, by Nigel Farage, the former leader of the UK Independence Party (UKIP), with the aim of providing a fast exit from the EU after Conservatives had lost voters confidence on the issue (Dennison (2020, p. 127). In the 2019 EP elections, the Brexit party with Farage as lead candidate won 30.5% of votes from UK voters (Dennison (2020, pp. 127–129).

EU Commission President was supposed to increase the democratic accountability of European institutions – however, with limited success (Gattermann & de Vreese, 2017, p. 448).

Input and output legitimacy are both related to communication processes, since they can be enhanced through communication and feedback options between political decision-makers and the electorate (Schmidt, 2013). Especially online communication and social media platforms may increase these effects by allowing direct communication between political actors and citizens and by providing unfiltered options to observe the opinions of individuals posted on social media (Neuberger, 2018, p. 52).

So overall, favourable context conditions regarding the communication environment on the one hand (i.e. the possibility for easy and direct transnational communication between different actor groups) are met by unfavorable context conditions for Europeanization and increasing democratic legitimacy (i.e. increasing politicization and growing Euroscepticism, crises) on the other hand. This begs several questions: In how far are existing social media platforms able to increase the Europeanization of network public spheres and the democratic legitimacy of the EU by fostering transnational communication between actors from various EU member states and between European politicians and citizens? Do Eurosceptic voices really dominate online discourses about European issues and in how far does a proposed European integration cleavage (Hooghe & Marks, 2018; Kriesi et al., 2006; Treib, 2021) become salient in public debates on social media platforms?

Research questions

In order to address this overarching research interest and analyze the potential of social media platforms to foster transnational communication between citizens and politicians from various EU member states and from the European level, this dissertation seeks to answer the following three research questions. The communication about the 2019 EP elections on Twitter is used as a case study, because Twitter has been described as a place for political communication and politicians as well as journalists use Twitter extensively for campaigning and research purposes, respectively (Bossetta, 2018, p. 472; Jungherr, 2016, p. 72). The 2019 EP elections as an important European event should also foster enough transnational communicative interactions to make inferential analysis possible.

> *RQ 1: In how far does Twitter communication about the 2019 EP elections lead*
> *to the Europeanization of networked public spheres with regard to*
> *(a) the actors and their communicative interactions, and*
> *(b) the issues present in the discourse?*

The first question focusses on the Europeanization of the Twitter communication about the 2019 EP elections and investigates Europeanization of the Twitter discourse on a network and a content level in terms of (a) actors and their communicative interactions and (b) issues present in the debate. Exponential Random Graph Models (ERGMs) with actor attributes as exogenous covariates are calculated to explain the formation of communicative interactions between actors (i.e. edges) from a network perspective. This serves the purpose to explain why transnational communication occurs on Twitter and which actor attributes can explain the tie-formation between actor groups. Salient issues in the debate are identified using Structural Topic Modelling (STM).

> *RQ 2: To what degree can direct communicative interactions between citizens and politicians as a precondition for democratic legitimacy be observed in the debate about the 2019 EP elections on Twitter?*

In order to investigate Twitter's potential to enhance the democratic discourse in the EU by providing the possibility for direct communication and feedback between political actors and citizens or civil society, the second research question puts a special focus on direct and reciprocated communicative interactions in the debate. From a network perspective, reciprocated edges between two actors indicate a mutual recognition as equal participants in the discourse and can thus serve as a precondition for the responsiveness of political actors for the needs and demands of citizens (Keman, 2017; Meijers, Schneider, & Zhelyazkova, 2019; Schmidt, 2013). First, top-down and bottom-up communication between citizens and civil society actors as well as politicians on the national and the European level will be analyzed. Ties between political actors and citizens are of special importance in this regard because they are considered an important precondition for democratic legitimacy on the input and the output level.

> *RQ 3: Which European level conflict lines become salient in the debate about the 2019 EP elections on Twitter?*

The third research question asks whether political conflict lines that play out at the European level become salient in the Twitter debate about the 2019 EP elections in the light of growing Euroscepticism, multiple crises, and the Brexit referendum. Various conflict lines have been discussed with regard to European politics. From a network perspective, political conflict lines in the debate should become visible as specific actor-issue constellations in the cohesive subgroups (i.e. communities) in the networks. Cohesive subgroups are groups of densely connected nodes in a network (Wasserman & Faust, 1994, p. 249), meaning that nodes that belong to the same subgroup are more closely connected to each other than they are to nodes in other subgroups.

Thus, information can circulate more easily within than between different cohesive subgroups. Furthermore, social network research shows that people tend to connect to other people who share similar characteristics as themselves (i.e. homophily) (Himelboim, McCreery, & Smith, 2013; McPherson, Smith-Lovin, & Cook, 2001). Therefore, actor-issue constellations in these cohesive subgroups can be considered relevant indicators to point towards the cleavages related to the EU in the Twitter communication about the 2019 EP elections. Community detection is used to answer this research question and to identify the cohesive subgroups in the debate. The actor-issue constellations in the subgroups are then analyzed using the results of the STM and a manual coding of user profiles to identify who engages in communicative interactions with whom about which issues.

1.2 Structure of this dissertation

Chapter 2 connects the concept of networked public spheres with literature about the Europeanization of public spheres, democratic legitimacy of the EU as well as considerations about communication networks and emerging conflict lines on the European level. The impact of digitalization and the emergence of networked public spheres with their advantages and challenges for transnational communication and the democratic legitimacy of the EU are discussed. To do so, *networked public spheres* are first introduced as a theoretical concept to describe contemporary public spheres in times of digitalization and online communication (Chapter 2.1). A special focus lies on the role of social media platforms for transnational and direct communication in networked public spheres. Second, the importance of a *European public sphere* and how it may emerge in networked public spheres is discussed (Chapter 2.2). Drawing on the concept of vertical and horizontal Europeanization (Koopmans & Erbe, 2004), the scope of communicative interactions between actors from various countries indicates the Europeanization of networked public spheres. Direct communicative interactions between citizens and political actors from the national and the European level as an important precondition for the *democratic legitimacy of the EU* are discussed in Chapter 2.3 with a focus on communication aspects of input and output legitimacy (Schmidt, 2013). Finally, Chapter 2.4 looks at increasing polarization and politicization of European issues in online debates and how they might lead to the salience of new *European level conflict lines*. The *strategic communication* and decisions of different actor groups have to be taken into account due to the possibility for direct communication provided by social media platforms to all actors in Twitter debates. These are discussed in detail in Chapter 2.5 for political actors, civil society actors, media actors, and citizens.

Chapter 3 provides a detailed explanation of the *study design* and discusses the choice of Twitter communication about the 2019 EP elections as a case study. Furthermore, hypotheses for the Exponential Random Graph Models (RQ 1) are derived. Guiding assumptions and questions are formulated for the descriptive analysis of the second and third research question.

Methodological decisions and operationalizations are explained in detail in Chapter 4 starting with the operationalization for the manual coding of actors' Twitter profiles (Chapter 4.1) and moving on to network analysis, ERGMs, and community detection (Chapter 4.2) and Structural Topic Modelling (Chapter 4.3). Code and anonymized example data for all important steps of the analysis are documented on GitHub[3]. Although the code is not completely reproducible due to privacy reasons and anonymization of data sets, important statistical decisions and model parameters are documented.

Chapters 5 through 7 provide the results of the empirical analysis. The results regarding the *Europeanization* of the Twitter debate about the 2019 EP elections (RQ 1) are provided in Chapter 5. It shows that considerable degrees of transnational communication arise in the context of the 2019 EP elections and a variety of European issues become salient in the debate. However, communicative strategies of different actor groups lead to important differences with regard to their transnational communication and national issues are also still salient in the debate. Overall, this leads to ambivalent conclusions about the Europeanization of networked public spheres and indicates that it is important to include actor characteristics and their communication strategies in the analysis when analyzing the Europeanization of networked public spheres.

Chapter 6 discusses the *reciprocated communicative interactions* between actors in the debate about #EP2019 as an indicator for Twitter's potential to increase the responsiveness and democratic legitimacy of (European) politicians and the EU (RQ 2). It shows that citizens address national as well as European level politicians frequently in their Twitter communication and thus provide important communicative input for political decision making. These communicative interactions from citizens are, however, not often reciprocated. Thus, the chapter also includes communicative interactions between political actors and civil society as well as the media as potential intermediaries between citizens and European as well as national politicians. It also discusses the role of shared issue agendas for democratic legitimacy.

Chapter 7 provides the analysis of actor-issue constellations in the *community structures* of the #EP2019 debate as indicators for *emerging European level conflict lines* (RQ 3). It shows that the European integration conflict manifests itself in the context of the Brexit and Nexit debates in the

---

[3] https://github.com/benertv/Europeanization_on_Twitter

2019 EP elections. First indications arise also for an emerging environmental conflict on the European level, which is mobilized by left-to-center actors in the debate, but is de-mobilized by right-wing and nationalist actors.

Finally, Chapter 8 provides a *discussion of the results* described in the previous chapters in the light of contemporary and traditional theoretical considerations about networked public spheres and Europeanization, legitimacy, and conflict lines. It also reflects on the dissertations limitations as well as advances of current theoretical and empirical investigations of Europeanization in networked public spheres and how network analytical concepts and measures can be used to analyze Europeanization, political input and output between citizens and politicians as well as (emerging) European conflict lines.

2 Communicating about the EU in networked public spheres

The public sphere is traditionally thought of as "an open forum of communication for everybody who wants to say something or listen to what others have to say" (Neidhardt, 1994, p. 7; Risse, 2015, p. 6). In democratic societies, the public sphere shall establish an arena for diverse actors, issues, and opinions on matters of public concern, provide orientation to facilitate the formation of public opinion, and monitor democratic decision-making processes (Gerhards & Neidhardt, 1991, pp. 34–35). A European public sphere is needed to make "the European level visible and accessible to citizens" (Statham, 2010, p. 4) and provide information about the European Union as a foundation for informed participation in politics and elections on the part of citizens.

Insufficient information about European decision-making and European actors and issues in national public spheres has been criticized to result in a communication deficit and, consequently, in a democratic deficit of the EU (Gerhards, 2001, 2002), which can lead to declining satisfaction with European politics and European integration in general (Hooghe & Marks, 2009). Although extensive research is available about the role of legacy media for the Europeanization of national public spheres (e.g. Adam, 2007a; Wessler, Peters, Brüggemann, Kleinen-von Königslöw, & Sifft, 2008; Koopmans, Erbe, & Meyer, 2010; Kleinen-von Königslöw, 2010; Walter, 2017b), digitalization and transnationalization processes have fundamentally changed communication infrastructures and political processes (Benkler, 2006; Blumler, 2016; Chadwick, 2013; Chadwick, Dennis, & Smith, 2016).

One of the advances of digitalization is the advent of social media platforms, which have profoundly altered communication in general as well as about the EU. On the one hand, social media platforms may act as drivers of Europeanization of (networked) public spheres and the

democratic legitimacy of the EU by allowing a more diverse set of actors to engage in public debates about political issues. As such,

> [s]ocial media seem to be the obvious solution for the public sphere deficit. The World Wide Web provides the infrastructure for unlimited communication across borders. In principle, social media could be the prime place for a fully Europeanised discourse. (Roose et al., 2017, p. 273)

Cyber-pessimists, on the other hand, see fragmentation and polarization of public spheres as threats to modern democracies (e.g. Ben-David & Matamoros-Fernández, 2016; Pariser, 2011; Sunstein, 2006). Adding to this discussion, the following chapters will first provide a summary of the changes in communication conditions in networked public spheres. Afterwards it will be discussed how these communication environments provide opportunities as well as obstacles for Europeanization, the democratic legitimacy of the EU, and the emergence of European level conflict lines through increasing politicization.

2.1 Networked public spheres: changing communication environments through digitalization and globalization

Changes related to digitalization and globalization have led to the fourth age of political communication (Blumler, 2016, p. 28), which is characterized by increasing complexity and "communication abundance" (Bennett & Pfetsch, 2018, p. 244). Digitalization and online communication have resulted in a hybrid media system that is characterized by the simultaneous existence of interconnected online and offline media outlets (Chadwick, 2013, p. 4). At the same time, globalization and the possibility of easy transnational communication have challenged the notion of the nation-state as the only possible boundary of the public sphere (M. Castells, 2019, p. 95; Kriesi, 2013, p. 13). As a result, nationally anchored public spheres combined with global *governance* while *governments* remain national result in the EU's observed political legitimacy crisis (Gerhards, 2001, pp. 151–152).

Benkler (2006, p. 212) describes two fundamental differences in networked public spheres compared to traditional public spheres: first, a shift from the traditional one-to-many communication of mass media to "multidirectional", many-to-many communication with, second, significantly lower costs of becoming a speaker. Online communication is therefore characterized by a plethora of actors and voices that create discussion networks on various platforms (Benkler, 2006, p. 212). These networks are connected through digital links between actors and issues created through shares, likes, comments, and URLs on websites and social media platforms (Benkler, 2006, p. 220; Bruns & Highfield, 2015, p. 59; Papacharissi, 2002,

p. 17). The impacts of these changing communication environments through digitalization and globalization can be summarized under the following aspects: participation and the inclusion of diverse actors and issues, interaction and connection through the possibility for direct communication and feedback, and transparency (Neuberger, 2018, pp. 16–17). These will be discussed in the following with a special focus on social media platforms' functions in networked public spheres.

Participation and inclusion of diverse actors and issues. The lowered cost of becoming a speaker in networked public spheres fosters the inclusion of diverse actors and opinions in online discussions (Benkler, 2006, p. 212). Journalists are no longer the only producers of news (Bruns, 2005, 2009a). Instead, non-elite actors such as individual citizens and civil society organizations can produce and distribute high-quality online contents easily, address issues of personal importance, and use online communication and social media platforms for fast and direct communication to organize online and offline protests (Fraser, 1990, pp. 62–63; Maireder & Schlögl, 2014; Wessler, Rinke, & Löb, 2016).

While the inclusion of diverse actors and voices in online debates may increase Europeanization and democratic legitimacy by allowing direct communication between politicians and citizens and thus creating a direct forum of accountability (Bovens, 2007, p. 450), more participation in networked public spheres also requires higher levels of responsiveness: "Participation in the public sphere now means that one must be responsive to others: besides speaking to an indefinite audience, one is now accountable to participants' objections and answerable to demands that one consider [sic!] their objections and concerns" (Bohman, 1998, pp. 207–208). Thus, globalization made traditional "political instruments available to states increasingly less effective" (Bohman, 1998, p. 200). This is not only true for what Bohman refers to as the "influence of global media on national public spheres" (Bohman, 1998, p. 200), but also for the legitimacy of the EU in the context of the EU's democratic deficit.

Additionally, diverse actors can put issues of societal relevance on the agenda (e.g. the #metoo and #blacklivesmatter discussions). When ever more actors and voices can become salient on social media platforms while communication can cross national borders easily, this creates what has been referred to as "noise" (Pfetsch, Löblich, & Eilders, 2018, p. 482), "information overload" (Benkler, 2006, p. 241), or "a cacophony of voices" (Sunstein, 2017, p. 64). For example, Pfetsch, Löblich and Eilders (2018, p. 482) observe highly affective and emotionalized communicative acts such as hate speech on the one hand and solidarity movements on the other (e. g. #JeSuisCharlie).

Castells points out that the "mismatch between the global space in which the important issues for debate arise and the national space where the issues are managed leads to a crisis of legitimacy" (M. Castells, 2008, p. 82). Social media platforms offer the possibility to raise important issues to a great variety of various actors with diverse goals, scopes, and country backgrounds. These issues then need to be addressed on national, European, or transnational levels, making democratic legitimacy even more difficult and raising questions of issue scope and responsibility. At the same time, it becomes increasingly difficult for citizens and politicians alike to filter out the important messages from the abundance of voices online and to assess their correctness (Pfetsch, 2020, p. 103). Therefore, civil society actors as advocates for problems as well as intermediaries between the political level and citizens become even more important in transnational online communication settings (M. Castells, 2008, p. 83).

Interaction and connection through direct communication and feedback. Social media platforms foster connectivity and exchange between senders and receivers of information through direct communication. They allow for the merging of and switching between roles of content producer and content consumer, user-based selection of information, and easy content production and distribution (Bruns, 2009b). Thus, "[i]t is no longer only professionals, such as journalists or other central gatekeepers, who can filter, edit and forward information to their recipients, but users themselves forming nodes in information networks" (Klinger & Svensson, 2015, p. 1248). Politicians and citizens can communicate directly online instead of relying on mass media actors for mutual observation. As a result, digital links between actors and issues in networked public spheres created through follows, likes, and shares of online content form networks of communication that connect actors, contents, and objects online (Ausserhofer & Maireder, 2013, p. 306; Neuberger, 2018, p. 50).

Since these communicative interactions between actors and issues in networked public spheres can easily transcend time and space, social media platforms are attributed a "transnational promise" (Bossetta et al., 2017, p. 54). People from various countries can use social media platforms to initiate and engage in discussions about issues of shared relevance; recent examples being the Covid19 pandemic, Brexit, and the EP elections. As such, social media platforms may "facilitate and strengthen fringe communities that have a common ideology but are dispersed geographically" (Sunstein, 2017, p. 65). This underlines the transnational and the democratic potential of online communication through communicative interaction between individuals (i.e. mobilization for a certain issue) as well as between citizens and politicians (i.e. responsiveness and accountability).

Conversely, missing connectivity and interaction between actors in networked public spheres has been discussed to lead to fragmentation and polarization in online debates (Papacharissi, 2002, p. 22). In this regard, online communication and social media platforms have been accused of creating echo chambers and "deliberative enclaves" (Sunstein, 2001, p. 67), which foster the polarization of networked public spheres. Habermas has referred to the possibility of fragmentation in communication networks as early as 1998:

> "Whereas the growth of systems and networks multiplies possible contacts and exchanges of information, it does not lead per se to the expansion of an intersubjectively shared world and to the discursive interweaving of the conceptions of relevance, themes, and contradictions from which political public spheres arise. The consciousness of planning, communicating and acting subjects seems to have simultaneously expanded and fragmented. The publics produced by the Internet remain closed off from one another like global villages." (Habermas, 1998, pp. 120–121)

While some scholars do find evidence for fragmentation in the form of the development of multiple issue publics in online communication settings (e.g. Himelboim, Smith, & Shneiderman, 2013; Heft, Wittwer, & Pfetsch, 2017), others argue that fragmentation does not lead to the emergence of completely separate filter bubbles (Bruns, 2019; Mahrt, 2019) and instead point towards social media platforms as diverse sources of information (Barberá, Jost, Nagler, Tucker, & Bonneau, 2015, p. 1539). For instance, research on the potential of online news sites for information dissemination, political mobilization, and strengthening of the EU's legitimacy shows that "a deepening of existing disputes between member states rather than the accomplishment of common understanding" (Michailidou et al., 2014, p. 99), which is at least partially linked to a growth in strongly and publicly expressed Euroscepticism in the commenting sections of internet news sites and which may exacerbate polarization and fragmentation (Michailidou et al., 2014, p. 145). Thus, contrary to hopes and expectations, online news sites do not per se increase democratic legitimacy of the EU (Michailidou et al., 2014, p. 164). Contrary to these results, Barberà, Jost, Nagler, Tucker, and Bonneau (2015) analyze 150 million tweets posted between 2012 and 2014 and find that Twitter communication is not fragmented per se. Especially tweets about non-political issues such as the Super Bowl spanned across the whole network and connected users with different ideological positions (Barberá et al., 2015, p. 1537). Thus, even though some tendency for homophilic links could be found that have the potential to result in polarization and fragmentation of the Twitter sphere, "the fact that individuals receive news and information from diverse ideological sources may improve the quality of the informational environment, as well as the fidelity of political representation" (Barberá et al., 2015, p. 1539).

Transparency. Transparency is needed in networked public spheres to navigate the abundance of information (Benkler, 2006, p. 241). It refers to users' active search for news and information with the help of search engines or on social media platforms as well as to algorithmic filtering that curates individual news feeds for individual users. Early conceptualizations of the public sphere have already highlighted the importance of mass media's function to select important contents from the abundance of information and provide orientation (Gerhards & Neidhardt, 1991, p. 43). Social media platforms' ability to synthesize information and provide sufficient orientation about important societal issues has been questioned. While some scholars warn that algorithmic selection could create filter bubbles that present users with contents which reinforce their beliefs (Pariser, 2011; Sunstein, 2017), recent empirical investigations of networked public spheres find limited to no evidence for the concept of filter bubbles (Bruns, 2019; Mahrt, 2019; Puschmann, 2019).

Summing up, digitalization and globalization lead to the emergence of networked public spheres characterized by the interconnectedness of diverse actors in a hybrid media setting, easily communicating across time and space. Online communication in general and social media platforms in particular foster the inclusion of diverse voices, which at the same time leads to an abundance of speakers and opinions. While this may increase participation in online debates about issues of societal importance and foster the communication across borders, it also leads to unequal distributions of attention dynamics in networked public spheres and increases the necessity to filter information. While the possibility for direct interactions with other users through mentioning, sharing, or replying to contents may increase Europeanization and democratic legitimacy, it may also lead to the emergence to densely connected like-minded groups of highly politicized issue-publics online (McPherson et al., 2001).

Therefore, in the age of networked public spheres and hybrid media systems, public spheres need to be discussed and analyzed from a network perspective. In traditional public spheres with one-to-many communication, actors with many resources (in terms of organizational aspects, money, power) were the most prestigious actors in a debate (Gerhards & Neidhardt, 1991, p. 59). Due to the possibility for different actors to post on social media platforms, anyone can engage in public debates in networked public spheres. Similarly, media actors as gatekeepers were by far the most important brokers controlling information flows in traditional public spheres. In networked public spheres and especially on social media platforms, anyone can occupy brokerage positions in a debate; if non-elite actors such as citizens and civil society succeed to gain attention for their contents, they may even become authorities and thus gain attention in online debates (Maireder & Schlögl, 2014). The changing communication

environments with diverse actors and multiple communicative interactions between them result in changing conditions for public communication about the EU and its democratic legitimacy. These will be discussed in the following chapters.

2.2 Europeanization of networked public spheres

Scholars have frequently debated the existence, scope, and function of a European public sphere in relation to the EU's democratic legitimacy (e.g. Adam, 2007b; 2008; Koopmans & Statham, 2010a; Heft, 2017; Wessler et al., 2008). A European public sphere becomes an essential prerequisite for the legitimacy of European politics in light of continued European integration and increasing decision-making competencies on the European level (Scharpf, 1999; Schmidt, 2013). Networked public spheres and social media platforms in particular offer new possibilities for citizens to interact with (European) politicians directly, engage in political discussions about (European) issues, and receive information about the EU (Benkler, 2006; Neuberger, 2018). At the same time, politicians can use social media platforms to communicate with potential voters and for campaigning purposes (Bossetta, 2018; Daniel & Obholzer, 2020; Obholzer & Daniel, 2016). These communicative interactions between various users about issues of European importance create communication networks, which can be analyzed using network theoretical measures and the concept of vertical and horizontal Europeanization (Koopmans & Erbe, 2004).

Pan-European public sphere vs. Europeanization

Two conceptualizations of the European public sphere dominate the scholarly debate: (1) a pan-European public sphere established through a common set of transnational media (Brüggemann & Schulz-Forberg, 2008; 2009; Brüggemann, 2005), and (2) the Europeanization of national public spheres established through media coverage about actors and issues from the European level and other EU member states by national media (Eder & Kantner, 2000; Koopmans & Erbe, 2004; Koopmans & Statham, 2010b). The search for a unified pan-European public sphere focusses on transnational media outlets in the EU that provide European citizens with a common set of information. Transnational media are defined as media "that address audiences beyond and across national borders" (Brüggemann & Schulz-Forberg, 2009, p. 696) and can be distinguished based on the specific audience they want to address (instead of their distribution or availability in different countries). First, *national media with a transnational mission* focus on audiences beyond national borders. Second, *inter-national media* are defined by cooperation between media outlets from at least two countries. Third, *pan-regional media* include all

transnational media that focus on specific regions of the world. Lastly, *global media* do not focus on a specific world region but seek to reach a global audience (Brüggemann & Schulz-Forberg, 2009, p. 700).

Criticism of the concept of a pan-European public sphere is based on the assumption that the few existing transnational media have disappeared again (e.g. *The European*) or that they attract a marginal and rather elitist audience, while the few really successful transnational media channels apply a global rather than a European perspective (Koopmans & Statham, 2010b, p. 36). Therefore, many scholars agree with Gerhards (1993, pp. 100–101, 2001, pp. 151–152) that the emergence of a pan-European public sphere fully incorporating all member-states of the EU is an unrealistic scenario due to economic, cultural and language constraints of mass media and an incongruence between electoral politics and decision-making. Thus, scholars in search of a European public sphere focus on the Europeanization of public spheres instead, established through the visibility of European actors and the salience of European issues in national mass media (e.g. Eder & Kantner, 2000; Koopmans & Erbe, 2004; Wessler et al., 2008; Koopmans & Statham, 2010a; Heft, 2017).

Vertical and horizontal Europeanization

Europeanization of communication has been defined as communication and information flows that extend beyond national borders (Zürn, 2000, p. 187; Trenz, 2015, p. 237). For example, Eder and Kantner (2000) have argued that a European public sphere can emerge if citizens from different EU countries can perceive the same issues at the same time under similar criteria of relevance (p. 315). The salience of common issues and the synchronicity of issue agendas across various EU member states are crucial to make EU-level politics and decision-making processes visible for EU citizens (Kleinen-von Königslöw, 2010, p. 44).

However, transnational communication can also emerge through transnational communicative interactions between actors from various EU member states. Koopmans and Erbe (2004, p. 101) as well as Koopmans and Statham (2010b, p. 38) have provided a fruitful conceptualization of these communicative interactions between actors from various countries as well from the European and national levels. They distinguish three forms of Europeanization through the communicative interactions between actors in a debate. First, *vertical Europeanization* refers to communicative linkages and mutual address between national and European actors and issues. This can occur as a top-down version, when actors from the European level address actors from the national level or in a bottom-up version, when actors from the national level address actors from the European level in their communication (Koopmans & Erbe, 2004,

p. 101). Second, *horizontal Europeanization* describes the communication between actors from different member states. In a weak form, this occurs when actors from one country acknowledge and refer to issues or events in another country (e.g. German chancellor Angela Merkel publicly criticizing the Italian Prime Minister Matteo Salvini for his refugee policy). In a strong form, this implies that actors from various member states directly address each other in their communication (e.g. German media report on rising death counts in the course of the Covid19-pandemic in Italy) (Koopmans & Erbe, 2004, p. 101). Third, supranational Europeanization describes communicative interactions between actors from the European level (e.g. MEPs addressing the European Council about EU policies) (Koopmans & Erbe, 2004, p. 101). In order to focus on the communicative interactions between actors in a debate, one has to take the actual actor constellation into account as well. Wessler, Peters, Brüggemann, Kleinen-von-Königslöw and Sifft (Wessler et al., 2008, pp. 12–14) as well as Risse (2015, p. 10) therefore additionally propose to include the visibility of discourse participants from national as well as European levels into the analysis when investigating Europeanization.

Figure 1. Political spaces and communicative links in a multilevel setting
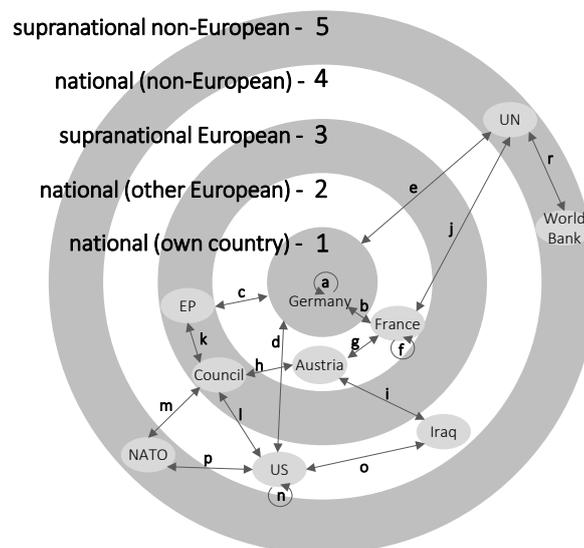
Note. **Areas** mark the political spheres in which actors are situated. In this example, Germany has been taken as the national point of reference, and thus Sphere 1 "national (own country)" corresponds to German actors. Each **arrow** represents possible communication linkages between actors, as explained in the text. EP = European Parliament; NATO = North Atlantic Treaty Organization. Source: Koopmans & Statham, 2010b, p. 39

Figure 1 depicts the reach and scope of communicative interactions of actors in (political) public communication. In this example, Germany has been chosen as the national point of reference. Therefore, the national sphere (Sphere 1) corresponds to Germany and German actors. From this perspective, the next sphere (Sphere 2) corresponds to the national public spheres and actors of other European countries (e.g. France or Austria). Koopmans and Statham (2010b, p. 39)

point out that their analysis is not limited to "EU-ization" and therefore also include European countries in this sphere that are not members of the EU. The next sphere (Sphere 3) then refers to the supranational European actors and institutions such as the European Parliament. Sphere 4 corresponds to the national spheres of countries outside of Europe and, lastly, Sphere 5 contains all supranational institutions on a global scale. The arrows refer to the communicative interactions between actors from the individual spheres and therefore correspond to the different forms of vertical, horizontal, and supranational Europeanization (and transnationalization). In traditional offline public spheres, these communicative interactions are established in the form of claims in news reporting by mass media and journalists (Koopmans & Statham, 2010b, p. 54).

Research on the Europeanization of national public spheres identifies four overarching trends. First, national mass media favor national over European actors as active speakers in national news reporting (Adam, 2008, p. 101). As a result, European actors and institutions are only rarely presented in national mass media (Koopmans & Erbe, 2004, p. 109; Koopmans & Statham, 2010b, p. 47). Second, citizens and civil society actors are generally underrepresented in national news coverages about European issues: a comparative content analysis of print and television news finds that national citizens become visible in 20 percent of analyzed news items while European citizens are only featured in 5 percent of all news pieces (Walter, 2017a, p. 127). Overall, vertical Europeanization is focused on elite actors and citizens only become visible in instances of horizontal Europeanization (Walter, 2017a, p. 173). Similar results have been found for the salience of social movements and NGOs as political challengers and intermediaries between the political level and ordinary citizens in quality newspapers: elites dominate the discourses while social movements and NGOs remain largely invisible in European news reporting (Adam, 2007b, p. 332). Analyzing political claims of collective actors in seven European countries between 1990 and 2002, Koopmans (2007, p. 196) shows that representation of civil society actors in EU news is generally low, while attention is paid primarily to institutional actors in powerful positions. Civil society actors gain visibility in mass media only in specific issue fields (e.g. agrarian policies). In light of these results, Habermas arrives at an "ambivalent, if not outright pessimistic, conclusion" about the inclusion of citizens in traditional (European) public spheres (Habermas, 2006, p. 422). Third, Europeanization is usually found to be especially low with regard to issues referring to policy fields in which EU competencies are low and national sovereignty is still strong (e.g. education) (Koopmans & Erbe, 2004, p. 109; Wessler et al., 2008, p. 45). Fourth, Europeanization has been described as a multi-dimensional process, which increases over time and especially during crises and

events of European importance (e.g. elections, summits) (Bossetta et al., 2017; Heft, 2017; Saxer, 2006).

Extending Europeanization to networked public spheres

This approach can be extended to networked public spheres and communicative linkages on social media platforms such as Twitter: Twitter's digital architectures (Bossetta, 2018) provide users with the possibility to engage in communicative interactions through @-mentions, retweets, quotes, and replies, which create actual digital links between users. These interactions as digital links can be used to analyze and measure the Europeanization of Twitter publics in terms of vertical and horizontal Europeanization. Europeanization can then be measured as the percentage of nationalized vs. European level communicative linkages (Koopmans & Erbe, 2004, p. 103) which become visible on Twitter and on other platforms in the form of communicative interaction. Europeanized networked public spheres are thus conceptualized as networks of communicative interactions on and across social media platforms and websites that connect (networked) issue publics. Europeanization of networked public spheres is conceptualized as a multi-dimensional process (Wessler et al., 2008, p. 25) in which the density of transnational communicative interaction through mentioning (i.e. @-mentions) other users, sharing, (i.e. retweets, quotes) and replying to contents (i.e. replies) increases and makes similar issues salient for citizens in various EU member states.

Twitter' digital architectures provide several possibilities for communicative interactions between users (Bossetta, 2018). First, users can address others in a debate via *mentions*. This leads to increasing salience of the mentioned user. Mentioned users also receive a notification that they are mentioned in a tweet, which makes it likely that they perceive the contents of the tweets they are mentioned in. In terms of Europeanization of networked public spheres, mentions thus create attention on the actor-level (i.e. to the mentioned actor), because the account becomes visible to all followers of the tweet sending user. Second, users can share tweets sent by other users and disseminate them amongst their own followers by *retweeting*. In contrast to quoting a tweet, which allows users to share the tweet while adding their own additional thoughts or information, retweeting is a mere replication of the original tweet without any alterations. Retweets thus provide salience to the contents of tweets and might therefore increase the Europeanization of networked public spheres by making the same issues salient for users in various EU member states. Due to the possibility to add further content, *quotes* foster the engagement of users with the contents of other users and are thus important to create

transnational debates and discussions about issues. Similar to quotes, users can *reply* to the contents of others and engage with their contents in this way.

Theoretically, social media platforms in general and Twitter in particular provide the potential for transnational communication between various actors. People from various European countries can use social media platforms to discuss issues of shared relevance, recent examples being the Covid19 pandemic, Brexit, and the EP elections. Additionally, they can put issues of societal relevance on the agenda (e.g. the #metoo and #blacklivesmatter discussions). In combination, the participatory and the transnational promise of social media platforms have led some scholars to call social media the "Habermasian ideal speech situation" (Risse, 2015, p. 7), which – in theory – provides equal communication resources to everyone affected by societal problems to publicly discuss and deliberate (see also Ruiz-Soler, 2018, p. 426). This makes social media platforms and especially Twitter with its overly politically interested user base important platforms for the Europeanization of networked public spheres.

The "transnational" and the "participatory promise" (Bossetta et al., 2017, p. 54) of social media platforms increases the potential for direct communication between citizens, civil society, and politicians from various national and European backgrounds but also between citizens and civil society actors from different (European) countries (Hänska & Bauchowitz, 2019). Not only can citizens now directly articulate issues of societal importance publicly on social media platforms (Ruiz-Soler, 2018; Ruiz-Soler, Curini, & Ceron, 2019), they can also directly address politicians via @-mentions in their tweets, share contents with their own followers (i.e. retweet, quote) or reply to other users tweets to engage in debates and/or hold them accountable for their words and actions. This may enhance the Europeanization of networked public spheres by making transnational communication between actors from various countries and from the European level easier and perceptible to other users on social media platforms (Bossetta et al., 2017, p. 54). For example, Hänska and Bauchowitz (2019) find high levels of transnational communicative interactions on Twitter, underlining its potential to foster transnational communication. Furthermore, crises and politicization as well as language are still important predictors for the Europeanization of networked public spheres (Hänska & Bauchowitz, 2019, pp. 8-10).

Finally, citizens and civil society actors can potentially make their voices heard on issues of societal relevance and therefore – at least indirectly – participate in European policy processes (Koopmans & Erbe, 2004, p. 98). For example, Ruiz-Soler (2018) investigates the actor constellations for two European issue publics on Twitter (#TTIP and #schengen), finding that

non-elite actors receive more attention than elite actors in the #schengen-debate. Non-elite actors are also more active than elite actors in terms of initiating mentions and retweets and therefore play important roles in the Europeanization of networked public spheres (Ruiz-Soler, 2018, pp. 438–439). In the #TTIP debate, however, elite actors receive more attention than non-elite actors, indicating the importance of issue-contexts for the salience of actors in European Twitter debates (Ruiz-Soler, 2018, p. 440). Furthermore, Barberio, Kuric, Mollona, and Pareschi (2020) show that horizontal Europeanization is the dominant form of Europeanization on Twitter communication and that it is the result of institutionalized communication procedures in the sense that Europeanization is a "spontaneous result of shared discontent" (Barberio et al., 2020, p. 113), which occurs when individual citizens comment on tweets of local politicians and institutions. Moreover, the negative sentiments articulated in the Twitter debate suggest that Euroscepticism acts as a driver of Europeanization also on social media platforms (Barberio et al., 2020, p. 113).

In line with previous Europeanization research, Europeanization of networked public spheres can be conceptualized as a multi-dimensional process (Wessler et al., 2008, p. 25) in which the density of transnational communicative interaction (i.e. links as edges) increases and makes similar issues salient for actors (i.e. nodes) in various EU member states. This process increases in times of politicization, contestation and crises (e.g. Euro crisis, Covid19) (Heft, 2017; Risse, 2015) as well as during (planned) events of transnational importance such as EP elections, summits, or the Eurovision Song Contest (Bossetta et al., 2017, p. 70; Saxer, 2006). To sum up the potential of social media platforms for the Europeanization of networked public spheres, one might put it in the words or Roose et al. (2017), who point out that "[s]ocial media seem to be the obvious solution for the public sphere deficit. The World Wide Web provides the infrastructure for unlimited communication across borders. In principle, social media could be the prime place for a fully Europeanised discourse" (Roose et al., 2017, p. 273).

In sum, it makes sense to discuss Europeanization in the context of networks and network analytical approaches in the age of networked public spheres and hybrid media systems since contemporary public sphere theories (Benkler, 2006; M. Castells, 2008) and European public spheres (Adam, 2007a, 2007b; Habermas, 2006; Heft, 2017; Koopmans & Zimmermann, 2010) have been discussed with network terminology. Networked public spheres can be conceived of as an interconnection of various issue publics on the web that are formed and constantly changed by actors' active communicative practices (Bruns & Highfield, 2015, p. 61). The connections are digital links established through posting and following, sharing, linking (URLs), retweeting, and answering. Network theory and measures used in network analysis can

be used to describe and evaluate these networked public spheres. Therefore, it is crucial to discuss the roles of different actors in networked public spheres and their positions in the communication network to understand how and to what extent different interests and strategic communicative actions shape networked public spheres with regard to their Europeanization, the legitimacy of the EU, and politicization and the emergence of European level conflict lines in online debates.

2.3 Accountability and responsiveness through direct communication in networked public spheres

A European public sphere as a shared and transnational communicative space within and between actors of the EU is crucial for this democratic legitimacy of the EU and decision-making processes on the European level (Grill & Boomgaarden, 2017, p. 570; Risse, 2015, p. 5). Especially in the European context, where mass media constitute a means for citizens to observe geographically distant events even more than in the national context, public spheres established through mass media are crucial for the mutual observation of political actors and citizens (Gerhards, 2001, p. 151). The democratic legitimacy of the EU has been questioned repeatedly due to the supposedly missing accountability of unelected European institutions (e.g. European Commission) and the weak accountability of the European Parliament (Fraser, 2007, p. 8, Gerhards, 2002, p. 150). The "dismissive consensus" of European governance has been replaced by a "constraining dissensus" (Hooghe & Marks, 2009, p. 5).

At the same time, the democratic deficit of the EU is – at least partly – derived from a *communication deficit* created by a

> discrepancy between Europe's institutional development, its increasing competences and influence on Europeans' way of life, on the one hand, and the continuing predominance of the national political space as the arena for public debates and the source for collective identification and notions of citizenship. (Koopmans & Erbe, 2004, p. 97)

In other words, in addition to cultural and language barriers that hinder the development of a single (pan-)European public sphere, an incongruence exists between decision-making processes on the European level and electoral processes on the national level.

Input and output legitimacy

The democratic legitimacy of multi-level institutions such as the EU has to be discussed in terms of (1) input legitimacy, referring to the responsiveness of the EU to citizens as well as citizens' participation; (2) throughput legitimacy, meaning the efficacy, accountability and

transparency of governance processes as well as the inclusiveness and openness to citizens; and (3) output legitimacy, evaluated based on policy outcomes (Schmidt, 2013, p. 2). With regard to social media potential to foster direct communicative interactions between citizens and (European) politicians, input and output legitimacy through communicative interaction deserve special consideration. *Input legitimacy* can be described as political participation *by* the people (Schmidt, 2013, p. 9, emphasis in original). Generally, input legitimacy refers to aspects of participation of citizens in political processes (Scharpf, 1999, p. 7). This includes voting but also aspects related to the communicative representation of the electorate. *Output legitimacy* can be described as governing *for* the people (Schmidt, 2013, p. 9, emphasis in original; see also Scharpf, 1999, p. 11). It requires that policies and political decision-making reflect the demands of the electorate. Therefore, accountability and responsiveness are crucial for the legitimacy of democratic institutions (Bühlmann & Kriesi, 2013, p. 46). Bovens (2007) defines *accountability* as "a relationship between an actor and a forum, in which the actor has an obligation to explain and to justify his or her conduct, the forum can pose questions and pass judgement, and the actor may face consequences" (p. 450). These actors can consist of institutions, agencies, or organizations while the accountability forum can be a single person, the media, a parliament, a court, and so forth (Bovens, 2007, p. 450). *Responsiveness* describes "the ability and willingness of political (and bureaucratic) actors to reflect changes in public opinion in their policy-making behavior" (Meijers et al., 2019, p. 1724). In other words, politicians are responsive to the electorate if the outcome of political decision-making and policy processes reflects the interests and preferences of citizens (Bühlmann & Kriesi, 2013, p. 47).

Bühlmann and Kriesi (2013, p. 58) formulate a chain of responsiveness and a chain of accountability, which can be used as a heuristic to point out the importance of communication related aspects in creating democratic legitimacy on the input and output level. Following Powell (2004), the authors distinguish four elements of the *chain of responsiveness*, namely (1) the formation, (2) the mobilization, (3) the aggregation, and (4) the implementation of citizens' policy preferences (Bühlmann & Kriesi, 2013, p. 47). The formation of policy preferences on the side of citizens requires that citizens can inform themselves about current affairs. This underlines the importance of a functioning public sphere to guarantee the availability of diverse information. Second, parties and interest groups, NGOs, and social movements try to mobilize citizens' preferences. In doing so, they provide "the political structuring" (Bühlmann & Kriesi, 2013, p. 48) that ensures diverse electoral choices. Third, the aggregation of preferences happens during elections when "political programs are translated

into the formation of political offices" (Bühlmann & Kriesi, 2013, p. 48). In this stage, the inclusion of all citizens into as well as their willingness to participate in the electoral process is crucial for responsiveness. Finally, the last link in the chain of responsiveness is the implementation of citizens' policy preferences by the elected representatives (Bühlmann & Kriesi, 2013, p. 50).

With regard to the *chain of accountability*, Bühlmann and Kriesi (2013, p. 53) identify three important elements: (1) information and justification, (2) evaluation, and (3) judgement and sanctions. First, in order for politicians to be accountable to their electorate they have to inform citizens about and justify their actions and political decisions. In this sense, accountability implies transparency, which is a crucial precondition for the subsequent elements in the chain of accountability (Bühlmann & Kriesi, 2013, pp. 53–54). Second, the accountees retrospectively evaluate the actions and decisions of politicians based on government performance. Lastly, based on this evaluation, a judgement is formed and possible sanctions may follow if the judgement is negative. The authors summarize the importance of sanctions for processes of accountability as follows: "Sanctions function like the sword of Damocles: because policy-makers know that undesired decisions and illegitimate conduct can lead to sanctions, they act according to the expectations of the accountees" (Bühlmann & Kriesi, 2013, p. 57). Thus, accountability and responsiveness are both related to communication processes, since communication and feedback options between political decision-makers and the electorate can be conceived as a precondition for both, responsiveness on the input side and accountability on the output side of democratic legitimacy.

The public sphere constitutes a forum that makes political processes and decision transparent to the public and reflects public opinion on these processes and decisions back to politicians as a means of orientation for (further) political decision-making (Koopmans & Erbe, 2004, p. 98). Responsiveness and accountability can theoretically take place in a variety of situations and actor-forum constellations on each of the various levels (i.e. EU-level, national level, sub-national level) as well as their intersections. However, since this study focusses on the question in how far the networked public sphere (and in particular Twitter) can enhance democratic legitimacy, the following discussion will focus on communication-related aspects of accountability and especially on those instances in which networked public spheres and social media platforms can provide the potential to enhance democratic legitimacy by fostering direct communication between citizens and politicians. Social media platforms open up the elite-dominated fora created by mass media and create the potential for citizens and political challengers to participate in debates, put their own issues on the agenda, and address political

actors on the national and even the European level (Ausserhofer & Maireder, 2013; Bruns, 2005, 2009a; M. Castells, 2008, 2009).

Figure 2. Direct communication on social media platforms as potential driver of democratic legitimacy on the input and output level

```
                         citizen-to-politician interaction
                               as a precondition for
                                 responsiveness
┌─────────────────┐                  ──────────▶        ┌─────────────────┐
│    Input:       │                                     │    Output:      │
│   political     │                                     │    public       │
│  preferences    │        ◀──────────                  │    policies     │
└─────────────────┘    politician-to-citizen interaction└─────────────────┘
                               as a precondition for
                                 accountability
```
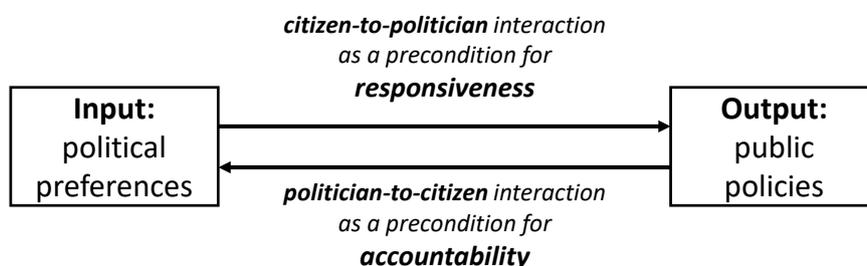
Note. Based on Bühlmann & Kriesi, 2013, p. 46

Direct communication as a precondition for input and output legitimacy

Based on a simple model of responsiveness and accountability from Bühlmann and Kriesi (2013, p. 46), Figure 2 depicts the potential of social media platforms to affect both mechanisms through communicative interaction. On the input level, social media platforms can offer the *preconditions to enhance the responsiveness of politicians to citizens' demands by providing the opportunity for citizens to address politicians directly and articulate their wishes and demands*. This becomes observable (and measurable) in the form of communicative interactions from citizens and civil society actors to political actors. On the output level, social media platforms may provide *a precondition for enhanced accountability by offering the potential for citizens to observe the performance of politicians and hold them accountable publicly*. In order for this to happen, politicians need to communicate their decisions to the electorate. Thus, mutual communicative interaction between citizens and civil society actors on the one hand and political actors on the other hand can be used as communication-based indicators for the potential of social media communication to enhance responsiveness and accountability.

However, research on the use of social media platforms by (European) politicians finds that direct communication between politicians and citizens is limited. Various studies point to the "broadcasting" nature of (European) politicians' social media use and show that social media platforms are mostly used for information dissemination rather than to interact with and respond to citizens (Fazekas, Popa, Schmitt, Barberá, & Theocharis, 2021, p. 392; Kalsnes, 2016, p. 8; Magin, Podschuweit, Haßler, & Russmann, 2017, p. 1714). With regard to MEPs social media use, Haman, Školník, and Čopík find that MEPs mostly use Twitter to communicate with the "Brussels bubble" (2023, p. 4), meaning (international) journalists and other MEPs.

Additionally, in those instances in which communication between citizens and European actors and institutions does occur on social media platforms, the communication has been shown to be dominated by very technocratic language and terminology (Özdemir & Rauh, 2022, p. 142), which might hamper the understanding between citizens and politicians. These results suggest that politicians do not implement the interactive potential of social media platforms in their communication strategies. However, Özdemir and Rauh (2022, pp. 141–142) also find that the number of tweets sent by supranational European actors as well as interaction with these tweets have increased since 2010, indicating better information and participation of citizens. Thus, analyzing the potential of increasing democratic legitimacy of the EU through direct communication between citizens and politicians in the context of the 2019 EP election debate can provide further insights into social media's potential for democratic legitimacy through direct communication.

In sum, social media offer the potential to enhance the democratic legitimacy of the EU by providing the opportunity for direct communication between citizens and politicians on the input (i.e. precondition for responsiveness) and output level (i.e. precondition for accountability). First, the possibility of easy transnational communication has the potential to create a transnational forum for accountability and the information of European citizens about issues of European relevance. As such, social media platforms may also foster the notion of a European public sphere through the salience of the same issues at the same time under similar criteria of relevance (Eder & Kantner, 2000, p. 316). Second, the inclusion of diverse sets of actors can foster the mobilization of citizens' policy preferences, lead to higher political competition between incumbents and challengers, and enlarge the potential forum of accountability to which decision-makers have to justify their actions. Third, the possibility for direct communication between politicians with citizens as well as civil society actors creates direct mechanisms of responsiveness and accountability, which can greatly increase the perceived democratic legitimacy of (national and European) politicians when implemented in their communication strategies. Conversely, the abundance of voices online as well as potential fragmentation and polarization of online debates suggest that these possibilities and positive impacts of social media platforms on the democratic legitimacy of the EU are limited in practice. The question in how far possibilities of direct communication between politicians on the hand and citizens and civil society actors on the other hand are actually implemented therefore deserves empirical scrutiny.

2.4 Politicization and European conflict lines in networked public spheres

Politicization refers to the public visibility and discussion of contentious matters of political and societal importance. Politicization is defined as a three-dimensional concept that includes "(a) the growing salience of European governance, involving (b) a polarisation of opinion, and (c) an expansion of actors and audiences engaged in monitoring EU affairs" (De Wilde, Leupold, & Schmidtke, 2016, p. 4). For instance, Wessler et al. (2008) demonstrate that higher levels of Europeanization result from the politicization of issues related to European integration, which becomes apparent by the increased visibility of European actors and issues in the national news coverage of different countries. Politicization has therefore been discussed as a challenge for as well as a potential driver of Europeanization and democratic legitimacy of the EU: "Politicization does not imply de-legitimation, per se. On the contrary, a political public sphere promoting discursive processes of opinion formation is classically seen as a legitimizing force for a political system" (Barisione & Michailidou, 2017, p. 3).

Research on the politicization of European integration has received much scholarly attention after Hooghe and Marks (2009) famously claimed that the "permissive consensus" with European integration has been replaced by a "constraining dissensus" by many EU citizens (p. 5). As such, it is often discussed in the context of conflict and crises. For example, the Euro crisis has sparked contestation between European creditor and debtor countries and has therefore increased the salience of European issues in national public spheres (Hutter & Kriesi, 2019, p. 1001). The contestation became apparent through different frames in mass media reporting in creditor countries such as Germany and debtor countries such as Spain (Heft, 2017, p. 64). Kriesi (2016, p. 34) also points to referendums as potential drivers of politicization since they "provide dissenting voices with a public forum they usually lack". However, politicization not only leads to increasing Europeanization in the sense of increased salience of European issues and actors in the news. It also increases political contestation around issues of common concern and might thus lead to the emergence of political conflict lines and cleavages. For instance, Hutter and Kriesi (2019, p. 1000) contend that the growing popularity of Eurosceptic parties across the EU can be attributed to the failure of mainstream parties to mobilize on the topic of European integration, which has allowed Eurosceptic political opponents from both the left and the right to politicize the debate over European integration. Growing Euroscepticism is thus related to pro-European mainstream parties have traditionally tried to depoliticize issues related to European integration. It has been argued (e.g. Hooghe & Marks, 2009; 2018; Kriesi et al., 2006) that the contestation of issues related to European integration and the resulting increase in politization on the EU level have led to the emergence of new political conflict lines on the European level.

Cleavages and conflict lines

Politicization of certain issues and positions may lead to the emergence of conflict lines and cleavages, when (political) actors decide to campaign and mobilize potential voters on these positions (Enyedi, 2005, p. 699). Cleavages can be described as "deep and long-lasting divisions of groups based on some kind of conflict" (Bornschier, 2009, p. 2) and traditional cleavage research focusses on the importance of cleavages for voting behavior and the emergence of European party systems. Lipset and Rokkan identify two major historical developments that constitute "critical junctures" (1990, p. 123) along a territorial and a functional line of division, which have created four central cleavages: (1) the national revolution (i.e. the process of nation-state formation) and reformation resulted in a center-periphery and a religious cleavage and (2) the industrial revolution resulted in an rural-urban cleavage and a class cleavage (Lipset & Rokkan, 1990, p. 130).

The *center-periphery cleavage* is a conflict between the central nation-building culture and the increasing resistance of ethnically, linguistically, or religiously distinct subject populations in the provinces and peripheries (Lipset & Rokkan, 1990, p. 101). Contemporary manifestations of the center-periphery cleavage can be found in wealthy regions such as Flanders (Belgium) and Catalonia (Spain), that demand independence resulting in separatist movements strongly supported by high-income voters (Gethin, Martínez-Toledano, & Piketty, 2022, p. 11). The *religious cleavage* describes "the conflict between the centralizing, standardizing, and mobilizing Nation-State and the historically established corporate privileges of the Church" (Lipset & Rokkan, 1990, p. 101). It is of great importance for party system formation in various European countries (Ertman, 2010), which is still reflected today by the presence of religious parties in many party systems (e.g. Germany's Christian Democratic Union (CDU), or the European People's Party (EPP) fraction in the EP). However, religious based voting is declining in many countries due to secularization and economic changes (Best, 2011, p. 280). The *rural-urban cleavage* describes the "conflict between the landed interests and the rising class of industrial entrepreneurs" (Lipset & Rokkan, 1990, p. 101). Today, the rural-urban cleavage coincides with a variety of other structural divides in Western democracies. For example, Gethin, Martínez-Toledano, and Piketty find that the emergence of multiparty systems results in a "reshuffling of rural-urban divides within rather than across left–right blocs" (Gethin et al., 2022, p. 39), meaning that left-oriented and liberal voters are more likely to live in urban areas than right-leaning voters. Lastly, the *class cleavage* denotes the "conflict between owners and employers on the one side and tenants, labourers, and workers on the other" (Lipset & Rokkan, 1990, p. 101). The class cleavage has received significant attention in contemporary cleavage

literature. For example, Gethin, Martìnez-Toledano and Piketty (2021) analyze the interrelation of cleavage structures and social inequality in 50 countries between 1948 and 2020 and find that class-based voting has weakened since the 1980s in the sense that the distinction between low-income voters on the left and high-income voters on the right of the political spectrum no longer holds, resulting in a weakening of the political representation of class conflicts (Gethin et al., 2021, pp. 8–9). They relate this de-alignment to the emergence of new (sub-)cleavages.

These four cleavages and their mobilization in national electoral contexts have shaped the modern party system of (West) European countries (Bornschier, 2009, p. 2). Although the traditional account of Lipset and Rokkan refers to Western Europe, some scholars have provided retrospective analysis of how these cleavages have also shaped Eastern European party systems (e.g. Evans, 2010; Sitter, 2002). Lispet and Rokkan (1990) have argued that European party systems froze into place after the 1920s (p. 134) and that the general constellation of party systems in European countries more or less remained the same since then. The foundation of new parties and their establishment in national party systems is, of course, still possible as the examples of the German Alternative für Deutschland (AfD) or the Brexit Party in the UK show.

European conflict lines and networked public spheres

Scholars have proposed contemporary social divisions, which have the potential to develop into new cleavage structures. The common divides between social groups that describe contemporary democracies include education (Ford & Jennings, 2020; Gethin et al., 2021, 2022), gender (Gethin et al., 2022), age (Ford & Jennings, 2020), geographical segregation (Ford & Jennings, 2020), and increasing ethnic diversity of electorates (Ford & Jennings, 2020). On the European level, two contemporary conflict lines have been identified in the scholarly literature: (1) the conflict about European integration, and (2) the conflict about environmental protection. As Ford and Jennings point out:

> These changes to social structure, and to the prevalent sets of beliefs and values within particular groups, create opportunities for existing or new parties to mobilize support – and thus potentially give rise to new dimensions of political conflict, which can change the cleavage structure of political competition. (Ford & Jennings, 2020, p. 300)

Conflict about European integration. In the context of a growing importance of the EU with regard to member states as well as political decision-making competencies, scholars have argued for the existence of a European integration cleavage that emerges around the question of European integration on the one side and national sovereignty and "demarcation" (Kriesi et al., 2006; 2012) on the other side (e.g. Braun, Hutter, & Kerscher, 2016; Hooghe & Marks, 2018; Treib, 2021).

This conflict has been discussed under a variety of names in the literature: integration vs. demarcation (Kriesi et al., 2012) or the winners versus the losers of globalization (Kriesi et al., 2006, p. 922), eurosceptic (Treib, 2021), and transnational or GAL-TAN cleavage (Hooghe & Marks, 2018). As Hooghe and Marks argue,

> The perforation of national states by immigration, integration and trade may signify a critical juncture in the political development of Europe no less decisive for parties and party systems than the previous junctures that Lipset and Rokkan (1967) detect in their classic article. (Hooghe & Marks, 2018, p. 109)

Kriesi et al. (2006, p. 922) see the conflict over more or less European integration as a divide between the winners and the losers of the changes brought about by the economic, political, and cultural changes resulting from globalization. A European integration cleavage would then play out as a divide between those with higher education and economic security (i.e. the winners who can profit from further European integration) and those with lower education and economic security (i.e. the losers, who fear the loss of their cultural and economic stability due to further European integration and immigration). Similarly, Hooghe and Marks see the European integration cleavage as a defense of a national status quo against "external actors who penetrate the state by migrating, exchanging goods or exerting rule" (2018, pp. 109–110), which derived as a consequence of the loss of national sovereignty, higher economic exchange, and increasing immigration due to European integration. Hooghe and Marks differentiate between a TAN (traditional-authoritarian-nationalist) and a GAL (green-alternative-liberal) side of cleavage mobilization. Radical right parties occupy the TAN side of the cleavage by mobilizing against (further) European integration in terms of economic and migration policies and for national sovereignty, while GAL values are mobilized mostly by Green parties (Hooghe & Marks, 2018, p. 111; see also Dolezal, 2010, p. 548). With regard to territorial patterns of the European integration cleavage, Hooghe and Marks (2018, p. 127) postulate strong differences across Europe as a result various of interconnections with older cleavages. While the TAN side of the cleavage has been mobilized by radical right parties in Northern, Central and Eastern Europe, left-wing mobilization of GAL values occurred in Northern, Central and Southern Europe.

Brexit. A recent manifestation of the conflict over more or less European integration can be found in the Brexit referendum and the United Kingdom subsequently leaving the European Union. In the context of the campaign, two strictly divided conflict lines emerged – the Remain side, i.e. those in favor of EU membership of the UK, and the Leave side, i.e. those in favor of the UK leaving the EU. These conflict lines have led to party system change in the UK in so far as they have resulted in the establishment of the Brexit Party. The *Brexit Party* was founded on January,

20th, 2019, by Nigel Farage, the former leader of the UK Independence Party (UKIP), with the aim of providing a fast exit from the EU after Conservatives had lost voters confidence on the issue (Dennison, 2020, p. 127). In the 2019 EP elections, the Brexit party with Farage as lead candidate won 30.5% of votes from UK voters after Theresa May and the Conservatives had lost three parliamentary votes on the Brexit deal with the EU (Dennison, 2020, pp. 127–129). The Brexit party campaigned extensively on social media and in Leave-dominated constituencies in the UK despite not providing a manifesto or policy positions (Tournier-Sol, 2021, p. 386). After the UK finally left the EU on January 31st 2020, the party was renamed to *Reform UK* and changed its formerly single-issue manifesto (i.e. leaving the EU) to a manifesto strongly aligned with radical right and populist values (Zulianello, 2020, p. 332).

The conflict lines resulting from Brexit are also reflected in the use of different hashtags on Twitter by the Remain and the Leave side of the debate (Bossetta et al., 2017, p. 67). In an analysis of identity formation and polarization during the 2016 Brexit referendum, Hobolt, Leeper and Tilley (2021, p. 1477) find considerable degrees of affective polarization of identities and values around the Brexit referendum that cut across existing party lines. The authors interpret these new identities as reflecting "pre-existing – but less-politicized – social divisions, like age and education, which were mobilized in the context of the referendum and have consolidated into the newly salient identities: Leave and Remain" (Hobolt et al., 2021, p. 1477). Furthermore, the mobilization for and against Brexit has not only caused the emergence of a new party, but also led to an increase in support for the Liberal Democrats, who strongly mobilized for the UK to remain in the EU (Ford & Jennings, 2020, p. 302). Additionally, analyzing the dominant topics in Brexit-related Twitter communication between December 2018 and February 2020, del Gobbo, Fontanella, Sarra, and Fontanella (2021) find that important events related to Brexit triggered particular high levels of Twitter communication and that the topics discussed reflect the arguments of those in favor of Brexit and national sovereignty on the one side and those in favor of EU membership and European integration on the other side. Following Treib (2021), Brexit can be considered a national manifestation of the conflict between those in favor of European integration and those in favor of European integration.

Conflict about environmental protection. The emergence of a potential environmental conflict on the European level has also been subject to scholarly debate. While some argue that the debate about more or less environmental protection plays out as a new conflict on the European level (e.g. Ford & Jennings, 2020; Gethin et al., 2021, p. 618), others argue that it is "absorbed within

the traditional left-right continuum" (Andersen & Evans, 2005, p. 58, see also Hooghe & Marks, 2018).

The potential emergence of an environmental conflict on the European level deserves attention for several reasons: First, environmental protection can be considered most successful when as many countries as possible adhere to them, making European policy making particularly important for environmental protection (M. Castells, 2008, p. 82; Della Porta, 2013, p. 2). At the same time, these policies are implemented on the national level, which may foster politicization and Europeanization by putting EU policies on the national agenda (Reber, 2019). Second, Green parties have received great electoral support in many countries during the 2019 EP elections and this trend is likely to continue in the future: "As the consequences of the current deterioration of the environment on the conditions of social life eventually unfold, they [i.e. environmental issues, V.B.] will likely play a structuring role in generating new coalitions with constructive political visions" (Gethin et al., 2021, p. 619). Third, environmental issues have been shown to cause politicization and polarization (Castro & Kammerer, 2021; Gethin et al., 2021; Hanusch & Meisch, 2022). For example, Hanusch and Meisch (2022) relate the conflict between those in favor of environmental protection and those in favor of tradition and stability to a divide between younger, well-educated, and science-oriented actors versus those with right-wing populist identities and values (Hanusch & Meisch, 2022, pp. 7-10).

Furthermore, Green parties have gained significant amounts of votes in the 2019 EP election in many countries compared to previous elections (Fenoll, Haßler, Magin, & Russmann, 2021, p. 14) and a number of environmental social movements such as *Fridays for Future*, *Extinction Rebellion*, or *Letzte Generation* (Last Generation, primarily active in Germany and Austria) were founded in recent years. This suggests that voters differentiate their voting behavior in European and national elections and it provides an indicator against the 'freezing' hypothesis of party alignments suggested by Lipset and Rokkan (1990, p. 134) – at least on the European level. Additionally, it makes the European level the right place to look out for a potential environmental conflict line. For example, Gethin, Martinez-Toledano and Piketty (2021, p. 619), who study the changes in socioeconomic structures and their relation to voting in 50 democracies, argue that "one may also imagine a democratic universe structured by new forms of cleavages, starting with the future of the environment and the conditions of a durable cohabitation between humans and nature." The authors draw this conclusion based on the increasing importance of Green and environmentalist parties and issues in their analysis and their accelerating effects on the rise of "multi-elite" party systems and the decline of the class cleavage (Gethin et al., 2021, p. 619).

Emerging conflict lines in networked public spheres

Social media platforms offer the potential to engage in communicative interactions with like-minded individuals and may therefore deepen contemporary conflict lines (Heft et al., 2017; Himelboim, Smith, & Shneiderman, 2013; McPherson et al., 2001). Thus, it makes sense to analyze emerging conflict lines apparent in the community structures of social media communication as indicators for emerging conflicts and cleavages.

Figure 3. Identifying conflict lines based on cohesive subgroups
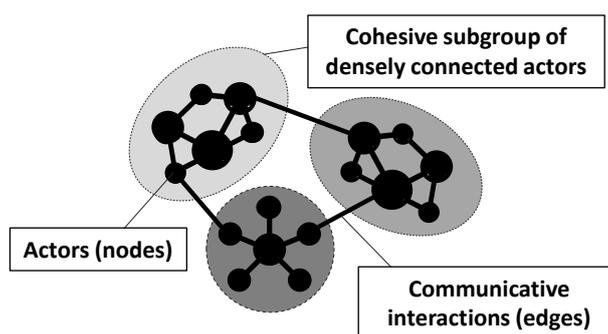
Note. Source: own depiction

Since conflict lines and cleavages are deeply rooted in the social structures of an electorate and manifested by mobilizing decisions of parties, (European) conflict lines should become apparent in the community structure of communication networks – which reflect strategy communicative choices of actors in a debate – on social media platforms. Figure 3 illustrates the emergence of cohesive subgroups in (communication) networks as groups of densely connected nodes (Wasserman & Faust, 1994, p. 249). On social media platforms, communities emerge through the strategic communicative interactions (edges) of the actors (nodes) that participate in a debate. These interactions (i.e. mentioning, sharing, replying) create digital links that signify communicative interaction between actors and through which information can travel in communication networks. Put differently, actors participating in a debate on social media platforms consciously decide whom they mention in their post or whose contents to share with their own followers. In line with the principle of homophily, actors are more likely to interact with those who share similar characteristics to them (McPherson et al., 2001). Research finds these homophily effects across a large variety of different actor attributes, including race, sex, gender, religion, and (political) beliefs (McPherson et al., 2001, p. 418). As a result, conflict lines would become apparent through many links between members of the same political ideology on a certain issue of societal relevance while at the same time receiving and sending

few links from and to actors with contrasting political ideologies and opinions on the matter in question.

A network-oriented approach to the investigation of political cleavages is offered by Heft, Wittwer, and Pfetsch (2017, p. 196), who argue that communicative interactions on Twitter between parties and individual politicians with pro and anti-EU positions can provide insights on the existence of a European integration cleavage. By analyzing the Twitter communication and the connections between parties and individual politicians in four European countries (i.e. Germany, France, UK, Poland) the authors show a strong separation between pro- and anti-EU parties into separate communities with limited numbers of links between each other (Heft et al., 2017, p. 209). Additionally, networks are confined to national borders with almost no cross-national interactions between parties from different countries (Heft et al., 2017, p. 211). These results indicate that Twitter communication can serve as a first indicator of an emerging European integration cleavage between parties with pro- and anti-EU positions.

Eurosceptic voices from both ends of the political spectrum are the main drivers of EU politicization (Hutter & Kriesi, 2019, p. 1000). Dutceac Segesten and Bossetta (2019, p. 1052) utilize a combination of topic modelling and manual coding to analyze Eurosceptic news reporting in the 2014 EP election campaign and find that Euroscepticism as a news topic occurs in various EU countries and might thus even contribute to the emergence of a European public sphere. Similarly, Adam and Maier (2011, p. 448) analyze in how far parties from six European countries (Bulgaria, Czech Republic, Germany, the Netherlands, Spain, UK) campaign on the contestation about European integration in the 2009 EP elections. The results indicate that EU contestation is higher in countries with many Eurosceptic parties indicating that Eurosceptic parties can act as drivers of EU politicization and thus Europeanization. Treib (2021) argues that the success of Eurosceptic parties in many EU countries can be considered a result of a new center-periphery cleavage on the European level with the goal of defending national cultural and economic sovereignty (Treib, 2021, pp. 182–183). If a European integration cleavage as a contemporary manifestation becomes salient in the communicative interactions during the 2019 EP election debate on Twitter, one might thus assume it to emerge in a community structure that reflect this left-right distinction in terms of actors' political ideology.

Overall, it becomes apparent that online communication and social media platforms have led to more complex communication environments compared to legacy media, which have the potential to increase Europeanization and democratic legitimacy of the EU. I argue that it is worthwhile to analyze European conflict lines as community structures in the contemporary

communication environment provided by online communication and social media, because it provides the possibility for direct mobilization of certain issues and the formation of communities through easy communication with like-minded individuals. Europeanization of networked public spheres is determined by a more diverse set of actors with specific strategies and resources, who can engage in direct communication with each other (Benert, 2021; Benert & Pfetsch, 2022). Since social media platforms offer the potential to communicate directly with (distant) potential voters, the importance of European level conflict lines and their mobilization or de-mobilization in election campaigns becomes a relevant focus when analyzing European election debates on social media platforms (Enyedi, 2005). The following chapter will therefore discuss the state of research regarding the goals and communicative strategies of different actor groups in the context of Europeanization and the legitimacy of the EU. The focus lies on political actors, civil society, media actors, and citizens as the most important actor groups in democratic societies.

2.5 An actor-centered approach to networked European public spheres: Who communicates about Europe?

The direct nature of communication on social media platforms such as Twitter puts those into the focus of analysis who use these platforms to communicate publicly (Benert, 2021; Bruns & Highfield, 2015). Journalists no longer act as the only gatekeepers in networked public spheres (Bruns, 2005) and journalistic selection processes are no longer the only determinants for the actors and issues that receive attention online. Instead, online visibility is determined by network structures and adheres to a power law distribution, in which a few central actors receive most of the attention in terms of communicative ties and most actors only receive limited attention (Barabási & Albert, 1999, p. 510). Different actors can become the subject of communication as well as the communicator at the same time (M. Castells, 2008) and actors and their specific communication situations (i.e. their strategies, context conditions and goals of communication) directly influence the outcome of the communicative processes. They can strategically decide to emphasize or de-emphasize certain issues in their online communication and whether or not to establish communicative interactions with other actors in the debate. Therefore, Europeanization, democratic legitimacy, as well as politicization and the salience of societal conflict lines are the results of actors' strategic decisions in networked public spheres (Adam & Maier, 2011, p. 435; Enyedi, 2005, pp. 698–700; Evans, 2010).

Due to the direct nature of communication on social media platforms, various actors can now address the issues of highest importance to them and frame these issues in ways that are most advantageous with regard to their specific goals (M. Castells, 2008, p. 90). Instead of a media

logic (Altheide & Snow, 1979; Mazzoleni, 2008) they now adhere to what has been referred to as social media logic (van Dijck & Poell, 2013) or networked media logic (Klinger & Svensson, 2015). While the media logic of traditional mass media responds to the "assumptions and processes for constructing messages within a particular medium" (Altheide, 2004, p. 294) that relate to the selection, organization, and interpretation of information for mass media, networked media logic is shaped more strongly by the distinct logic of social media platforms (Klinger & Svensson, 2015, p. 1242). These logics include technical aspects related to the digital architectures of platforms and what kinds of communicative interaction they allow users to establish (Bossetta, 2018).

Since communicative interactions on social media platforms create links to other actors and their contents and thus provide these actors with attention in networked public spheres, it is assumed that communicative interactions are also subject to strategic decisions. Thus, networked public spheres can be conceived of as an interconnection of various issue publics on the web that are formed and constantly changed by actors' communicative practices (Bruns & Highfield, 2015, p. 61). Especially election campaign communication can be conceived of as communicative situations in which politicians, media, and civil society actors strategically refer to each other to achieve their individual goals (Klingemann & Voltmer, 1998, p. 396). Elections and camapign periods are thus times with sepcific actor dynamics that can be considered to influence communicative interactions in networked public spheres. For example, interactions between politicians and citizens are important to analyze democratic legitimacy on the input and the output level because politicians are expected to address citizens more frequently in election campaign contexts in order to mobilize them to vote in the election. Citizens, on the other hand, are expected to address politicians in networked public spheres and hold them accountable for (past) actions. Civil society actors are also important, especially with regard to Europeanization and democratic legitimacy, because they represent citizens' perspectives in an organized manner.

In addition, actors are still embedded in and depend on a variety of context factors that influence their communication strategies and can therefore lead to certain patterns of communication – both with regard to which issues are addressed on certain platforms and which other actors they engage in communicative interactions with. For example, one also has to acknowledge the constraints related to specific political and media systems (Hallin & Mancini, 2004) in which the communicating actors operate. These may determine the structure of the resulting networked public spheres and thus in turn the Europeanization of online communication, direct communicative interactions as the precondition for democratic legitimacy of the EU, as well as

the formation of (potential) cleavages online. The concept of political opportunity structures can be used to conceptualize context factors of various actors and evaluate the resulting behavior. Political opportunity structures are "comprised of specific configurations of resources, institutional arrangements and historical precedents for social mobilization" (Kitschelt, 1986, p. 58) that "provide incentives for people to undertake collective action by affecting their expectations of success or failure" (Tarrow, 1994, p. 85).

2.5.1 Political actors

In democratic societies, the general goal of political actors is to gain government positions or – if already in office – maintain them (Sheafer, Shenhav, & Balmas, 2014, p. 211). Therefore, the strategic actions of political actors are primarily focused on achieving positive evaluations by potential voters in order to achieve decision-making legitimacy through voting. This is especially true for communication during elections and election campaign periods (Klingemann & Voltmer, 1998, p. 397). Political actors may use a variety of (communicative) strategies to affect public communication about issues of societal and political importance (Braun & Grande, 2021, p. 1126). The specific context-conditions and opportunity structures for political actors in the context of EP election campaigns will be summarized in the following.

Social media use of political actors. Much attention has been attributed to the use of social media platforms by political actors from various countries and in different contexts. The overarching trends related to Twitter use of parties and candidates in election campaigns can be summarized as follows (Jungherr, 2016, p. 84): first, political actors from the opposition, incumbents, and actors with large monetary resources are especially likely to use Twitter. Second, Twitter is used mostly to broadcast information instead of interacting with citizens. Regarding election campaigns, four general uses of social media platforms can be identified: providing potential voters with information, promoting candidates, connecting with potential voters, and providing audio-visual (campaign) material (Vergeer, Hermans, & Cunha, 2013, p. 142). Web 2.0 and social media platforms allow politicians and parties to engage in data-driven and algorithmically tailored campaigns to individuals depending on personal characteristics and beliefs, meant to reach those voters that would not actively visit a parties' website (Magin et al., 2017, p. 1701). However, parties still use social media platforms mostly for information instead of interactive purposes (Magin et al., 2017, p. 1714).

The percentage of MEPs who used Twitter for election campaigning has increased from 45 percent in 2014 to 79 percent in 2019, indicating its growing importance as a tool for political communication and campaign activities (Daniel & Obholzer, 2020, p. 2). Regarding

transnational communication activities, Stier, Froio, and Schünemann (2021) show that Europeanized communicative interaction between MEPs remains limited in the 2019 EP elections on Twitter. However, even though national interaction is generally higher than transnational interaction, the results indicate that the Spitzenkandidaten did receive considerable amounts of vertical interactions, at least from their own party families and that incumbents are more likely to communicate (horizontally) transnationally than new candidates (Stier, Froio, & Schünemann, 2021, p. 1475). However, it remains to be seen whether these results still hold when adding other actor groups such as media, civil society, and individual citizens into the equation.

For the 2009 EP elections, research shows that contents of tweets posted on Twitter are closely related to the election campaign materials of the respective parties. Similar results have been found in regional contexts: an analysis of politicians' Twitter use in the run up to German state election in Bavaria and Hesse in 2018 finds that the contents of politicians' tweets reflect the parties' election manifestos (Benert, 2019), showing that the political leaning of actors influences the contents of their social media communication.

Mainstream parties vs. challengers from the left and right fringes. The EU constitutes an additional layer of decision-making, which provides specific opportunities and constraints for strategic (communicative) choices (Kriesi, Tresch, & Jochum, 2007, p. 49). An analysis of the action repertoires of political actors on the national and European levels shows that communication strategies of politicians from the supranational European level are more strongly focused on the EU, while political actors from different EU member states concentrate on their specific national backgrounds (Kriesi et al., 2007, p. 64).

Additionally, the role of Eurosceptic challenger parties for the democratic legitimacy of and support for the EU has achieved considerable scholarly attention with the rise of populism and Euroscepticism in many European countries. From a communication perspective, social media platforms resonate well with populist communication styles and allow populist to circumvent traditional media channels (Ernst, Blassnig, Engesser, Büchel, & Esser, 2019; Flew & Iosifidis, 2020). While Eurosceptic and Euro-critical challengers from the left and right fringes of the political spectrum have been shown to drive conflict over European integration in order to mobilize against a pro EU-consensus (Hobolt & de Vries, 2015; Hutter & Borbáth, 2019; Kriesi et al., 2006), mainstream parties choose de-emphasizing strategies in order to avoid internal conflicts about EU integration (Braun & Grande, 2021, p. 1137; Hobolt & Rodon, 2020, p. 166; Hutter & Grande, 2014, p. 1016). For example, an analysis of parties' contestation about

European integration in six European countries (Bulgaria, Czech Republic, Germany, the Netherlands, Spain, UK) finds that parties from countries with strong Eurosceptic voices campaign more frequently on European issues than parties from countries, in which Eurosceptic voices are not as present, showing that co-orientation between parties' campaign strategies is important to explain issue salience in EP elections (Adam et al., 2013; Adam & Maier, 2011, p. 448).

Left-wing and right-wing parties' manifestos have been found to shift towards more Eurosceptic positions in the aftermath of the multiple EU crises. However, while right-wing parties' positions are affected by public support for European integration in their respective countries, left-wing parties show more critical positions towards European economic issues (Braun, Popa, & Schmitt, 2019, p. 813). Furthermore, when Eurosceptic challenger parties act as drivers of politicization of issues related to European integration, mainstream parties tend to unite in pro-EU framing to conquer anti-EU narratives (Miklin, 2014, p. 1204). These results show the impact of perceived responsiveness of the European level on public opinion and consequently challenger parties' manifestos.

However, one has to distinguish between policy- and polity-related issues when analyzing the politicization of European issues by pro- and anti-EU actors. Especially with regard to policy-issues, party- and country-specific differences in the salience of European issues exist, as an analysis of Euromanifesto data reveals (Braun et al., 2016, p. 574). European issues generally make up two-thirds of issues addressed and policy-issues outperform polity-issues in all elections since 1994 (Braun et al., 2016, pp. 579–580). Second, Euro-critical parties are found to be more likely to address constitutive European issues in their manifestos than pro-EU parties and the stronger the polarization over European integration in a party system, the less likely are parties to emphasize European policies in their manifestos (Braun et al., 2016, p. 583). Schimmelpfennig (2020) discusses the actor- and issue-related factors that influence EU-level actors' strategic decisions to politicize or de-politicize when faced with domestic pressures and states that

> elected EU actors have strong incentives and capacity to use reactive politicisation [sic!] strategies in managing bottom-up pressure – especially if they represent challenger or GAL-TAN parties, domestic salience is high and elections are close […] [while, V.B] unelected supranational actors focus on depoliticisation (except in the inter-institutional arena, in which they conflict with other EU actors). (Schimmelfennig, 2020, p. 344)

Second-order nature of European elections. Research has repeatedly stressed the second-order nature of European parliamentary elections (Reif & Schmitt, 1980), meaning that they are

perceived as less important than the national arena and are thus overshadowed by it (Schmitt, 2005). For example, the issues and campaigns that dominated early EP elections were largely shaped by national concerns and politics (Steenbergen & Scott, 2009, p. 189). The introduction of the Spitzenkandidaten system in 2014 was supposed to foster stronger Europeanization of the campaigns and increase the accountability and responsiveness of the elected candidates to a European instead of national electorate. However, various studies have found that this effect was not achieved due to still nationally anchored campaigns and elections (Gattermann & de Vreese, 2017, p. 448; Hobolt, 2014, p. 1538), even though the Spitzenkandidaten system did increase voter turnout and candidate recognition (Schmitt, Hobolt, & Popa, 2015, p. 363).

Even though EP elections as European media events "attract[.] the largest possible number of audiences" (as compared to other European events), they are still mostly directed at national electorates and audiences instead of referring to a common Europe-wide election (Michailidou et al., 2014, p. 21). As a result, politicization of European issues in the context of EP elections has been declining since 1994 (Braun & Grande, 2021, p. 1137) due to mainstream parties de-emphasizing European issues in EP elections. However, the 2019 EP elections show a contrasting trend characterized by high levels of EU politicization by mainstream parties. This emphasis on EU issues is triggered by challengers putting these issues on the agenda (Braun & Grande, 2021, p. 1137). The results emphasize the relevance of EP versus national elections as well as differentiating between challengers from the left and right for the politicization of European issues.

Interaction with other actor groups. When it comes to politicians' interaction with other actor groups on social media platforms, research mostly points towards elite-centered communication patterns: while many studies find considerable degrees of politician-politician and politician-media interaction, politician-citizen interaction is characterized mostly by one-sided "broadcasting"-styles of communication (Fazekas et al., 2021; Kalsnes, 2016; Magin et al., 2017) instead of engaging styles. This results in less engagement in terms of replies to the European level by citizens (Fazekas et al., 2021, pp. 387–389). Similar results are provided by Kalsnes (2016), who investigates Norwegian political parties' Facebook communication strategies in the context of the 2013 national elections and finds a discrepancy between parties' communication strategies for interacting with citizens and their actual lack of responsive communication. This lack is driven by parties' perception of potential consequences of communication, especially risks related to their reputation, negative media attention as well as the resources needed for social media management (Kalsnes, 2016, p. 8).

Research has also addressed the strategic decisions to communicate on certain platforms for specific purposes. For example, politicians strategically use Facebook and Twitter for different purposes. While Facebook is used for the mobilization of users, Twitter is used to comment on policies and events, which may be explained by a strategic targeting of different user groups on the two platforms (Stier, Bleier, Lietz, & Strohmaier, 2018, p. 59). Additionally, policies are discussed less frequently on social media platforms than campaign-related events (Stier et al., 2018, p. 67). Different uses of Twitter and Facebook are also accompanied by language choice: while Facebook communication mostly takes place in national languages, English is more prominent on Twitter in order to reach transnational audiences (Haman et al., 2023, p. 416). Twitter communication of MEPs mostly targets the "Brussels bubble" (Haman et al., 2023, p. 416), which includes other MEPs and journalists. In line with the findings by Stier et al. (2018), Twitter was used by MEPs mostly to inform voters about political and legislative matters, while Facebook was used for more personalized communication with voters (Haman et al., 2023, p. 416). As such, even though Twitter communication by supranational EU actors has increased seven-fold since 2009, their tweets are significantly more difficult to understand in terms of syntactic complexity, familiarity of words used, as well as verb-to-noun ratio than random tweets as well as tweets of national politicians (Özdemir & Rauh, 2022, p. 137). Therefore, citizens might have a hard time to understand supranational EU actors' Twitter communication, as an analysis of the impact of message complexity in campaign communication on political knowledge shows (Bischof & Senninger, 2018, p. 490).

2.5.2 Civil society

Civil society is broadly defined as "a set of voluntary associations, distinct from both the state and the market and sharing some common, civic values" (Della Porta & Caiani, 2009, p. 6). These include diverse forms of organized individuals, such as social movements, unions, and non-governmental organizations (NGOs), who represent diverse interests. As Habermas (1996, p. 354) points out, civil society actors have important functions in democratic societies since they may achieve visibility for citizens and their concerns in democratic political processes and thus provide a bridging role between the political level and society (see also Tilly, 2004, p. 125). As such, communication strategies of civil society actors are usually directed to political actors on the one hand, whom they address with issues and issue positions of societal relevance; and to citizens on the other hand, whom they want to mobilize for political participation (Habermas, 2006, p. 417; Oehmer, 2022, p. 2). With regard to the EU, this is especially important due to the technocratic and complex nature of its institutions (Özdemir & Rauh, 2022, p. 137).

In order to mediate between the political level and citizens by aggregating and mobilizing public opinion, civil society actors need access to the (mass) media and the public sphere (Lang, 2012, p. 4). However, they attract limited media attention (Della Porta & Caiani, 2009, p. 168; Esser & Strömbäck, 2014, p. 226) and are therefore in a weaker communication position than politicians (Habermas, 2006, p. 419) – especially in news reporting about European affairs (Koopmans, 2007, p. 201). Research on the communication strategies of civil society actors has thus quickly praised online communication and social media platforms for their potential for easy and direct possibilities to engage in public discussions about various issues, for reducing the costs of internal organization and protest mobilization (Benkler, Roberts, Faris, Solow-Niederman, & Etling, 2015; Della Porta, 2013, p. 1), and to circumvent state control and mainstream media (Cammaerts, 2015, p. 1032).

In this regard, the Internet and social media platforms have been praised as democratizing tools that allow civil society actors to engage in "free, open and responsive dialogical interaction" (Bohman, 2004, p. 144) and to decrease journalistic selection biases towards elite actors (Gamson & Wolfsfeld, 1993). For example, hyperlink networks have been shown to provide important resources for social movements and non-governmental actors in national as well as European contexts (Della Porta & Tarrow, 2005; Häussler, Adam, Schmid-Petri, & Reber, 2017, p. 3111). As Castells points out, in contemporary media environments and networked public spheres, in which power relations are structured in a global network, civil society organizations have to "think local rooted in their society, and act global, confronting the power where the power holders are" (M. Castells, 2009, pp. 90–91).

Bennett and Segerberg (2012) distinguish between traditional forms of collective action and more recent forms of connective action. The *logic of collective* action refers to "the organizational dilemma of getting individuals to overcome resistance to joining actions where personal participation costs may outweigh marginal gains, particularly when people can ride on the efforts of others for free" (Bennett & Segerberg, 2012, p. 748). Traditional forms of political participation such as protests are demanding in terms of the resources (time, money, (political) knowledge and interest) individuals need to invest, which often makes mobilization efforts difficult; while online communication and social media platforms, however, have lowered these costs not only for civil society actors trying to mobilize supporters, but also for citizens seeking political participation (Barisione & Michailidou, 2017, p. 10). The *logic of connective action* refers to "networks [that] are typically far more individualized and technologically organized sets of processes that result in action without the requirement of collective identity framing or the levels of organizational resources required to respond effectively to opportunities" (Bennett

& Segerberg, 2012, p. 750). For example, online petitions (e.g. Lindner & Riehm, 2011; Wright, 2016) and hashtag activism (e.g. George & Leidner, 2019; Xiong, Cho, & Boatwright, 2019) have been shown to drive political participation. Importantly, collective and connective action forms are not mutually exclusive, but can occur within the same civil society organization (Bennett & Segerberg, 2012, p. 754). The degrees to which different groups and organizations implement forms of collective or connective action varies, but generally social media platforms and online communication have lowered the costs of self-organization and mobilization of supporters in various countries of civil society actors (Bennett & Segerberg, 2012, p. 753).

Social movements. Social movements are informal networks of individuals that organize with regard to a specific cause or societal problem and share a form of collective identity (Della Porta & Diani, 2006, p. 20; Rucht, 1994, pp. 338–339). With regard to the communication of social movements on a European level, Della Porta (2013, p. 2) distinguishes two strategies: domestication and externalization. *Domestication* describes the attempts to influence politicians on the national level in order to achieve policy changes at the European level. *Externalization* refers to the mobilization of European actors to put political pressure on the national level. Domestication and externalization strategies act as drivers of Europeanization from below because social movements simultaneously target various levels of governance (Della Porta, 2013, p. 3). Attempts to influence political decision-making on the EU level are most successful when social movements use tactics that target multiple levels (Kriesi et al., 2007, p. 51). Thus, social movements are expected to address political actors from the national as well as the EU level in their Twitter communication about the 2019 EP elections to put issues of societal importance on the agenda in the election campaign and therefore act as drivers of the Europeanization of networked public spheres.

Concerning Europeanization, social movements mostly choose domestication strategies (37 %) and predominantly target the national level with protests due to the inaccessible, complex, and unaccountable nature of supranational EU governance (Della Porta & Caiani, 2009, p. 41). Here, national governments act as intermediaries to the European level. Strategies of externalization (34 %) are used in about one third of the instances and have been found to increase over time, which indicates that social movements try to adapt to the multi-level nature of the EU (Della Porta & Caiani, 2009, pp. 52–54). Additionally, a network analysis shows social movements and NGOs are in the periphery of the network indicating limited influence on EU level policies (Della Porta & Caiani, 2009, p. 169).

A special consideration should be paid to movements concerned with issues of inherently supranational or global relevance, because their mobilization strategies are expected to especially target transnational supporters as well as institutions. For example, Vicari (2014) analyzes hyperlink networks of movements from the transnational World Social Forum (WSF) coalition and finds strong homophily effects of movements' geographical location and languages on tie-formation (p. 105), which contradicts transnationalization mechanisms. On the contrary, Fridays for Future (FFF) as a movement concerned with climate protection and climate justice draws upon a particularly heterogenous group of supporters in terms of education and social class (Della Porta & Portos, 2021, p. 11). Since 2019, FFF has mobilized protests in many countries, showing the potential for great transnational interaction and mobilization (de Moor, de Vydt, Uba, & Wahlström, 2021). Furthermore, the movement has gained considerable attention of mass media, support from scientific actors as well as a growing collective (European) identity (Huth, 2019, pp. 7–8). This not only underlines the potential of social media communication for the transnational communication and mobilization of social movements, but also points to their importance in the emergence of an environmental conflict that cuts across the traditional class cleavage (Della Porta & Portos, 2021, p. 13).

NGOs. NGOs and social movements share many similar characteristics and goals and an empirical and conceptual distinction between them is not always made (Lewis, 2010, p. 1058). While social movements rely on grass-roots organization forms and protests to achieve their goals, NGOs target the political level more strongly with their strategies (Della Porta & Caiani, 2009, p. 26). NGOs are therefore expected to adhere to similar communication strategies as and build alliances with social movements. Crepaz (2022, p. 1459) analyzes NGO activity in Facebook groups in the context of migration and refugee protection and shows that what started off as a regional Facebook group (i.e. *Solidarität mit Flüchtlingen/Solidaritá con i profughi*) quickly turned into transnational activism with transnational collaboration and communication that is directed at the supranational European level. This case study provides indication for the democratizing and Europeanizing potential of social media platforms. Conversely, Müller and Slominski (2022, pp. 4785–4786) analyze the de-politicization strategies and governments' obstruction in the Mediterranean region in the face of humanitarian NGOs' mobilization strategies. The authors find that while Salvini and the populist radical right *Conte I* government were in charge, obstruction of humanitarian NGOs went hand in hand with the mobilization of radical right populist values and the politicization of anti-EU narratives. The mainstream *Conte II* government simply de-politicized the conflicts and issues mobilized by NGOs. Taken together, online communication and social media do provide important mobilization and

communication tools for NGOs, but political context conditions are still important for their success in Europeanization and mobilization strategies.

2.5.3 Media actors

Media themselves are important actors in political debates for several reasons. First, they fulfill important functions in public spheres by selecting and providing information and interpretation of important events, policies and political decisions (Koopmans & Erbe, 2004, p. 99). They foster democratic legitimacy on the input and output level by providing the opportunity for mutual observation of politicians and citizens (McNair, 2000; Schmidt, 2013). Thus, journalists are often described as the fourth estate or watchdogs and play important roles for democratic legitimacy of the EU – even in online communication environments (Esser & Neuberger, 2019, p. 194; Norris, 2014).

Second, agenda setting research suggests that journalistic reporting can affect the issues prevailing on the public agenda (McCombs & Shaw, 1972). By selecting and reporting on some aspects of certain issues and obscuring others, journalists create frames that "[…] promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation […]" (Entman, 1993, p. 52). Europeanization research has often analyzed the framing of issues from a European instead of a national perspective and the use of 'we'-references to foster the emergence of European identities. Experimental studies show that positive or negative framing of the EU in news reporting affects recipients' evaluation of and support for EU policies as well as satisfaction with the EU in general (de Vreese & Boomgaarden, 2003; de Vreese, Boomgaarden, & Semetko, 2011; Schuck & de Vreese, 2006). References as 'we Europeans' have increased gradually since the 1980s, which indicates a "nascent trend towards the Europeanization of public identities" (Wessler et al., 2008, p. 50). Risse (Risse, 2010, p. 231) interprets this as a positive development for European democracy.

Third, journalists themselves can appear as speakers in political debates and comment on issues and events (Eberwein, Porlezza, & Splendore, 2015, p. 2; Pfetsch, 2008, p. 22). As such, media actors play important roles for the Europeanization of public spheres and the democratic legitimacy of and public support for the EU by presenting news from a European perspective, featuring European actors in news reporting, and favorably reporting about EU policies and events (Pfetsch, 2008, p. 22). For example, a study on the interplay between media and political actors with regard to agenda setting influence in the context of the 2014 EP election campaigns shows that most public communication is driven by media actors, which emphasizes the

importance of media actors as agenda setters during European parliament elections (M. Maier, Bacherle, Adam, & Leidecker-Sandmann, 2019, p. 173).

Reporting about the EU. News values research suggests that events become news when they combine several news factors (Galtung & Ruge, 1965, pp. 70–71). The EU is not considered a particularly newsworthy topic due to its (perceived) limited impact on people's lives and EU policies and decisions are often discussed from a national rather than a European perspective (de Vreese, 2003, p. 165). Thus, journalistic decisions regarding news selection and framing may affect the Europeanization and evaluation of the EU in national public spheres. Research on newspapers' position taking on the EU and European integration in seven European countries (France, Germany, Italy, the Netherlands, Spain, Switzerland, UK) shows that levels of Europeanization and positions towards European integration vary depending on country contexts and issue fields. Media in France, Germany, and Italy show considerable degrees of Europeanization and positive evaluations of European integration, while Dutch and Swiss media were rather nationally confined in their news reporting. The UK provides an exceptional case with a national focus and critical stance towards EU integration (Pfetsch, 2008, pp. 33–34).

Media are therefore relevant actors with regard to the Europeanization and the democratic legitimacy of the EU. National context conditions related to the media system and political system may affect news reporting about the EU (e.g. in terms of journalistic norms and working routines, political parallelism, and the media landscape in specific countries (Barberá, Vaccari, & Valeriani, 2017, p. 27; Hallin & Mancini, 2004, p. 67).

Journalism and social media platforms. Regarding social media platforms, media actors are still considered to hold important roles and network positions even though they have lost their exclusive gatekeeping functions (Bruns, 2005). Power relations from traditional public spheres are mirrored in online communication settings (M. Castells, 2011; Larsson, 2013). Journalists can also still be considered resourceful actors due to their institutionalized access to news sources and research possibilities. This is especially true for the European level, which is usually not directly perceptible to ordinary citizens (Statham, 2010, p. 4).

The potential of online communication and social media platforms for journalists and media outlets has been related to the distribution of news articles. For example, journalists have been found to use hashtags as means of tagging their contents more frequently than politicians (Enli & Simonsen, 2018, p. 1089). Furthermore, journalists use social media platforms – especially Twitter, due to its relevance for political communication (Jungherr, 2016) – as sources for

journalistic research (Bruns, Enli, Skogerbø, Larsson, & Christensen, 2016; Parmelee, 2014). Thus, journalists are still considered important actors with regard to Europeanization, accountability, and politicization dynamics because they may choose to take up issues from social media communication in traditional mass media contexts (Bennett & Segerberg, 2012, p. 742). Indeed, research on the ad-hoc emergence of issue publics on Twitter shows that journalists still occupy key roles in online communication networks and can provide significant levels of attention to otherwise low-resource actors such as citizens and civil society actors (Maireder & Schlögl, 2014). For example, an analysis of media actors' roles in Twitter discussions across different national contexts (i.e. Germany, France, Russia, USA) suggests that media are still important as information providers in social media debates (Bodrunova, Litvinenko, & Blekanov, 2018, p. 186).

Media actors have to adhere to different communication logics on social media platforms compared to offline communication channels. While traditional mass media were characterized by specific working routines that "reflect[ed] the goals, traditions, and routines of a given media organizations and an adaptation to the demands of the audiences" (Mazzoleni, 2008, p. 1), social media platforms adhere to a different logic. This has been referred to as 'social media logic' (Enli & Simonsen, 2018) or 'networked media logic' (Klinger & Svensson, 2015) and describes changes in online communication environments and on social media platforms related to the production, distribution, and consumption of news. Social media platforms allow journalists to communicate news almost in real time instead of adhering to specific print or television schedules (Chadwick et al., 2016, p. 14).

Additionally, media actors have lost their exclusive position as gatekeepers due to decreasing financial, technical and time-related resources needed to produce and publish content on social media platforms, blogs, or websites (Bruns, 2009b). This leads to mixing of journalistic and amateur contents online (e.g. citizen journalism, bloggers) but also to blurring boundaries between factual and entertaining contents (Neuberger, 2018, pp. 37–38). As a result, the role of news media and journalists in networked public spheres has been described as moving from 'truth keepers' to 'truth mediators' (Michailidou & Trenz, 2021, p. 1340). For example, journalistic hashtag usage on Twitter is closely linked to journalist norms and role perceptions and conclude that "[s]ocial media logic is largely moderated by both the professional norms of the specific user groups and by the media logic of mainstream media" (Enli & Simonsen, 2018, p. 1092).

On social media platforms, all users also have to adhere to the technological affordances created by the digital architectures of different platforms. Posts on Twitter are limited to 280 characters and Instagram focusses on visual contents while texts are only secondary. Twitter (and other platforms) allows to include URLs to contents on other platforms and websites and to contextualize tweets by using hashtags, allowing media actors to refer to longer articles and spread their contents to diverse audiences (Bossetta, 2018, p. 482). Entertainment, shareability and audio-visual materials are more important news factors on social media platforms than in traditional media (Harcup & O'Neill, 2017, p. 1482). EU policies and issues are expected to not resonate well with the digital architectures of social media platforms due to (1) the technocratic and complex nature of EU politics, which is not easily explained in 280 characters and (2) missing news values such as proximity or personalization of EU level events and politicians (Heidenreich, Eisele, Watanabe, & Boomgaarden, 2022, p. 128).

Communicative interactions of media actors. When it comes to communicative interactions on social media platforms, one needs to differentiate between accounts of media outlets and those of individual journalists. However, research shows that journalists' role perceptions influence the contents of their private tweets (Tandoc, Cabañes, & Cayabyab, 2019, p. 867). This shows that media routines affect private social media use of journalists. Also, individual journalists can be considered to hold advantageous positions and resources with regard to their access to information and knowledge about certain issues due to their professional roles that can be considered to prevail even when journalists communicate privately on social media platforms. These advantageous positions of media actors in social media communication networks becomes apparent in the study of Kapidzic, Neuberger, Stieglitz, and Mirbabaie (2019) who investigate communicative interaction between different actor groups on Twitter to identify important actors in Twitter discussions. While topic-specific differences exist in the interaction patterns of actor groups, media actors are in general still the most important actor group in terms of incoming communicative interactions (including retweets as well as URLs) from other actor groups (Kapidzic et al., 2019, p. 266). Thus, from a network perspective, media actors still act as authorities in communication networks who provide credible information on topics of societal relevance.

Twitter's potential for direct interaction is also crucial with regard to journalist-citizens interaction. Research shows that expectations about journalistic performance affect citizens' communicative interactions with journalists on Twitter and these instances of direct communication with journalists may lower perceived media biases on the side of citizens (de Zúñiga, Diehl, & Ardèvol-Abreu, 2018, p. 238). This is not only important for increasing

Europeanization of networked public spheres through communicative interactions, but might also increase satisfaction with the EU and its democratic legitimacy through the feeling of being better informed about European affairs.

2.5.4 Citizens

Citizens are important actors in democratic societies because the political level "needs input from citizens who give voice to society's problems" (Habermas, 2006, p. 421). Citizens can be considered the only 'group' to communicate on social media platforms without overarching group-specific interests and resources that may lead to coherent strategies. Ordinary citizens are defined as individuals with no political power or connection to official organizations (e.g. universities, ministries) and no obvious form of engagement in civil society organizations (e.g. social movements, NGOs, etc.). They do have certain values, beliefs, and maybe even goals related to their (communicative) actions. However, these depend on the individual citizen and cannot easily be generalized across the actor category. Therefore, citizens' actions are more likely to be influenced by their individual political leaning (Santoro, 2022, 119), the political and media context conditions of their country backgrounds (Pfetsch, Maurer, Mayerhöffer, Moring, & Schwab Cammarano, 2014, p. 31), as well as political interest and their motivation to engage in political debates online (Bossetta et al., 2017, p. 56).

Research has repeatedly addressed the importance of a European public sphere for ordinary citizens as well as their roles in it. Citizens depend on journalists and news reports to perceive information about the EU (Gerhards, 2001, p. 151; Koopmans & Erbe, 2004, p. 98). This underlines the importance of a (networked) European public sphere for informed electoral decisions on the sides of EU citizens and thus democratic legitimacy of the EU. Visibility and a positive depiction of the EU in news reporting as well as entertainment media contents has been shown to increase European identities and values (Bee, 2014, p. 1022). Compared to other actor groups, ordinary citizens hold disadvantageous positions with regard to media attention on the national as well as the European level. For example, citizens become visible in 24 percent of EU news in traditional mass media, while government actors and parties appear in 85 percent and 34 percent of analyzed news pieces, respectively (Walter, 2017c, p. 758).

Social media platforms increase the amount of political information citizens are exposed to online (Bossetta et al., 2017, p. 54), which includes information of European level policies and decision-making and might therefore lead to Europeanization of networked public spheres by making the same issues salient at the same time for citizens from various EU countries (see Eder & Kantner, 2000). Additionally, through sharing and liking of contents users contribute to

the distribution of information in their own personal networks online and can therefore make (European) political information salient for otherwise uninterested individuals (Emmer, 2019, p. 379). Thus, political information can travel in online networks, even though research has pointed out that only a few very active users drive political communication online (Ademmer, Leupold, & Stöhr, 2019, p. 323).

Salience and prestige. Furthermore, citizens can directly address issues of societal importance online (Chadwick et al., 2016, p. 19). Ausserhofer and Maireder's (2013, pp. 301–303) study of Twitter use of different actor groups in the context of national politics in Austria shows that even though elite actors from media and politics form dense networks of interaction among each other, they also communicate with non-professional actors such as citizens, which allows citizens to set issues on the agenda. Communication on Twitter in the context of two inherently European debates (i.e. #ttip and #schengen) has been found to open up debates for non-elite actors and allow ordinary citizens to achieve considerable attention in terms of indegree centrality in communication networks (Ruiz-Soler, 2018, p. 439). Especially the debate about #ttip has resulted in high engagement from non-elite actors (Ruiz-Soler, 2018, p. 440), which indicates that ordinary citizens can gain visibility in debates about European issues on Twitter; but it depends on the communication activity on the side of citizens and is thus more likely for issues that are contested or interesting.

Even though single tweets of individuals can potentially gain a lot of attention, online communication has generally been found to reflect offline power relations and actor constellations as the example of the #metoo-debate shows (Fileborn & Loney-Howes, 2019). Various studies have identified attention and prestige-metrics in online communication, including social media platforms, to adhere to so-called power law distributions (Barabási & Albert, 1999; Clauset, Shalizi, & Newman, 2009; Newman & Girvan, 2004), meaning that only a limited number of actors receives most of the attention and links in online settings while most actors receive only a small number of all links. Citizens have been found to attract less communicative interactions on Twitter than political or media actors (Kapidzic et al., 2019, p. 265). This has been shown in Europeanization research (Koopmans, 2007; Walter, 2017a, 2017b), but also with regard to national issues. For example, Maireder and Schlögl (2014) analyze the Twitter communication about #Aufschrei, a German debate about sexism prior to the more prominent #metoo-debate. The case of #Aufschrei shows that social media platforms do allow users to put issues on the agenda, but that media attention is still important to provide attention to these issues – especially outside of social media platforms (Maireder & Schlögl,

2014, p. 698). Therefore, it is expected that citizens will participate in the debate about the EP elections on Twitter and use the opportunity to put their own issues on the agenda and address politicians directly, but that these communicative actions will receive only limited attention.

Communicating political input. Social media platforms equip ordinary citizens with the possibility to communicate directly with people from other countries as well as political actors from the national and the European level and to publicly address issues of societal importance. They are expected to be motivated to contribute to political debates and engage in online forms of political actions more easily than before due to the ease of sharing information, liking contents and finding information online (Bennett & Segerberg, 2012, p. 753). Research shows that communicative interaction between politicians and ordinary citizens does occur on Twitter on the national (Ausserhofer & Maireder, 2013; Maireder & Schlögl, 2014) as well as the European level (Bene, Ceron, et al., 2022; Bene, Magin, et al., 2022; Ruiz-Soler, 2018; Ruiz-Soler et al., 2019). However, despite the often attributed "participatory promise" (Bossetta et al., 2017, p. 54) and the possibility for interaction and feedback options, politicians' communication strategies on social media platforms can rather be described as "broadcasting" (Fazekas et al., 2021, p. 377) than as an interaction with citizens. Taken together, citizens are likely to address politicians on the national as well as the European level on Twitter about European issues, but this communication is less likely to be reciprocated, especially by politicians from the European level.

During election campaigns, one may expect interaction between politicians and citizens to increase because politicians are expected to mobilize voters (Klingemann & Voltmer, 1998, p. 396). Research on Facebook activity shows an increase in user interaction and activity during election campaigns compared to routine times of politics (Batorski & Grzywińska, 2018, p. 368). Similarly, Twitter use of citizens is strongly event-related and has been shown to increase in the course of election campaigns with most interaction occurring close to election day(s) (Jürgens & Jungherr, 2011, p. 211).

Political leanings and beliefs. Eurosceptic and anti-EU vote have become more popular in the context of the Eurozone crisis (Hobolt, 2014). A recent analysis of user interaction with parties' Facebook posts finds that populist communication as well as domestic and immigration-related issues foster more user engagement than environmental issues (Bene, Ceron, et al., 2022, p. 444). However, this does not seem to be the case for EU-related posts: "while there is an engagement gap, and EU politics gains less engagement, at least the engagement is not received

for posts that would exacerbate extant levels of mistrust and Euroscepticism" (Bene, Magin, et al., 2022, p. 117).

3 Study design

The previous chapters discuss the changing communication environment of networked public spheres. Social media platforms have the potential to foster transnational communicative interactions between actors in various European countries and to provide a precondition for democratic legitimacy through direct communication and feedback options between citizens and political actors. At the same time, increasing politicization of European integration, growing Euroscepticism and electoral support for right-wing parties might increase the salience of European level conflict lines in online debates about the EU. Thus, when investigating communication about the EU on social media platforms from a networked perspective, three areas of research stand out as important. First, an actor-centered approach to the Europeanization of networked public spheres that looks at the communicative interactions between actors as well as the issues addressed by certain actors is necessary. Second, communication and feedback options between politicians and their electorate prompt the question of their potential as a precondition for improving the democratic legitimacy of the EU. Third, due to the increasing politicization of European integration and environmental policies as European debates combined with the possibility to directly engage in online debates with like-minded individuals one might ask in how far these (emerging) conflict lines can be observed in social media communication about the EU.

3.1 Research questions and hypotheses

This leads to three research questions for empirical analysis, in which Twitter will be used as an example for political social media communication.

> *RQ 1: In how far does Twitter communication about the 2019 EP elections lead*
> *to the Europeanization of networked public spheres with regard to*
> *(a) the actors and their communicative interactions, and*
> *(b) the issues present in the discourse?*

The first research question asks for the **Europeanization of networked public spheres** in terms of actors in the debate and the communicative interactions they establish between them as well as the issues they choose to address online. From a network perspective, Europeanization through communicative interactions can be conceptualized based on the

concept of vertical and horizontal Europeanization (Koopmans & Erbe, 2004; Koopmans & Statham, 2010a). The degree of Europeanization of networked public spheres is then dependent on actors' strategic communication and the communicative interactions they deliberately form when communicating on social media platforms. For example, political actors in government and mainstream parties are likely to address European issues in non-conflictual ways and to engage in communicative interaction primarily with those that hold similar political beliefs and policy positions as themselves in order to de-emphasize conflict about the EU (Braun & Grande, 2021; Hutter & Grande, 2014). Political challengers, however, may foster conflict about European issues, especially in the run up to the 2019 EP elections (Hobolt & de Vries, 2015; Hutter & Borbáth, 2019; Kriesi et al., 2006). As such, they might act as drivers of Europeanization of networked public spheres on the one hand, but may also trigger the emergence of new European level conflict lines. Civil society actors are generally expected to display low levels of mobilization on the European level due to the EU's multi-level institutional set up as well as the high transaction costs for communication and mobilization. On the other hand, social media communication has significantly lowered these transaction costs and allows civil society organizations to mobilize citizens in various countries, engage in transnational collaboration with other civil society organizations, and directly address politicians on a national as well as European level. From a network perspective, civil society actors are therefore expected to engage in communicative interactions with and therefore establish edges to many different actor groups from various countries and across multiple levels of governance. Media actors are considered to be in advantageous positions and important as information providers in networked public spheres despite losing their unquestioned gatekeeping positions (Bruns, 2009a; Pfetsch, Adam, & Eschner, 2008). This should reflect in incoming communicative interactions from other actors in the debate. Citizens, on the other hand, are expected to use the possibility to address elite actors, especially politicians, frequently in the debate but are unlikely to attract many communicative attention from other actor groups themselves – especially in Europeanized debates (Walter, 2017a, 2017b).

Vertical Europeanization. Forms of vertical Europeanization on social media platforms can occur as a top-down (i.e. European level actors link to national level actors ($i_{(eu)} \rightarrow j_{(nat)}$, where *eu* stands for European and *nat* stands for national) and a bottom-up (i.e. national actors link to European actors ($i_{(nat)} \rightarrow j_{(eu)}$)) variant. Based on previous research (see Chapter 2), one might expect top-down variants of Europeanization to be generally low on social media platforms, because EU level politicians use social media primarily as a form to broadcast information and less to engage in communicative interaction (Fazekas et al., 2021; Kalsnes, 2016). If top-down

vertical Europeanization does occur, it is expected to do so between elite actors (i.e. from European politicians to national politicians and national media actors ($i_{(eu\text{-}pol)} \rightarrow j_{(nat\text{-}pol)}$ or $i_{(eu\text{-}pol)} \rightarrow j_{(nat\text{-}med)}$, where pol stands for political actors and med stands for media actors). Bottom-up vertical Europeanization may involve citizens as initiators but not as senders of ties ($i_{(nat\text{-}cit)} \rightarrow j_{(eu\text{-}pol)}$ or $i_{(nat\text{-}pol)} \rightarrow j_{(eu\text{-}pol)}$).

Horizontal Europeanization. Horizontal Europeanization can occur in a strong variant, when actors from one country create actual digital links (i.e. edges) to actors from a different country through mentioning, sharing (retweets, quotes), and replying to other actors' contents. Theoretically, a weak variant of horizontal Europeanization occurs when actors refer to others in (the texts of) their social media posts without setting up digital links; however, in the following empirical investigation, will only focus on the strong variant of horizontal Europeanization because the creation of digital links creates a network of communication, in which users can follow the links and information can flow. Horizontal Europeanization can occur between actors from the same actor groups (e.g. $i_{(nat\text{-}civ)} \rightarrow j_{(nat\text{-}civ)}$, where $nat_{(i)} \neq nat_{(j)}$ and where civ stands for civil society) as well as between actor groups (e.g. $i_{(nat\text{-}cit)} \rightarrow j_{(nat\text{-}pol)}$, where $nat_{(i)} \neq nat_{(j)}$ and where cit stands for citizens). The concept of homophily suggests that edges are more likely to occur between actors that share the same characteristics (McPherson et al., 2001). Thus, horizontal Europeanization should be more likely to occur between actors from the same actor groups than between different actor groups. However, scholars have pointed out the importance of language constraints for the (lack of) Europeanization (Gerhards & Hans, 2014; Gerhards, Hans, & Carlson, 2014; Hänska & Bauchowitz, 2019), indicating that homophily effects based on the language and country backgrounds might hinder the Europeanization of networked public spheres and lead to high level of national communication on social media platforms.

Supranational Europeanization. Finally, supranational Europeanization occurs when communicative interaction takes place between actors from the European level ($i_{(eu)} \rightarrow j_{(eu)}$). This form of Europeanization is considered to be lower than other forms of Europeanization as well as national communication due to the limited number of supranational European actors compared to national level actors. Additionally, ordinary citizens without any affiliations in political parties or civil society organizations are by default considered to be national actors and can therefore not be part of this kind of Europeanization.

Additionally, in terms of issue agendas, Europeanization on social media platforms can occur when actors address European issues in their communication and therefore make these issues

salient for other actors in various EU member states (Eder & Kantner, 2000). From a network perspective, communicative interactions in the form of sharing contents online are therefore important for the Europeanization of networked public spheres, because they allow information flow between users from different countries. Political challengers in the form of oppositional parties as well as civil society organizations are expected to act as driver of Europeanization by putting European issues on the agenda in the 2019 EP election campaign (Della Porta & Caiani, 2009; Hobolt & de Vries, 2015; Kriesi et al., 2006).

> *RQ 2: To what degree can direct communicative interactions between citizens and politicians as a precondition for democratic legitimacy be observed in the debate about the 2019 EP elections on Twitter?*

The second research question addresses social media communication as a precondition to increase the **democratic legitimacy of the EU in terms of responsiveness and accountability** by providing the possibility for direct communication between politicians and those they govern. In order for democratic legitimacy to exist, (European level) politicians need to be responsive and accountable. Responsiveness describes "the ability and willingness of political (and bureaucratic) actors to reflect changes in public opinion in their policy-making behavior" (Meijers et al., 2019, p. 1724). Accountability refers to the "relationship between an actor and a forum, in which the actor has an obligation to explain and to justify his or her conduct, the forum can pose questions and pass judgement, and the actor may face consequences" (Bovens, 2007, p. 450). Social media communication cannot overcome all problems with the responsiveness and accountability of EU actors and institutions. For example, scholars have criticized the limited electoral accountability of EU institutions (Della Porta & Caiani, 2009, p. 43; Gattermann, 2015). However, as Della Porta and Caiani point out:

> The quality of democracy in the EU cannot be considered only (or mainly) in terms of constructing representative institutions, electorally accountable to their citizens. Beyond the dimension of electoral accountability there is another one linked to the construction of European public spheres, where the decisions of EU institutions can be discussed and assessed. (Della Porta & Caiani, 2009, p. 43)

Thus, the focus of the empirical analysis will be on those aspects of responsibility and accountability that are related to the communication between those with political decision-making powers and the governed.

Input legitimacy and responsiveness. On social media platforms, responsiveness may increase when citizens and civil society actors address political actors and bring issues of societal concern to the attention of politicians, which they can then consider in their policy decisions

($i_{(civ)} \rightarrow j_{(pol)}$ or $i_{(cit)} \rightarrow j_{(pol)}$). The direct communication on social media platforms from citizens to political actors may thus provide a *precondition* for democratic legitimacy on the input level. Due to social media's potential for easy transnational communication, citizens and civil society can directly address European level politicians (e.g. $i_{(nat-civ)} \rightarrow j_{(eu-pol)}$ or $i_{(nat-cit)} \rightarrow j_{(eu-pol)}$); however, research indicates that national politicians often act as intermediaries for national civil society and citizens to put pressure on European politicians (Della Porta, 2013). Thus, it is important to also consider communicative interactions from national citizens and civil society to national politicians as a potential increase of responsiveness (e.g. $i_{(nat-civ)} \rightarrow j_{(nat-pol)}$ or $i_{(nat-cit)} \rightarrow j_{(nat-pol)}$). Generally, citizens and civil society actors are expected to provide input to politicians frequently in the debate. However, since research indicates that politicians use broadcasting styles of communication more frequently than interactive styles when communicating to citizens (Fazekas et al., 2021), which is also reflected in the use of technocratic language (Özdemir & Rauh, 2022), the communicative input from citizens is not expected to be reciprocated by politicians often. National politicians are expected to be addressed more frequently than European level politicians and thus act as intermediaries for the European level due to the perceived distance of European level decision-making on the side of citizens (Hurrelmann & Wagner, 2020; Özdemir & Rauh, 2022).

Furthermore, social media posts send by citizens and civil society actors can inform politicians about public opinion on certain issues and therefore can be considered an indirect form of responsiveness. Even though this cannot be measured directly by communicative interactions, the topics addressed by citizens and civil society actors in social media debates can be used as indicators for public opinion. Responsiveness (and accountability, see below) may increase, when politicians take up these issues in their political decisions (i.e. when the issue agendas addressed citizens/civil society and politicians are similar).

Output legitimacy and accountability. Accountability of politicians and political institutions may increase (in a communicative sense, not necessarily in an electoral sense), when they answer to and thus address citizens in their communication to justify political decisions. Direct communication from political actors to citizens may thus provide a *precondition* to enhance democratic legitimacy on the output level. This can be measured by communicative interactions from politicians to citizens ($i_{(pol)} \rightarrow j_{(civ)}$ or $i_{(pol)} \rightarrow j_{(cit)}$) as well as by reciprocated communication between citizens and politicians ($i_{(pol)} \leftrightarrow j_{(civ)}$ or $i_{(pol)} \leftrightarrow j_{(cit)}$). As with responsiveness, politicians from the European level can directly address citizens and civil society actors, but national politicians are likely to act as intermediaries by communicating

European issues to national citizens and civil society actors (e.g. $i_{(nat-pol)} \rightarrow j_{(nat-civ)}$ or $i_{(nat-pol)} \rightarrow j_{(nat-cit)}$). Second, politicians can also indirectly be perceived as accountable when they inform citizens and justify their decision making. Again, this does not entail direct digital links between the actor groups, but accountability (and responsiveness, see above) can be considered to increase, when politicians take up issues of relevance to citizens in their political decisions (i.e. when the issue agendas addressed citizens/civil society and politicians are similar).

Despite the election campaign context of the analyzed debate and while social media in general and Twitter in particular allow politicians to engage in direct communication with citizens to increase their democratic legitimacy, politicians are expected to display rather elitist communication styles (Hurrelmann & Wagner, 2020; Özdemir & Rauh, 2022) on social media platforms and establish communicative interactions with other politicians as well as media actors more frequently than citizens and civil society actors.

> *RQ 3: Which European level conflict lines become salient in the debate about the 2019 EP elections on Twitter?*

Finally, the third research question seeks to investigate in how far social media communication reflects the **(emerging) political conflict lines on a European level**. As "deep and long-lasting divisions of groups based on some kind of conflict" (Bornschier, 2009, p. 2) in a society they may be mobilized strategically by parties or political challengers. From a network perspective, (emerging) conflict lines can be observed in the community structure of communication networks, because the strategic communication of actors on different sides of political cleavages should reflect in their communicative interactions (Enyedi, 2005; Evans, 2010). The principle of homophily suggests that actors establish links to like-minded individuals (McPherson et al., 2001). Additionally, strategic decisions of different actors will affect which issues are mobilized in election campaigns (Braun et al., 2019; Della Porta & Caiani, 2009; Kriesi et al., 2007). As a result, the actor and issue constellations of communities in social media debates will reflect which actors (in terms of actor groups, political leaning, and country backgrounds) discuss which issues with each other. Conflict lines become salient in the debate, when issues are discussed in communities of homogenous actor constellations, while heterogenous actor constellations allow for diverse viewpoints and differentiated discussion of societal problems among a variety of actors. For example, civil society actors can mobilize European conflicts through their social media communication and therefore affect the emergence of (European) conflict lines. Environmental movements such as Fridays for Future

are expected to mobilize policy positions in favor of environmental protection, which might lead to the deepening of an emerging environmental conflict.

Hypotheses for inferential analysis

In addition to these assumptions about the descriptive part of the analysis, several hypotheses can be formulated from a networked perspective for the inferential analysis.

Table 1. Hypotheses on tie-formation in Twitter communication about the 2019 EP elections

Network effect		Hypotheses
Structural effects (endogenous)		
Reciprocity	○◄——►○	H2: The general tendency for reciprocity in the network will be negative.
Actor attribute effects (exogenous)		
Sender effect (politicians)	●——►	H1a: Political actors and citizens are more likely to initiate ties in the network than media and civil society actors.
Sender effect (citizens)	●——►	
Receiver effect (politicians)	——►●	H1b: Elite actors (i.e. politicians and media actors) are more likely to receive ties than non-elite actors (i.e. civil society and citizens).
Receiver effect (media)	——►●	
Homophily (actor group)	●——►●	H1c: Ties are more likely to occur between actors from the same actor group than between actors from different actor groups.
Homophily (political leaning)	●——►●	H1d: Ties are more likely to occur between actors with the similar political leaning than between actors with different political leaning.
Homophily (country/language)	●——►●	H1e: Ties are more likely to occur between actors from the same country/language backgrounds than between actors from different country/language backgrounds.
Comparison of homophily effects	$p_{h\ (country/language)} > p_{h\ (actor\ group)}$ AND $p_{h\ (country/language)} > p_{h\ (pol.\ leaning)}$	H1f: Homophily effects based on country/language attributes will be stronger than homophily effects for actor group and political leaning (i.e. overall, homophily accounts for nationalization instead of transnationalisation of tie-formation).
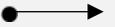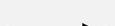
Note. Black nodes indicate actor with attribute.

Table 1 summarizes the hypotheses for the inferential analysis. First, based on previous research about strategic communication and the use of social media platforms in general and Twitter in particular by various kinds of actors (see Chapter 2.5 for a detailed discussion), it is assumed that politicians and citizens will show positive sender effects, meaning that they are more likely to initiate ties in the networks (H1a). Second, previous research (Jungherr, 2016; Vergeer, 2015) suggests that elite actors such as politicians and media actors continue to receive most of the communicative attention in online settings. Therefore, H1b assumes that the models will show positive receiver effects for politicians and media actors. Third, with regard to homophily effects, previous research suggests that actors with the same characteristics tend to form ties more frequently than actors with different characteristics (Barberá et al., 2015, p. 1537; McPherson et al., 2001, p. 415). Therefore, H1c through H1e assume positive homophily effects for different actor characteristics (i.e. actor group, political leaning, and country and language, respectively). With regard to the Europeanization of networked public spheres, it is

furthermore assumed that country and/or language specific homophily effects will be more pronounced than effects related to actor groups or political leaning (H1f). If true, this would show a tendency towards nationalization of the Twitter communication, because this would hinder transnational communication interaction since it would result in actors from the same countries and/or communicating in the same language forming ties between each other. If, however, homophily effects related to actor group and/or political leaning outperform those of country and language, one might assume that these effects can override the nationalization effects of country and language homophily and thus lead to increasing Europeanization in the Twitter debate. Lastly, with regard to the second research question that asks for the reciprocity of communicative interaction in the debate, H2 assumes that the general tendency for reciprocity in the networks will be negative, indicating little reciprocity in the debate about the 2019 EP election in Twitter. This assumption is based on general findings related to the sparsity of complex networks as well as to considerations about the actors' strategic communication in the debate (Barabási & Albert, 1999; Enyedi, 2005). Based on the election campaign background, for example, one might expect that politicians will use Twitter more frequently as a one-to-many broadcasting channel for their campaign material rather than to engage in communicative interactions with other actors in the debate (Kalsnes, 2016; Magin et al., 2017). Similarly, research on the Twitter use of journalists shows that this group mostly does not interact with other actors but rather uses Twitter as a means to broadcast news and link to their articles on other websites (Maireder & Schlögl, 2014).

3.2 Period of analysis and sampling

In order to analyze in how far communication between different kinds of actors on social media platforms may affect Europeanization, democratic legitimacy on the input and output level, and the salience of emerging conflict lines, Twitter communication about the 2019 EP elections is used as a case study. Europeanization of networked public spheres that emerges from communicative interactions between different actors can be considered to depend on the strategic communicative decisions of all actors involved in social media debates. Since Twitter is used by an especially politically interested user group across various countries (Jungherr, 2016) and has thus achieved special importance with regard to political communication, it provides a useful case study to investigate the transnational communication between different kinds of actors with various communicative goals.

Figure 4 provides an overview over the study design and methodology. To answer the first research question, the communicative interactions between Twitter users as well as the contents

of the discussion need to be taken into consideration. Thus, this question focusses on communicative interactions and issue salience in the complete network. Communicative interactions between actors are analyzed using descriptive and inferential network analytical measures. The second research question asks for the degree of direct and reciprocated communication between citizens and politicians. It focusses on the level of dyads (i.e. communicative interactions between two nodes in the network). To answer the third research question, the analysis focusses on the level cohesive subgroups (i.e. community structures) and the actor-issue constellations in these communities. Issues are identified based on STM topic proportions and actors and their characteristics are identified using a manual coding of use profiles.

Figure 4. Overview: study design and research questions
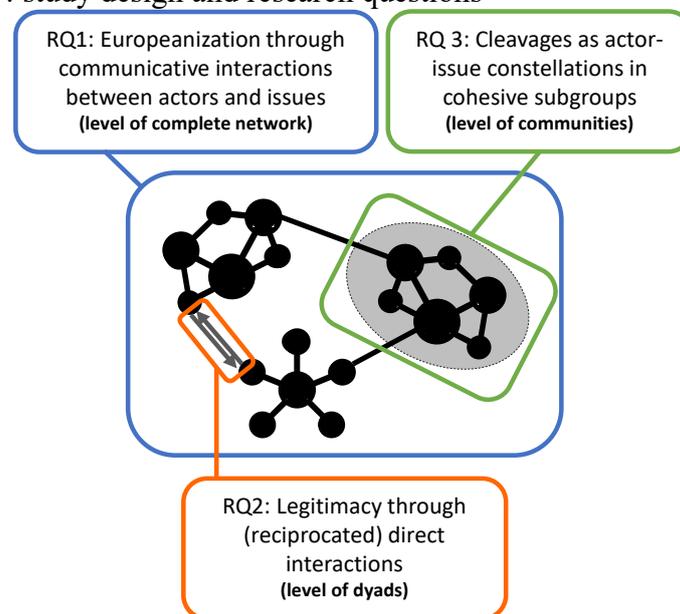
Source: own depiction

Twitter

Twitter is chosen as an example for a social media platform within the larger realm of networked public spheres. Twitter is a microblogging platform that allows users to send short messages ('tweets') of up to 280 characters. Twitter's digital architectures offer various kinds of communicative interactions (i.e. mentions, retweets, quotes, replies) (Bossetta, 2018). Users can link other users in their tweets via *mentions* (@-mentions) and share others' contents as *retweets*. More recently, users can also create polls on their timelines (Twitter, 2022a). While retweets are a mere multiplication of original tweets within a user's own followership, *quotes* allow users to share original tweets and add their contents and opinions. In order to investigate in how far these interactions are used for different purposes and whether this might result in

different effects with regard to the Europeanization (RQ 1) or input and output legitimacy (RQ 2) as well as community structures (RQ 3), the different forms of interactions will be analyzed as individual communication networks with different communicative interactions as edges and users as nodes. This allows for a comparison of network structures that arise from the different logics of interaction for mentions, retweets, quotes, and replies.

Twitter provides a well-suited example for the present research interest for several reasons. First, Twitter's open nature of communication in terms of networks structures as well as contents encourage communicative interactions between users. As Bossetta points out (2018, p. 479), compared to other social media platforms (e.g. Facebook), Twitter has an open network structure, which is not based on reciprocity of followership or communicative interactions. This might encourage transnational (i.e. European) interactions between users from different countries because Twitter's network structure allows users to perceive contents from users without being their active followers. Second, Twitter has been described as place for political communication and politicians as well as journalists use Twitter extensively for campaigning and research purposes, respectively (Bossetta, 2018, p. 472; Jungherr, 2016, p. 72). The various communicative interactions possible on twitter serve different communicative purposes and are therefore used by actors strategically (Jacobs & Spierings, 2019; Kreiss, Lawrence, & McGregor, 2018). This allows for the formulation of hypothesis about actor's linking strategies that may lead to Europeanization of nationalization of communication strategies and thus to the Europeanization of networked public spheres (see Chapter 3.1).

Period of analysis and sampling

The Twitter communication about the 2019 EP elections has been chosen as a case study to analyze the Europeanization on networked public spheres, its potential for democratic legitimacy of the EU as well as potentially emerging European level conflict lines. EP elections provide a time period of increased politicization of European issues and actors, which may increase the likelihood that diverse actor groups from various EU member states participate in the discussion about the election (Adam & Maier, 2011, p. 433). Research shows that even though EP election can still be considered second-order elections (Reif & Schmitt, 1980; Schmitt, 2005), they do provide a period of increased attention to EU-level actors and politicization of European issues (Michailidou et al., 2014, p. 21). The discussion about the 2019 EP elections on Twitter has therefore been chosen as a best-case scenario for the Europeanization of networked public spheres to emerge. This best-case scenario is necessary in order to explain under which circumstances Europeanization of networked public spheres

occurs in the form of communicative interactions between different actor groups by using inferential analyses.

The period of analysis includes various phases of pre- and post-election times around the 2019 EP elections in order to analyze potential changes in issue saliences on Twitter over the course of an election. Since it is assumed that politicians use Twitter strategically to communicate with other actors and to address issues of special importance to them – especially in times of election campaigning – the *early campaign phase*, the *hot campaign phase*, and a brief *post-election phase* are included in the analysis. Campaign phases usually differ between countries, depending on national context factors such as legal regulations of when campaigning is allowed to start. Generally, early campaign phases are considered to start approximately 8 weeks and hot campaign phases 6 to 4 weeks prior to the election (Daniel & Obholzer, 2020, p. 2; Lilleker et al., 2011, p. 201). Together with a brief post-election phase, this results in a two-month period of analysis from 1 April 2019, to 31 May 2019, including

> *Early campaign phase:* 1 April – 26 April 2019;
> *Hot campaign phase:* 27 April – 22 May 2019;
> *Election and post-election phase* 23 May – 31 May 2019.

All tweets with the official election hashtag *#EP2019* were scraped from Twitter via Twitter's Rest-API using the programming software R and the package *rtweet* (Kearney, 2019). The hashtag #EP2019 is the official election hashtag for the 2019 EP elections in all EU member states. This official and transnationally used hashtag has been chosen over nationally specific hashtags (e.g. #Europawahl) because the potential for transnational exchange and the perception of contents in various member states is an important precondition for the emergence of a Europeanized networked public sphere. A great advantage of this approach is that no country selection had to be made prior to sampling so that the data potentially includes communication from all (at the time) 28 EU member states. Even though excluding language-specific hashtags from the analysis will underestimate the number of posts related to the election and the actors who participated in language-specific discussions about the election, the focus on the transnationally shared hashtag can be considered the best-case scenario for Europeanization of networked public spheres to occur. In other words, if Europeanization of debates does not occur with transnationally shared hashtags, it is even less likely to occur with language-specific hashtags and/or on platforms with closed networked structures (e.g. Facebook; see Bossetta, 2018, p. 479).

At the time of sampling, Twitter provided access to their data via a variety of APIs. Since data sampling for this study was conducted before the introduction of the Academic API in 2020

(Twitter, 2022b), sampling relied on the open and free Rest-API. Data quality and completeness of the Rest-API have been discussed at great lengths (Janetzko, 2017). Most notably, the Rest-API has several limitations and rate limits that need to be taken into consideration when sampling data (compare Morstatter, Pfeffer, Liu, & Carley, 2013 and González-Bailón, Wang, & Borge-Holthoefer, 2014 for a detailed discussion). In order to account for these limits, data sampling was done in 48-hour intervals. Subsequently, uniqueness of the sampled tweets was checked using tweets' status IDs of tweets.

Data

In total, 446,198 tweets posted by 149,190 unique users were sampled between April 1st, 2019 and May, 31st, 2019. Off all tweets, 89 percent include mentions, 19 percent are retweets and only about 3 percent are quotes and replies to other users' tweets, respectively. Since mentions, retweets, quotes, and replies serve different communicative functions and are considered to be used by actors for varying strategic purposes, individual networks are conducted for each communicative interaction. Table 2 depicts the resulting networks.

Table 2. Numbers of nodes and edges in the resulting Twitter networks for the communicative interactions in the #EP2019 debate (in abs. numbers)

Network	Edges	Nodes	Active nodes (senders of ties)	Passive nodes (receivers of ties)
Mentions	588,885	153,727	141,830	24,904
Retweets	361,398	141,225	136,979	9,815
Quotes	14,680	10,349	5,604	5,921
Replies	14,015	8,247	3,945	5,806

Note. The total sample consists of N=446,198 tweets by 149,190 users. The complete network (i.e. all edgetypes combined) consists of E=978,978 edges between 155,886 unique nodes including senders and receivers of ties.

Taken together, the study design allows for a detailed analysis of the debate about the European elections 2019 on Twitter. Thus, this study adds to the existing literature in various regards. First, it provides a thorough analysis of the Europeanization of networked public spheres by combining all three important aspects of analysis: actors, issues, and communicative interactions. While there is some existing research on the role of social media platforms in driving transnational and Europeanized communication, previous studies have either focused only on the communicative interactions with transnationality only approximated by the languages used in the communication (e.g. Hänska & Bauchowitz, 2019), have investigated the issues without acknowledging the role of actors (e.g. Ruiz-Soler et al., 2019), or have analyzed actors in the debate without acknowledging the issues in detail (e.g. Ruiz-Soler, 2018). Second, this study adds to a variety of scholarly debates including (networked) public spheres, Europeanization, democratic legitimacy of the EU and politicization and conflict lines. Third,

on a methodological level, this study provides a combination of manual analysis of user profiles and computational methods. On the one hand, the manual content analysis provides a tested operationalization of political leaning of actors on Twitter (see Chapter 4.1 for a detailed discussion). On the other hand, the thesis uses computational methods – namely network analysis and topic modelling – to address and investigate complex theoretical concepts, thereby countering the usual criticism that data-driven analyses are not rooted in theoretical considerations often posed when automated analyses meet large data sets (Mahrt & Scharkow, 2013; Mayr & Weller, 2017; McCay-Peet & Quan-Haase, 2017).

4 Methodology and operationalization

The following chapter provides a detailed description of the empirical analyses and decisions related to methodology and operationalization. First, the manual coding of user profiles for the classification of actors is discussed (Chapter 4.1) since it provides the basis for all further empirical steps. Second, the computational methods and related methodological decisions are explained in the order of necessity to answer the research questions. Chapter 4.2 explains the network analysis and ERGMs and Chapter 4.3 provides information about the model specification and selection for the Structural Topic Modelling. Figure 5 shows which methods are used to answer the research questions.

Figure 5. Overview: Research questions and methodology
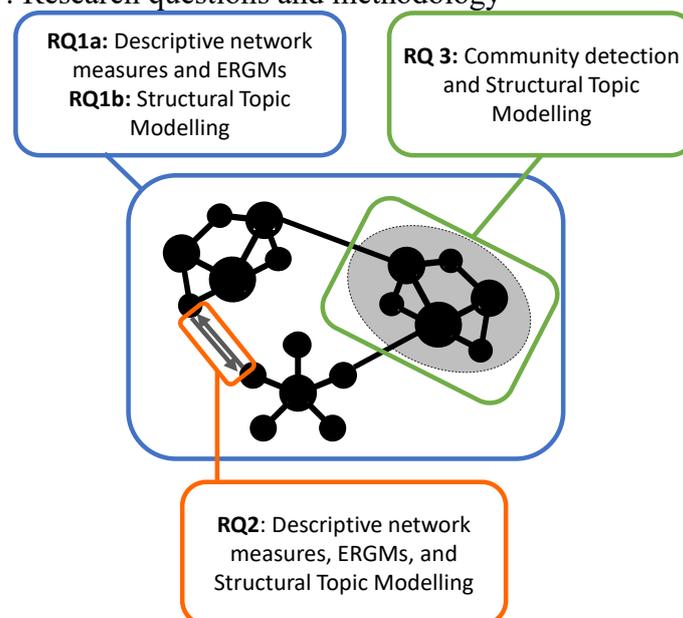
Source: own depiction

4.1 Classifying actors: manual coding of actors' Twitter profiles

In order to analyze which actors participated in the debate and to use actor attributes as exogenous variables in ERGMs, a manual content analysis of users' Twitter profiles was conducted. Due to the high number of actors in the debate, a complete coding of all profiles was not feasible. Thus, to be able to analyze the most important actors in the debate in terms of activity and visibility as well as be able to investigate the actor constellation as a whole, a combination of random sample (3 % of actors per week) and viral actors (100 most important actors with regard to tweets sent, retweets received, mentions received, quotes received, and replies received per week) was coded. To ensure that the whole sampling period is represented in the coding sample, the sample is additionally stratified per week.

As a result of this sampling strategy, a total of N=12,013 unique profiles[4] have been coded for the following information: actor groups (e.g. political actors, media actors, economic actors, civil society, citizens; including sub-categories), party affiliation (for political actors), actor scope (e.g. national, European, international, global), country of residence, and political leaning (operationalized as the party family distinction from the Party Manifesto Project, Klingemann & Budge, 2013, p. 64; Klingemann, Volkens, Bara, Budge, & McDonald, 2006, pp. 45–50). The complete codebook with detailed coding instructions and examples for each code can be found in Appendix A.

Codebook and Operationalization

Actor group. Classification of actors into actor groups is based on a study done by Heft, Reinhardt, and Pfetsch (2022). The main focus with regard to the Europeanization of networked public spheres is on four major actor groups: political actors, civil society, media actors, and citizens. For a detailed definition of the actor groups as well as their specific communication contexts (e.g. strategies, resources, etc.) see Chapter 2.5. Codes have been adjusted for the analysis in order to account for the specific nature of Twitter communication. For example, cultural actors (i.e. TV stars, musicians, artists, etc.) have been added as a category in order to be able to categorize non-institutional actors that nevertheless inhibit advantageous communication positions on social media platforms because they often have large follower bases, which have been shown to be an advantageous resource in online networks (M. Müller, 2022; Pond & Lewis, 2019). Similarly, a distinct category was added for economic actors

---

4 Due to the sampling strategy, an actor can be part of the random sample and the sample of viral actors at the same time. Whenever the complete sample is analyzed as a whole, each unique profile is only counted once, however, whenever random sample cland most important actors are compared against each other, any actor can be part of both samples, so that the total number of cases may at times exceed N=12,013. Table 23 in the appendix gives an overview over the two samples.

including collective accounts (of firms, brands, etc.) as well as individuals (CEOs, etc., e.g. Elon Musk). Lastly, a distinct category was included for all profiles that could not be coded unambiguously into any of these categories (i.e. 'other'). This applies, for example, to accounts that are no longer available due to deletion or banning but also to accounts with too little information to code any content-related variables. The actor groups of political actors, media actors, and civil society are then specified by a more detailed coding of sub-categories. For detailed coding instructions and examples of all sub-categories see the codebook provided in Appendix A.

Scope and country. In order to determine the scope of communicative interactions between actors in the #EP2019 election debate on Twitter, two variables are coded manually. The first variable refers to the *scope* of the actor. The scope of an actor refers to the actor's intended impact and thus the intended target region of their communication and action strategies. If the information given in an actor's profile or on a website denotes different scopes, the largest scope of the actor is coded (e.g. if Manfred Weber refers to himself as member of the German party *CSU* as well as member of the European Parliament, his scope is coded as EU-actor). The scope of an actor is coded based on the information disclosed in the account's profile. Information from websites may be used when they are linked in the Twitter profiles. In addition to national and EU scope, European (i.e. actors from European countries that are not EU member states), international scope (i.e. actors whose scope transcends the borders of one country and all countries included are non-European countries), and global scope (i.e. actors whose scope transcends the borders of one country and at least one European and one non-European country) are differentiated. This actor scope (in combination with the coded country variable) is used to calculate the scope of the communicative interactions between actors in the debates based on the concept of vertical and horizontal Europeanization explained in Chapter 2.2 (Koopmans & Erbe, 2004, p. 101; Koopmans & Statham, 2010b, p. 39).

The second variable refers to the *country* background of the actor. Since coding nationalities and/or residency of actors is a difficult task for Twitter data, no distinction is made between the nationality of actors and their residency for the purpose of this analysis. Previous research has indicated that geo-location and the location-variable in users' Twitter profiles are not sufficient to determine the country background of Twitter users. While only a small number of tweets are geo-coded, the location in users Twitter profiles is often used by users to disclose information about their residency (M. Hoffmann & Heft, 2020, pp. 185–186). However, user can also disclose non-existent locations (e.g. Hogwarts, on the moon, etc.). In order to account for these

problems, which are discussed in the context of automated identification of user location on Twitter, country background is coded manually for the present study, thus taking advantage of all available information in users' Twitter profiles. Country background can be determined based on Twitter's location variable (if applicable and interpretable), any profile descriptions, and visual information in the actors' profiles (e.g. flag emojis or flags in profile pictures). The language of the account as identified by the *rtweet*-package (Kearney, 2019) may be used as an additional indicator for country coding (e.g. in combination with profile descriptions or flag emojis), but may never serve as the only indicator due to, for example, the omnipresence of English as a lingua franca for transnational communication.

Political leaning. Coding of the political leaning of actors is based on the party family classification from the *Manifesto Research on Political Representation* (MARPOR) project (Klingemann et al., 2006, pp. 45–50; Klingemann & Budge, 2013, p. 64; Volkens et al., 2019a). The MARPOR-project classifies parties into party families based on expert evaluations of parties' profiles. In combination with parties' positions on four areas of policies (state policy, economic policy, social policy, and foreign policy) coded in the manifesto data set (Volkens et al., 2019a), it can be explained which policy positions are taken up by members of which party families (Klingemann & Budge, 2013; Volkens, Bara, Budge, McDonald, & Klingemann, 2013). Thus, the classification can be expanded to other actor groups by transferring positions on issues and policies addressed by actors on Twitter to the categorization of the MARPOR-project. For a detailed description of which statements and positions are associated with which party family see Table A1 and Table A2 in the codebook in the appendix (Klingemann & Budge, 2013, p. 64) as well as the coding definitions used in the MARPOR-project (Klingemann et al., 2006, pp. 45–50).

For parties and all political actors belonging to a party, the categorization is coded as described in the excel sheet list of parties. This categorization is taken from and therefore equal to the MARPOR-coding of parties (Volkens et al., 2019b). For actors that belong to other actor groups, the categorization must be decided based on information from their Twitter profiles and/or websites (if available). This is done as follows: (1) For all actors who disclose affiliation to a party on their Twitter profile (e.g. "proud AfD-supporter"), the classification of the party as provided by the MARPOR-project is used as political leaning of the actor. (2) If actors provide a self-description that fits the categorization (e.g. "social democrat from head to toe"), the self-description is used. (3) Otherwise, any information about issues/policies of importance to the actor (e.g. "climate change activist") can be used to evaluate political leaning according

to the descriptions of the categories below. In addition to the party families from the MARPOR-project, a specific code was added for non-partisan actors. This applies to actors who shall not display political leanings in their work (e.g. scientists, public service media and journalists). Additionally, individual codes were included for profiles without any information that allowed to assess the political leaning of the actor (e.g. "I love dogs.") as well for information that denotes some kind of political leaning but could not be coded unambiguously according to the categorization of the MARPOR-project (e.g. "I am a populist."). All cases coded into the second of these categories were then re-evaluated during data cleansing and, if possible, re-coded into one of the other categories.

This operationalization of political leaning has some major advantages. First, to my knowledge, this is the first study that applies the MARPOR party family classification to Twitter data despite its potential to evaluate political leaning of actors based on party-family support as well as positions on individual policy-issues. As such, the classification can easily be extended to other actor groups than political actors and therefore offers to opportunity for comparisons of different kinds of actors and from various countries. Furthermore, the analysis of the party manifestos and the resulting issues and positions associated with the specific party families provides a reliable and valid distinction of political orientation for (manual) content analysis. Third, the scale provided by the MARPOR-project is based on party family classification, but it can be transferred into a more general left-right distinction (compare Klingemann et al., 2006, pp. 52–56) and is therefore compatible with projects that use left-right scales (e.g. as self-reported political orientation in surveys).

However, some disadvantages need to be taken into consideration as well. Most obviously, coding political leaning of users based on information disclosed in social media profiles depends on which information is provided by users. On the one hand, this results in varying effectiveness of the measure for different actor groups since institutionalized actors can be considered to disclose more information about their strategic (communicative) goals in their Twitter profiles than ordinary citizens. This might than underestimate the effects of inferential network measures for those actor groups for which political leaning of less accounts could be identified. Similarly, this measure is likely to be more useful on Twitter, which has been attributed a particular relevance for political communication as compared to other social media platforms (Bossetta, 2018; Jungherr, 2016). On the other hand, by only including information that has been disclosed voluntarily by the users themselves can be considered more ethically unproblematic than, for example, the automated inference of political orientation based on

latent information and machine learning, because here information is used to infer information about users in a way that the users might not have intended the information to be interpreted.

Coding procedure and reliability

The unit of analysis for the manual coding are accounts of Twitter users. These can refer to individual actors (e.g. politicians, citizens, individual journalists, etc.) or collective actors (e.g. parties, institutions, movements, companies, etc.). Manual coding of actors is based on all information provided by these actors in their user profiles on Twitter.

Coding procedure. The dataset includes pre-recorded variables automatically derived from the *rtweet*-package (Kearney, 2019) for each user who posted tweets to the hashtag #EP2019. These include information that users voluntarily disclose on their user profiles (e.g. profile description, location, link to personal website). Whenever these variables include enough information to unambiguously code any variables needed, only the information given in these pre-recorded variables will be used since information sampled via *rtweet* equals the actual profile description during the 2019 EP election campaign. Coding user profiles from Twitter directly (by pasting the username into the browser) would code the information disclosed by the user at the time of coding. Since users can change their profile information as they like, this information would not necessarily have to equal the information at the time of data sampling. Only if no information is given in the pre-recorded variables or if the information is ambiguous or insufficient to decide on a code, the username or user ID (screenname or profile ID) of the actor will be posted to the Twitter website and information will be coded from there. This might also be the case if users disclosed nonexistent locations (e.g. "on the moon", "somewhere over the rainbow") at the time of data sampling. If the profile is unavailable on Twitter (e.g. because the user has been blocked or the profile deleted), the information prerecorded in the dataset (and if necessary Google) will be used to code all variables possible. If no information is given in the prerecorded variables (e.g. because the user did not disclose any information), all variables are left uncoded and the problem is explained in an open string variable (e.g. "account unavailable"). Coders are allowed to use Google and Google Translate to determine correct codes and translate profile descriptions if necessary. In order to enhance reliability and make subsequent data cleansing easier, coding was performed with the help of an Excel file that included the user profiles to code as well as all necessary and available user information. The Excel file was prepared in such a way that columns for a specific variable would only accept predefined values that the variable can actually have.

Pretests and reliability. Four coders were trained in four elaborate training sessions, in which the coding procedure, data, and logics of coded variables were explained and tested based on subsets of the data. These sessions also served as pretests for the codebook to verify the validity of the categories and provide more detailed coding descriptions where necessary. Furthermore, categorization of actor groups and political leaning are based on established classifications from previous studies (Heft, Reinhardt, & Pfetsch, 2022; Klingemann et al., 2006; Klingemann & Budge, 2013) in order to assure validity of these variables. Finally, an intercoder reliability test was conducted to assure reliability of coding (Krippendorff, 2004). All variables achieved good reliability scores ranging between α=.98 (country background) and α=.83 (political leaning). See Table 24 in the appendix for detailed reliability scores.

4.2 Network analysis: Measuring communicative interaction, actor effects on tie-formation, and community structures

Networks consist of actors (nodes) and the relationships between these actors (edges). In networked public spheres, nodes can refer to any kinds of collective or individual actors (e.g. politicians, parties, social movements, individual activists or citizens) while edges in communication networks are communicative interactions between these actors (Fuhse, 2016, p. 14). On social media platforms these can be observed and analyzed as actual digital links between collective or individual users created through following, or sharing, liking, and replying to content. Actors and issues are linked through these communicative interactions and create networks of information flows, which together determine the structure of networked public spheres (Benkler, 2006, p. 220; Bruns & Highfield, 2015, p. 59).

Networks and the positions nodes take within them are important resources (Burt, 1999, 2004; Friemel, 2008). As such, networks and network positions are a source of social capital: "Social capital is the sum of the resources, actual or virtual, that accrue to an individual or group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition" (Bourdieu & Wacquant, 1992, p. 119). For example, early network research points towards the importance of weak ties as an important resource in networks. Granovetter (1973, p. 1378) argues that weak ties are "indispensable to individuals' opportunities and to their integration into communities; strong ties, breeding local cohesion, lead to overall fragmentation." Similarly, Burt discusses the concept of *structural holes*, which describes the idea that nodes in brokerage roles exercise a form of social capital by providing additional information and opinions to otherwise homogenous groups of densely connected nodes (Burt, 2004, p. 349). Taken together, the concepts of weak ties and structural holes show

the importance of network positions of different nodes. In networked public spheres, weak ties and brokerage roles are important because they provide alternative information and can therefore counteract fragmentation and cleavage formation.

Furthermore, from the perspective of actors included in a network, network positions determine attention, which equals important power resources in (online) communication networks. Castells (2011, p. 773) discusses power relations in networked public spheres and distinguishes four important kinds of exercising power based on network positions: networking power (exercised through inclusion/exclusion), network power (exercised through standards for communication), networked power (exercised through power over others resulting from network positions), and network-making power (exercised through (platforms) ability to (re-)program technologies). As such, communicative ties are expected to be used strategically by different kinds of actors to achieve different advantageous positions in networks. These strategies are dependent on the specific communicative goals of the actors as well as the opportunity structures (Häussler, 2019; Koopmans, 2007; Meyer, 2004) in which these actors operate. Transferring this to the example of Twitter communication, since attention is a crucial resource of power in communication networks (Gerhards & Neidhardt, 1991, p. 67), having many followers on social media platforms or being connected to users with many followers can be interpreted as an important resource for which actors are expected to thrive. Indeed, research on typical examples of user generated contents that 'went viral' (e.g. #MeToo, #Aufschrei, etc.) shows that tipping points in terms of attention to certain issues are related to journalists picking up the issue in their news reporting on social media (Maireder & Schlögl, 2014) and studies on hyperlink networks show that incoming hyperlinks are important resources for websites (Ackland & O'Neil, 2011; Häussler et al., 2017).

Network structures and actors' positions in them result from a variety of network endogenous and network exogenous effects, which affect the structures and dynamics in networked public spheres. Thus, communicative interactions between actors on social media platforms can be analyzed from a network perspective to investigate Europeanization through transnational interactions, potentials for democratic legitimacy through direct interactions between citizens and politicians, as well as the emergence of conflict lines through the formation of strongly connected subgroups discussing politicized issues.

Network endogenous effects include mechanisms of network self-organization, such as reciprocity, preferential attachment, and triadic closure. Network exogenous effects are related to the characteristics of the nodes in a network and can be conceptualized in terms of homophily

and centrality measures. With regard to analyzing social media communication about the EU, network measures can be used to (1) analyze Europeanization of debates on social media platforms, (2) describe the importance of direct communication between European politicians and citizens as an indicator for accountability and responsiveness on a European level, and (3) investigate polarization and the emergence of conflict lines on the European level.

4.2.1 Descriptive network analysis

Preferential attachment. Preferential attachment describes the tendency of network ties to accumulate to the point of a significantly skewed distribution in favor of those who already have many ties. This tendency was first described for hyperlinks on the Internet by Barabási and Albert in 1999. Complex networks are characterized by two interrelated mechanisms, network growth and preferential attachment, which together result in a typical power-law distribution (Barabási & Albert, 1999, p. 510). First, complex networks are assumed to expand continuously. Second, "[b]ecause of the preferential attachment, a vertex that acquires more connections than another one will increase its connectivity at a higher rate; thus, an initial difference in the connectivity between two vertices will increase further as the network grows" (Barabási & Albert, 1999, p. 511). This results in a power-law distribution and inequality in attention, with a few central nodes receiving most of the ties and most nodes only receiving a limited number of ties.

Triadic closure and transitivity. Transitivity is a measure for the degree of triadic closure in networks. Triads are groups of three nodes in networks. Each group of three nodes can have a total of 64 different possible connections (or lacks thereof) between them. Ignoring those configurations that are structurally equivalent, there are 16 isomorphic forms of connections between every pair of three nodes in networks (Holland & Leinhardt, 1971, p. 118; Wasserman & Faust, 1994, p. 564). Monge and Contractor summarize Holland and Leinhardt's (1971) concept of transitivity as follows:

> […] transitivity measures the extent to which person i has a direct relation to person j, while also having indirect relations to j via several intermediary people, k. Thus [sic!] a triad of three actors (i, j, k) is transitive if actor i has a tie to actor j, i has a tie to k and k has a tie to j. If the ties are nondirectional, then a triad is transitive if the three actors have ties to one another. Any actor i can be embedded in several transitive triads involving other actors, j and k. (Monge & Contractor, 2003, p. 204, italics in original)

Transitivity is thus an important mechanism of network self-organization, which has to be accounted for when analyzing the structure of social networks and the importance of actor attributes for the emergence of these structures (Lusher & Robins, 2013b, p. 25).

Homophily. From a network perspective, homophily describes the tendency of nodes to connect to nodes that share similar characteristics as themselves (McPherson et al., 2001, p. 416). This mechanism has been confirmed for a variety of different network ties such as marriage, friendship, advice, exchange, and – as in the case of communication networks – information transfer (McPherson et al., 2001, p. 415). Homophily has also been described for a variety of actor characteristics including but not limited to sex, race, religion, and political opinions (McPherson et al., 2001, p. 418). Thus, community structures of networks can often be explained by homophily effects.

Cohesive subgroups (community structures). Edges between nodes in a network result in a particular community structure, which creates cohesive subgroups. These are groups of densely connected nodes in a network (Burt, 2004). Actors in the same cohesive subgroups are more densely connected to each other (i.e. they refer to each other more often) than to actors from other communities. Stoltenberg, Waldherr, and Maier (2019) discuss the relevance of community detection algorithms for the analysis of communication networks of civil society actors. They argue that the communities in which actors are embedded reflect the opportunity structures of these actors, and that – depending on the nature of the analyzed relationship and corresponding theoretical considerations about tie formation – community detection can help identify publics and counterpublics, discourse coalitions, or even strategic alliances between actors in communication networks (Stoltenberg et al., 2019, p. 120).

Reciprocity. Reciprocity is an important feature of tie-formation in directed networks, such as communication on social media platforms. It describes the degree to which ties in a network tend to be reciprocated so that if a tie exists from actor A to actor B, another tie exists from actor B to actor A (Garlaschelli & Loffredo, 2004, p. 1). While some social media platforms (e.g. Facebook) favor reciprocated ties due to their digital architectures (Bossetta, 2018, p. 479), communication on Twitter is public by default and communicative ties on Twitter are thus less likely to be reciprocated. Reciprocity indicates the mutual recognition of two actors in a debate (Shumate & Dewitt, 2008, p. 410).

Centrality measures and actor positions in networks

Direct communication between actors in network public spheres leads to increasing importance of actors' communication strategies to describe networked public spheres. Sharing, liking, and replying to other users' contents can be considered conscious and strategic decisions ((Benert, 2021; Benert & Pfetsch, 2022), see Chapter 2.5 for a discussion of actors' communication

strategies in the context of the 2019 EP elections). Based on their incoming and outgoing communicative interactions, actors occupy certain positions in networks, which are important resources (Burt, 1999; 2004; Friemel, 2008) that may create social capital (Bourdieu & Wacquant, 1992).

Centrality measures can be used to describe actor's roles based on their positions in networks that result from mechanisms of network self-organization (e.g. preferential attachment, homophily, etc.) as well as actors' strategic actions. In network theory, "position refers to a collection of individuals who are similarly embedded in networks of relations, while role refers to patterns of relations which obtain between actors or between positions" (Wasserman & Faust, 1994, p. 348). Thus, network positions as described by centrality measures relate to resources that may put actors in advantageous positions and the roles they occupy based on their relation to other nodes in the network in question. With regard to communication networks about European issues on social media platforms, centrality measures therefore relate to the ability to put issues on the agenda, affect information flow, or receive attention. Table 3 provides an overview over communicative roles and their interpretation for the different communicative interactions (i.e. mentions, retweets, quotes, and replies) on Twitter.

Table 3. Centrality measures and their interpretation for communicative interactions on Twitter

	Communicative interaction on Twitter			
Centrality measure	*Mentions*	*Retweets*	*Quotes*	*Replies*
Outdegree (= Hubs)	mentions other actors often; provides visibility to others	shares tweets of others often, provides visibility to others	comments on other actors' tweets often, provides salience to other actors' contents and adds own thoughts to debate	replies to tweets of others often, engages in discussions, adds to the debate
Indegree (= Authorities)	gets mentioned often by other actors, receives visibility/ attention from others	contents are shared often by other actors; actors' contents receive attention	contents are shared often by others with additional thoughts added, contents receive attention and encourage discussions	tweets are replied to often by others, tweets encourage debates and participation in the discussion
Betweenness (= Brokers)	can control visibility of actors in the network, acts as gatekeepers to which actors become visible in the debate	can control visibility of contents in the network, acts as gatekeeper to other actors' tweets	can control visibility of and engagement with other actors' contents, acts as gatekeeper for salience of and engagement with other actors' contents	
Interaction is primarily	*actor-oriented*	*content-oriented*	*content- and engagement-oriented*	*engagement-oriented*

Note. Read table as follows: "An actor with a high [centrality measure] in terms of [communicative interaction] does/receives…".

Authorities. *Authorities* are those nodes that receive many incoming links and therefor have high indegree centrality (Kleinberg & Lawrence, 2001, p. 1850). In communication networks, a high number of incoming links is considered an indicator of prestige since it signals attention by many other nodes in the network (Wasserman & Faust, 1994, p. 126). In the context of Europeanization of the 2019 EP election debate on Twitter, authorities are important since they receive attention and can thus become salient in Europeanized debates. With regard to democratic legitimacy, authorities are crucial when they belong to the group of political actors, because they are the ones who are addressed by others often and therefore have to be responsive to the hubs in the debates. Similarly, accountability can then be measured as outgoing links from political actors to other actor groups, especially citizens and civil society actors.

Hubs. *Hubs* are those nodes in networks that have a high number outdegrees (Kleinberg & Lawrence, 2001, p. 1850). Outdegree centrality refers to the outgoing ties of a node (Wasserman & Faust, 1994, p. 126). In communication networks, a high number of outgoing communicative interactions translates to a high activity in terms of communicating with others

and distributing attention. Hubs are important for the Europeanization of networked public spheres, because they are the initiators of communicative interactions and therefore foster transnational communication when they decide to communicate with actors from the European level and/or from other countries. With regard to democratic legitimacy, hubs are important actors because they frequently address other in their communication and might thus provide input and demand responsiveness.

Brokers. *Brokers* are nodes that act as bridges between structural holes in networks (Burt, 2004, p. 349). Brokers are therefore crucial for the interconnectedness of networks. Brokerage can be measured by high betweenness centrality, which is a measure of the number of shortest paths on which a node lies in a network (Freeman, 1977, p. 35). As such, betweenness centrality is a measure of importance of a node in terms of its potential to connect otherwise loosely connected subgroups and may foster exchange and information flow between these subgroups (Burt, 2004, p. 349). Brokers are important for the Europeanization of networked public spheres because they ensure that communication can flow across densely connected cohesive subgroups. Put differently, brokers are the ones that ensure that information can travel in networks and actors and issues can become salient in the overall network. With regard to democratic legitimacy, brokers may indirectly enhance accountability and responsiveness by providing bridges between actors from distant parts of the networks and therefore producing a larger forum to which politicians have to be accountable. By connecting various cohesive subgroups and acting as bridges for information flow, brokers also have the potential to counteract the emergence of cleavages in online debates.

4.2.2 Exponential Random Graph Models (ERGMs)

Exponential Random Graph Models (ERGMs)[5] are tie-based models that seek to explain the formation of ties within a network based on the endogenous (i.e. network structural effects) and exogenous (e.g. actors attributes) factors (Robins & Lusher, 2013, p. 9). Since a central assumption in network analysis is that the formation of ties is dependent on the presence of other ties in the network, classical statistical regression models are not suitable for network data (Borgatti, Everett, & Johnson, 2018, p. 160), for which ERGMs provide an alternative. ERGMs are theory-driven as they allow researchers to choose the network configurations that should be tested in the model based on theoretical considerations (Robins & Lusher, 2013, p. 10). ERGMs can be used to explain the formation of (transnational) ties in Twitter communication in the

---

[5] I would like to thank the HPC Service of ZEDAT, Freie Universität Berlin, for computing time.

context of the 2019 EP election drawing on network theoretical assumptions about tie-formation as well as theoretical considerations about the strategic decisions of different actor groups and how these decisions may result in communication (i.e. tie-formation) across borders. These assumptions are derived from theoretical considerations and the state of research in Chapter 3.2 and summarized in Table 1.

In order to arrive at a good model, it is crucial that ERGMs reflect theoretical considerations about the modelled social and network theoretical mechanisms. In the context of communicating about potentially transnational issues on social media platforms – such as the debate about the 2019 EP elections on Twitter – the general assumption of tie-formation is based on considerations in line with social selection models. Social selection models assume that node-attributes (i.e. characteristics of actors) affect the formation of ties in the network (Robins & Daraganova, 2013, p. 91). In contrast, social influence models analyze the contradictory assumption, namely that network structures and the positions nodes occupy in a network can affect node attributes (Daraganova & Robins, 2013, p. 103). An important mechanism related to social selection is homophily (McPherson et al., 2001), which is assumed to influence tie-formation in cross-national contexts (e.g. actors from the same country or with the same language background are more likely to establish communicative ties to each other than to actors from different country or language backgrounds).

Data reduction for inferential analysis

ERGMs are relatively computationally expensive (especially when including dyad-dependent parameters, see below). As a rule of thumb, networks of up to several hundred to a few thousand nodes can be handled in reasonable computing times (Hunter & Handcock, 2006, p. 581; Stivala, Robins, & Lomi, 2020). A reduction of the Twitter networks was thus necessary. Since random sampling from networks would result in bad network representation (i.e. 'holes' in the network) which may lead to unrealistic and potentially degenerate models, network reduction needs to capture the (theoretical) core of the networks in question in order to correctly depict the networks structural properties (Robins, Pattison, & Woolcock, 2004, p. 261). In the specific context of the 2019 EP election debate, nodes that are crucial for the longitudinal network structure (i.e. occupy the center of the networks over time) result from repeated activity and/or popularity in the network. In order to capture the network structures over the course of the election period, nodes have to be popular (in terms of indegree) *or* active (in terms of outdegree) in all three election periods.

To capture the core of the network in terms of importance in the 2019 EP election debate on Twitter, those nodes and their communicative ties were selected whose degree is equal to or higher than the average degree in the specific network (i.e. they are at least of average importance in terms of activity or popularity) and who appeared at least once (actively or passively) in each of the three campaign periods. Table 4 provides an overview over the reduced networks for ERGM calculation.

Table 4. Sizes of reduced networks for ERGMs

Reduced network	No. of edges	No. of nodes
Mentions	110,108	6,965
Retweets	75,833	5,725
Quotes	1,065	300
Replies	545	170

Note. All nodes and their ties were kept that a) were present in all three election periods and b) whose degree was at least equal to the average degree of the network (i.e. they were at least ordinary in terms of activity of popularity). Since this sampling strategy results in reduced in- and outdegree counts for those nodes included in the ERGMs, the final models might underestimate degree-related effects.

Even after reduction, the mention and the retweet network were too large for ERGM models to converge in reasonable computing times on the High-Performance Computing cluster of Freie Universität Berlin. Models for the mention and the retweet network did not converge within 90 days of computing time. Inferential analyses can therefore only be provided for the quote and the reply network.

Model specification and parameters

In order to reflect the theoretical assumptions about tie formation in Twitter communication about potentially transnational issues and events such as the 2019 EP elections, network endogenous and exogenous parameters are included in the model. Models are calculated with the *ergm*-package (Hunter et al., 2008; Krivitsky, Hunter, Morris, & Klumb, 2022) in R.

Endogenous parameters. Mechanisms related to network self-organization are included in the model to control for their impact on tie-formation compared to the exogenous actor attribute effects (e.g. homophily). ERGMs usually include a parameter that models the number of edges in the network. In the ergm-package, this parameter is modelled by the *edges*-term. The edges-term equals the intercept in linear regression models and "can be interpreted as the baseline propensity for the occurrence of ties" (Lusher & Robins, 2013a, p. 42), although it should not be mistaken for a simple measure of density. Second, the tendency for reciprocity in the network is modelled by the *mutual*-term from the ergm-package. Hypothesis 2 (RQ 2) assumes a negative effect of reciprocity for the communication about the 2019 EP elections because especially elite actors (i.e. politicians and media) are expected to not generally reciprocate incoming ties as a

result of their elite-centered communication strategies and "broadcasting" (Fazekas et al., 2021, p. 377) styles of communication. Third, in order to account for network self-organizing effects related to triadic closure, the *gwesp*-term from the ergm-package is included in the model. The geometrically edge-wise shared partners (GWESP) parameter offers a more robust alternative for the transitivity-terms in ERGMs, since the latter have been found to often result in non-converging, degenerate models (for a detailed discussion of the problems related to degeneracy and transitivity in ERGMs refer to Hunter & Handcock, 2006). The dyad-dependency of the gwesp-terms and its curved implementation in the ergm-package make it rather computationally expensive, especially for larger networks. In order to reduce computational time, the gwesp-term is fixed (Hunter & Handcock, 2006; Koskinen & Snijders, 2013, pp. 147–148). This leads to converging models with appropriate goodness of fit (see Figures 23 and 24 in Appendix D for GOF summary statistics). Since replies are directly related to one specific original tweet instead of addressing actors or diffusing contents, the network structure of the reply-network is expected to depend less strongly on effects related to triadic closure than the other networks. Finally, general activity and popularity effects are included in the model through the *odegree*- and the *idegree*-term, respectively, as a control for the actor-attribute related sender- and receiver-effects (i.e. *nodeofactor*- and *nodeifactor*-terms, see below). In order to correctly interpret potential significant sender- and receiver-effects as actually being related to actor-attributes, the model needs to reflect the general (i.e. not actor-attribute related) tendency for activity and popularity in the network (Krivitsky et al., 2022).

Exogenous parameters. Exogenous parameters are included to model the assumed effects of actor attributes on tie-formation. First, it is assumed that elite actors such as politicians and media actors will exhibit what Lusher and Robins (2013b, p. 26) refer to as receiver-effects (i.e. receive more incoming ties), while citizens and civil society actors are expected to act as providers of input and thus exhibit a sender-effect (i.e. initiate more ties). The sender-effect is included in the model by the *nodeofactor*-term from the ergm package, which models the number of outgoing ties for each value of categorical variables (i.e. actor group membership and political leaning). The receiver-effect is included in the model by the *nodeifactor*-term, which models the number of incoming ties for each value of these categorical variables and thus reflects actor-attribute related popularity in the network. Second, homophily effects related to various attributes (i.e. actor group, political leaning, country, language) are included in the models in order to compare different actor-attribute effects. Homophily is captured in ERGMs through the *nodematch*-term in the ergm-package. This includes a statistic equal to the number of edges between nodes with the same attribute into the model (Krivitsky et al., 2022). Homophily effects

are modelled for the following variables: actor group membership, political leaning, country background of actors, and language of the actors' Twitter profile.

Goodness of fit (GOF). To test the GOF of the estimated models, various graphs with the same parameter specifications are simulated to observe whether the models adequately reflect edgewise-shared partners, indegree, outdegree, and mean geodesic distance (Koskinen & Snijders, 2013, pp. 141–142). See Appendix D for GOF statistics.

4.2.3 Community detection

Communities are groups of densely connected nodes in networks (Wasserman & Faust, 1994, p. 249) in the sense that more ties (i.e. communicative interactions) occur between actors within the same community than between actors from different communities. Conflict lines are expected to become salient in the actor-issue-constellation of communities, because engaging in communicative interactions on Twitter as well as the mobilization of certain conflicts are both conscious strategic decisions of actors in the debate (Enyedi, 2005, p. 699). As such, looking at the information (i.e. topics of tweets) shared as well as the actors (i.e. actor group, country background, and political leaning) in different communities can reflect contemporary conflict lines around which political conflict lines may emerge in online debates about European issues.

Multilevel algorithm for community detection

A variety of community detection algorithms exist for network analytical purposes. Apart from some technical and practical considerations (e.g. related to the size of the network and the computational power available), the choice of the best community detection algorithm should be guided by theoretical considerations of the meaning of the communities for the specific research question (Stoltenberg et al., 2019, pp. 122–123). Since conflict structures are deeply rooted in society (Bartolini & Mair, 1990, p. 215), they should be reflected in the strategic communicative decisions of different actor groups. In combination with network theoretical assumptions related to homophily (i.e. actors with the same characteristics – in this case political beliefs – are more likely to communicate with each other), these conflict structures should become apparent in the community structure of the networks, which result directly from the communicative interactions (or lack thereof) between actors in the debate. Conflict lines are considered to become salient when topics are discussed in communities only between actors who share the same political leaning. However, when topics of societal relevance are discussed by a diverse actor constellation in communities, conflict lines are not considered to become salient because the discussion of societal conflict is not divided by ideological lines.

In this context, the direction of ties in the networks is of minor interest: in order for conflict lines to become salient in the community structures of online communication networks, it does not matter whether actor A addresses actor B in the context of a certain issue, or vice versa. It is sufficient that A and B communicate with each other about a certain issue of societal importance. Therefore, in line with the propositions of Stoltenberg, Waldherr, and Maier (2019, pp. 123–124), multilevel community detection (Blondel, Guillaume, Lambiotte, & Lefebvre, 2008) will be applied to investigate conflict lines in the Twitter communication about the 2019 EP elections. The multilevel algorithm has been shown to result in high modularity solutions in combination with considerable low numbers of communities resulting in good interpretability (Stoltenberg et al., 2019, p. 128).

Community detection is performed using the multilevel algorithm implemented in the *igraph*-package (Csardi & Nepusz, 2006). in R. In order to answer the third research question, all communities with at least 100 nodes are analyzed for their actor- and issue-distributions (i.e. manual coding and STM results) to find emerging conflict lines. Results are presented in Chapter 7.

4.3 Classifying content: Structural Topic Modelling

To analyze the topics present in the #EP2019 debate, Structural Topic Modelling (STM) is used. STM is a text mining algorithm used to extract latent themes from texts based on the bag of words approach. As a result of this generative model, a topic is defined as "a mixture of words where each word has a probability of belonging to a topic" (Roberts et al., 2019, p. 2). A document, then, is "a mixture over topics, meaning that a single document can be composed of multiple topics" (Roberts et al., 2019, p. 2). In contrast to Latent Dirichlet Allocation (LDA), STM allows for the inclusion of covariates (i.e. metadata on the document level) and is thus better suited to account for differences between different actor groups and their strategic decisions with regard to the topics addressed (Roberts et al., 2019, p. 2).

Corpus and pre-processing

The corpus for the STM includes all original tweets with #EP2019 between April, 1, 2019 and May, 31, 2019 on Twitter. Retweets have been excluded for topic modelling to prevent topics to cluster around original tweets and their retweets and to decrease the computational burden for model estimation. This resulted in a corpus of 81,921 original tweets for the STM. The topic proportions of the original tweets are matched to the retweets after model specification based on tweet IDs.

To account for language differences in the sample all tweets were translated into English prior to the analysis. Research on the use of topic modelling for comparative analyses across various countries and languages shows that this is an appropriate technique to ensure comparability across languages (Reber, 2019, p. 117, see also D. Maier, Baden, Stoltenberg, Vries-Kedem, & Waldherr, 2022). Reber's study (2019, p. 118) also provides insights into the impact of complete document versus term by term translation using different translators with the best result observed when using the Google Translate API and translating complete documents. Therefore, this approach is followed to prepare the #EP2019 Twitter data for the STM. Translation was performed using the *googleLanguageR*-package (Edmondson, 2022) in R and the Google Translate API. Qualitative manual checks were performed to assure good translation results.

Afterwards, preprocessing was conducted in order to account for noise in the data. The results of topic models strongly depend on the order of preprocessing steps (D. Maier et al., 2018, p. 110). Previous research suggests the following order: tokenization, transformation to lower case, removing punctuation, removing stopwords, lemmatization or stemming, relative pruning (D. Maier et al., 2018, p. 110), which was followed for the present study. In additional to general stopwords (Lewis, Yang, Rose, & Li, 2004), issue-specific stopwords were removed for the present study. Lemmatization was conducted with the *en_core_web_sm* lemmatizer implemented in the *spacyR* package (Benoit & Matsuo, 2020), which provides access to Python's SpaCy functionality for natural language processing in various languages. In contrast to stemming, which identifies the common root of a word by removing or replacing word suffixes, lemmatization identifies the inflected forms of a word and returns its base form (Manning, Raghavan, & Schütze, 2008, p. 32). Lemmatization was preferred over stemming due to better interpretability.

Previous studies that use STM to identify topics of very short texts such as tweets show that modelling corpora of short texts can be difficult (Albalawi, Yeap, & Benyoucef, 2020). Concatenation of tweets to achieve longer documents was not feasible for the present study since this would have resulted in concatenation of tweets from various election periods for some users (or at least from different days of election campaigning), which contradicts the assumption that issue agendas are subject to change in the course of the election campaign. Albalawi, Yeap, and Benyoucef (2020, p. 12) show that algorithms that rely on LDA, as does the STM algorithm, provided best results for short texts. Additionally, to keep more information in the texts and still arrive at interpretable and meaningful topics despite short texts, hashtags have not been cleaned. Furthermore, because the bag of words approach used in topic models typically discards word order Maier et al. (2018, p. 96) point out that it can be difficult to interpret topic model results.

Hashtags may also provide context for the interpretation of topics (D. Maier et al., 2018, p. 101), providing a second reason to keep them in the corpus.

Model specification and selection

Structural topic modelling allows for the inclusion of covariates during model specification. In order to account for strategic decisions in the context of the EP elections, time (i.e. the calendar week) has been included as a covariate in the model. Furthermore, STM calls for the need to manually define the number of desired topics of the model (Roberts et al., 2019, p. 12). For LDA topic models, previous research from the field of communication science suggests to specify models with various numbers of topics (K) depending on theoretical assumptions about the potential topics prevalent in a certain discussion as well as the desired granularity of the resulting topic solution (D. Maier et al., 2018, p. 97) and to compare the resulting models based on various goodness of fit metrics as well as manual inspection of human interpretability. Following this approach, STM solutions were calculated for various K (K=10 to K=65), testing different levels of granularity due to the large number of tweets. These solutions were then evaluated based on measures of topical coherence and interpretability (i.e. heldout likelihood, semantic coherence, and exclusivity; see Table 29 in Appendix E). *Held-out likelihood* generally measures a model's ability to fit unseen documents according to the topic solution in question. The higher the heldout likelihood, the better the model (Wallach, Murray, Salakhutdinov, & Mimno, 2009). However, heldout likelihood alone has been described to not predict human interpretation of topic solutions very well (Chang, Boyd-Graber, Gerrish, Wang, & Blei, 2009, p. 291). Thus, semantic coherence is taken as a second indicator for model quality. *Semantic coherence* measures the co-occurrence of words and it correlates well with human interpretability of topic quality (Mimno, Wallach, Talley, Leenders, & McCallum, 2011, p. 268). Higher values indicate higher semantic coherence. Semantic coherence is maximized when the most probable words in a given topic frequently co-occur together. High semantic coherence is easily achieved, though, in models with only a few topics dominated by very common words (Roberts et al., 2019, p. 11). Thus, *exclusivity* of words to topics and semantic coherence can be seen as a tradeoff and need to be evaluated in conjunction (Bishof & Airoldi, 2012; Roberts et al., 2014). The combined interpretation of these measures (see Table 29 in Appendix E) models with K=25 and K=30 topics were interpreted qualitatively and independently by two researchers and two student assistants to check for human interpretability. The model with K=25 topics provided best results. A detailed description of the resulting topic solution is provided in Table 18.

5 Europeanization on Twitter: Salience of actors and issues in #EP2019

This chapter provides an answer to the question of the Europeanization of the Twitter debate around the 2019 EP election with regard to the actors and communicative interactions (RQ 1a, Chapter 5.1) as well as the issues discussed (RQ 1b, Chapter 5.2). Afterwards, the role of reciprocity and mutual communicative connection in the networks for the responsiveness of politicians and therefore the potential to enhance the democratic and communication deficit of the EU (RQ 2) are discussed in Chapter 6. Finally, Chapter 7 provides evidence for political conflict lines that become salient in the community structures of the debate (RQ 3), by analyzing the actor and issue constellations in the cohesive subgroups.

5.1 Actors and their communicative interactions in the #EP2019 debate: Vertical and horizontal Europeanization

To analyze the communication between actors in the context of the 2019 EP election debate on Twitter with regard to vertical, horizontal, and supranational Europeanization, several aspects need to be taken into consideration. First, descriptive results for the actor constellation in all four networks (i.e. mentions, retweets, quotes, replies) are provided. Second, from a network perspective, the communicative interactions between actors with national and European scopes are described. Third, actors' positions in the networks – which stem from their communicative interactions and the resulting network structures – are described and actors' roles for the Europeanization of networked public spheres are discussed. The specific opportunity structures that result from group-specific goals and resources, political leanings, and country backgrounds are taken into consideration in order to analyze actors' roles for the Europeanization of the debate. Finally, ERGMs are used to provide inferential evidence for the descriptive results and test the influence of different actor characteristics and homophily effects on the network structure. Due to computational limits, only the two smaller networks (i.e. quotes and replies) are used as case studies for the inferential part of the analysis.

5.1.1 Europeanization: Descriptive results on the node and edge level

The official election hashtag (#EP2019) was used in 446,198 tweets, resulting in a total of 978,978 edges across all communicative interactions between 155,886 unique nodes from 108 different countries.

Table 5. Overview of network measures

	Mentions	Retweets	Quotes	Replies
Number of nodes	153,727	141,225	10,349	8,247
Number of edges	588,558	361,398	14,680	14,015
Number of communities	1,128	1,289	1,378	1,825
Modularity	.79	.81	.84	.86
Density	1.81E-09	2.49E-09	1.37E-04	2.06E-04
Diameter	19.00	24.00	12.00	11.00
Average degree	7.66	5.12	2.84	3.40
SD degree	126.13	120.60	9.08	12.53
Median degree	2.00	1.00	1.00	1.00

Table 5 provides an overview of the four networks for the different edge types in the 2019 EP election debate on Twitter. The mention network is by far the largest of the four networks with more than half a million edges sent by 153,727 nodes. Mentions are therefore the most frequently used interaction mode in Twitter communication. This may be explained by the particular functions of mentions. They provide visibility to a user in a debate by tagging the user. This does not require specific language skills and or knowledge about the specificities of a discussion. Mentions are also prone to result in larger networks than other interaction types because it is possible to mention more than one user in a tweet and thus to create more than one edge with a single tweet (i.e. mention more than one user in a tweet), while retweets, quotes, and replies can only create one edge per tweet. The relatively low number of replies is likely due to its strong dependence on language skill needed to understand and answer to original contents.

Network diameter is an indicator of the longest geodesic path between two nodes in a network (Wasserman & Faust, 1994, p. 134). It provides relevant information on the diffusion of contents in (communication) networks, with large diameters indicating that information needs to travel long distances to reach all nodes. In terms of activity and popularity, all four networks show effects of preferential attachment and power-law distributions, as exemplified by the skewed degree distribution typical for online communication networks. Especially the standard deviation and median of the degree distribution show large differences in terms of degrees in the four networks, indicating that few users receive most of the indegrees or account for high outdegrees. At the same time most users have low in- and outdegree as indicated by the median degree in all four networks. This suggests that some users occupy more influential positions in terms of communication output (activity = hubs) and attention (popularity = authorities) than others. In order to account for these actor-differences and their impact on the Europeanization of the #EP2019 debate, it is necessary to analyze the actors in the debate before turning to their communicative interactions.

Actor distribution in the #EP2019 debate

Viral vs. random sample. Comparing the viral and the random sample of coded actors on the node level (Table 6), it becomes apparent that citizens play an important role in the overall network (random sample: 62 %), but they are largely underrepresented among the most visible actors in the network (viral sample: 31 %).

This indicates that citizens do engage in online communication about the 2019 EP election campaign, but they do not receive as much attention as the other actor groups in the debate. This attention is mostly given to traditional elite-actors (politicians and media actors). Similar but less pronounced results can be found for civil society actors, who are important intermediaries between the political level and citizens (viral sample: 16 %; random sample: 10 %). As such they are expected to receive attention from citizens while themselves pointing their attention to the political level. In terms of actor distribution, they play a considerable role in the debate and thus have the potential to connect between the citizens and politicians. Politicians and media actors, however, are highly overrepresented in the viral sample (politicians: 28 %; media: 21 %) compared to the random sample (politicians: 13 %; media: 9 %), showing that these elite actor groups receive attention from others in the networks, which results in high indegrees.

Table 6. Comparison of viral and random sample across actor groups, political leaning, and actor scope, in % (N=12,013 coded actors)

	Viral sample n=1,333	Random sample n=11,122	Total sample N=12,013
Actor groups			
Political actors	28.21	13.43	14.21
Economic actors	2.03	2.58	2.52
Civil Society	16.28	10.13	10.59
Media actors	21.46	9.32	10.22
Cultural actors	0.53	1.55	1.48
Citizens	30.68	61.96	59.95
Others	0.82	1.03	1.025
Political leaning			
Left/Socialist	5.62	6.61	6.32
Green	8.31	7.07	6.91
Social democratic	7.54	5.58	5.50
Liberal	8.93	5.32	5.35
Christian democratic	3.77	1.84	1.87
Conservative	3.00	2.55	2.49
Nationalist	10.78	5.10	5.32
Agrarian	0.00	0.06	0.05
Regional/Ethnic minority	2.16	2.45	2.39
Special Issue	11.39	8.38	8.37
Electoral Alliances	0.08	0.06	0.06
Non-partisan/neutral	18.55	8.47	8.97
Unclear	19.86	46.52	3.07
Actor scope			
National	74.89	91.057	89.05
EU	15.89	4.172	4.81
Europe	4.69	1.509	1.77
International	0.15	0.245	0.24
Global	4.16	2.490	2.58
Unclear	0.23	0.527	1.55

The actor constellation in the debate remains constant for most of the election campaign. Percentages fluctuate slightly from one day to the next, but generally speaking, citizens make up the largest actor group for the whole time period (around 60 %). The presence of citizens compared to other actor groups increases on the election days and the days after the election. The salience of political actors in the debate decreases around the election dates (23–26 May 2019), while the salience of media actors increases. This indicates that journalists still play important roles with regard to explaining, evaluating and interpreting elections and elections results especially on the European level.

Actor groups. Table 7 provides an overview over the distribution of coded actors in the four networks as well as in the overall debate, showing important cross-network differences that point towards specific usages and functions of the different communicative interactions on Twitter. First, politicians and media actors are overrepresented in the quote (26 % and 21 %, respectively) and the reply network (25 % and 17 %, respectively) compared to their presence

in the overall debate (14 % and 10 %, respectively). For civil society actors, this tendency is similar, albeit more pronounced for the quote network (18 %). Conversely, citizens are highly underrepresented in these networks and gain more attention in the mention and the retweet network (60 % and 63 %, respectively). These distributions indicate that different actors become more or less salient in the different networks depending on their use of outgoing edges (i.e. activity) and receiving attention in terms of incoming edges (i.e. popularity) with regard to the respective communicative interaction. For example, media actors are more salient in the quote network than in the mention network, because they still provide reliable information about important issues, which is quoted by others and thus provides attention to media actors' contents. Additionally, this indicates that citizens tend to use more cost-intensive interaction mechanisms such as quoting and replying less frequently. Since mentioning and retweeting are less strongly content-focused than quoting and replying to tweets, they can be considered less costly in terms of knowledge and language skills needed to interact. This results in specific network structures and communicative roles as hubs, authorities, and brokers of different actors, which will be discussed in more detail below.

Taking a more detailed look at the subcategories, some specific results stand out. First, individual politicians and political parties[6] strongly dominate the category of political actors with more than 80 % in all four networks. This can be explained with the election campaign context of the study as well as the generally high number of individual politicians and parties in Europe compared to, for example, executive accounts. The group of civil society actors is dominated by scientists and research institutions (34 to 40 % of civil society actors), followed by pro- and anti-European civil society organizations and environmental organizations. Taken together, this indicates a particular relevance of civil society organization and individuals in the debate, who either possess specific knowledge about the EU (e.g. scientists) or have issue-specific interests related to the EU (e.g. environmental protection as an issue of transnational concern).

---

[6] Parties and individual politicians are both subsumed in the category of political actors.

Table 7. Distribution of actor groups in the mentions, retweet, quote, and reply network (in %)

Actor group	Mentions	Retweets	Quotes	Replies	Overall
Political actors, of which...	**14.21**	**13.44**	**25.73**	**24.71**	**14.21**
...government/executive	8.85	7.83	7.96	7.23	8.89
...legislative/political parties	86.78	88.62	88.97	89.84	86.66
...(state) executive agencies	3.25	2.61	1.53	2.15	3.22
...others	1.12	0.94	1.53	0.78	1.23
Economic actors	**2.49**	**2.26**	**3.03**	**2.03**	**2.52**
Civil Society, of which...	**10.61**	**10.54**	**18.48**	**14.58**	**10.59**
...environmental organizations	11.43	11.32	8.80	10.00	11.51
...migrant organizations	1.83	1.54	2.15	3.33	1.81
...pro-/anti-European organizations	16.27	17.32	21.24	22.33	16.25
...extreme right organizations	0.87	0.86	0.64	2.67	0.87
...feminist/LGBTQI organizations	3.89	4.12	6.01	6.00	3.86
...human rights organizations	11.51	11.06	10.73	11.00	11.44
...welfare organizations	2.14	2.23	3.00	2.33	2.13
...scientific/research institutions	40.16	40.05	37.98	33.67	40.30
...religious organizations	1.27	1.29	1.07	0.33	1.26
...consumer organizations	0.95	1.03	0.86	1.00	0.95
...others	9.68	0.60	7.51	7.33	9.62
Media actors, of which...	**10.13**	**9.32**	**20.53**	**17.18**	**10.22**
...legacy media/journalists	49.34	45.50	62.38	57.30	49.76
...online only media/journalists	20.27	21.30	20.15	18.54	20.15
...bloggers, influencers	30.40	33.20	17.47	24.16	30.10
Cultural actors	**1.44**	**1.27**	**1.50**	**1.45**	**1.48**
Citizens	**60.12**	**62.53**	**30.14**	**38.90**	**59.95**
Others	**0.99**	**0.64**	**0.59**	**1.16**	**1.02**
Total	100.00 (n=11,610)	100.00 (n=10,866)	100.00 (n=2,468)	100.00 (n=1,994)	100.00 (N=12,013)

Note. Analysis based on N=12,013 coded user profiles including viral and random sample. Sum of coded profiles in all four networks exceeds 12,013 since the same user can be part of more than one network. Accounts that could not be assigned to an actor group (i.e. 'other') are excluded from further analyses. All categories include individual and collective actors.

Political leaning. Generally, a well-balanced distribution of political leaning in the debate can be observed. Table 8 provides an overview of political leaning according to actor groups. It shows that the political leaning could be identified for about half of the coded actors (54 %), but the percentage of actors with sufficient information for the identification of political leaning strongly depends on the actor group. While political leaning could be determined for more than 90 percent of political actors, this is the case for only around 35 percent of all citizens. Even for a very politically oriented user base such as that of Twitter – one would still not expect all citizens to disclose their political leanings in their Twitter profiles.

Table 8 also provides insights into the actor constellation in the #EP2019 debate: Political actors mostly come from Green (17 %), Social Democratic and Liberal (almost 16 %, respectively) political backgrounds; more than 6 percent of all citizens in the debate show a nationalist political leaning in their Twitter profiles. Non-partisan actors mostly include scientists and research institutions as well as (public service) media.

Table 8. Distribution of political leaning according to actor groups (in %, n=11,890)

Political leaning	Political actors	Economic actors	Civil society	Media	Cultural actors	Citizens
Left/Socialist	8.55	0.66	9.04	5.78	6.18	5.76
Green	17.05	7.26	12.89	3.50	4.49	4.19
Social democratic	15.64	7.92	9.28	3.99	2.81	2.75
Liberal	15.64	7.92	1.97	9.28	1.69	2.92
Christian democratic	8.79	0.66	1.26	1.71	0.00	0.50
Conservative	4.39	0.66	0.63	3.91	0.56	2.29
Nationalist	7.09	0.33	1.02	3.83	1.69	6.30
Agrarian	0.12	0.33	0.16	0.08	0.00	0.00
Regional/Ethnic minority	3.57	0.33	1.73	0.73	0.00	2.69
Special Issue	7.79	5.28	16.98	3.50	1.69	8.25
Electoral Alliances	0.35	0.00	0.00	0.00	----	----
Non-partisan/neutral	9.49	1.98	37.74	35.02	----	----
Unclear	1.52	66.67	8.31	28.66	80.90	64.35
Total	**100.00** (n=1,707)	**100.00** (n=303)	**100.00** (n=1,272)	**100.00** (n=1,228)	**100.00** (n=178)	**100.00** (n=7,202)

Note. Per definition, citizens and cultural actors cannot be non-partisan or part of electoral alliances, because they are part of the electorate and expected to vote in the election. Deleted profiles are excluded because the political leaning variable could not be coded for deleted profiles.

Country and Scope. The question of actors' country backgrounds and scope is essential when it comes to the Europeanization of networked public spheres (Koopmans et al., 2010; Koopmans & Erbe, 2004). Before analyzing the scope of the communicative interactions between actors in terms of vertical and horizontal Europeanization (i.e. edges), a brief description of the country backgrounds and scopes of the actors (i.e. nodes) is in order. Generally, actors from a large variety of countries are represented across all networks. Actors from 108 different countries participated in the debate around #EP2019, including 45 European and 63 non-European countries. Table 9 shows the 20 most frequent country backgrounds of coded actors in the overall debate. Almost 12 percent of actors' country backgrounds could not be coded unambiguously due to insufficient information provided in user profiles. Among the Top 10 most represented countries are the UK, Germany, Netherlands, Ireland, Belgium, Spain, France, the USA, Italy, Sweden, and Austria. Non-European countries in the debate include the USA, Australia, Canada, Brazil, and Japan amongst others. Even though actors from non-European countries such as the USA or even India participated in the debate, one can generally still speak of a European debate considering the comparatively low number of actors from non-European countries; 92 percent of coded actors are from EU member states.

Table 9. Top 20 country backgrounds of coded actors

Country	Frequency	% from total	Valid %[1]
UK	2,209	18.389	20.80
Germany	2,054	17.10	19.34
Netherlands	1,703	14.18	16.04
Ireland	1,023	8.52	9.63
Belgium	614	5.11	5.78
Spain	575	4.79	5.42
France	431	3.59	4.06
USA	403	3.36	3.80
Italy	308	2.56	2.90
Sweden	137	1.14	1.29
Austria	135	1.12	1.27
Denmark	106	0.88	1.00
Portugal	78	0.65	0.74
Greece	69	0.57	0.65
Finland	59	0.49	0.56
Hungary	55	0.46	0.52
Poland	52	0.43	0.49
Switzerland	48	0.40	0.45
Czech Republic	46	0.38	0.43
Australia	42	0.35	0.40
Other countries	472	3.93	4.44
undefined	1,394	11.60	----
Total	**12,013**	**100.000**	**100.000**

Note. Valid percent exclude all nodes for which no country could be coded due to missing information or deleted profiles (i.e. 'undefined').

Only 6 percent of all coded actors are from non-European countries, with the USA as by far the most important non-European country with almost 4 percent of actors. Actors from European countries that are not part of the EU are also less strongly engaged in the debate about the #EP2019 debate. For example, only 0.45 percent of all actors in the debate are from Switzerland and only 0.37 percent are from Turkey.

Table 10. Actor scope by actor group (in %, n=11,890)

Actor scope	Political actors	Economic actors	Civil society	Media	Cultural actors	Citizens
National	80.77	74.59	62.63	76.20	90.45	100.00
European	17.76	10.56	25.34	10.69	1.12	----
International	0.18	0.99	0.94	0.81	0.56	----
global	1.23	10.23	9.99	9.86	5.62	----
unclear	0.06	3.63	1.10	2.44	2.25	----
Total	**100.00** (n=1,707)	**100.00** (n=303)	**100.00** (n=1,272)	**100.00** (n=1,228)	**100.00** (n=178)	**100.00** (n=7,202)

Note. Deleted profiles are excluded because the scope variable could not be coded for deleted profiles.

Table 10 shows the distribution of actor scope across all actor groups. The scope of an actor is defined as their scope of action in the sense of the intended target region of their communication and action strategies. It has to be distinguished from the scope of their communicative interaction (edge scope), which is measured as the actual communicative interaction between a sending and a receiving actor based on the actor scope and the country background of the

communicating actors. Table 10 shows that civil society actors are the most European actor group in terms actor scope (25 %). Civil society organizations with a European scope in the sample include, for example, @PositiveMoneyEU, a non-profit organization for a fair economy in the EU. Another example is @lobbycontrol, a non-profit organization that observes and explains lobbying structures in the EU. The sample also contains many political actors from the European level (18 %), which include European institutions (e.g. @EU_Commission or @eucopresident) as well as MEPs (e.g. @ManfredWeber, @SkaKeller, or @guyverhofstadt) and collective accounts for the EP fractions (e.g. @EPPGroup or @ALDEgroup). European-level media actors make up about 11 percent of this actor group. Examples of European-level media and journalists in the debate are @ARTEfr, @euronews, or @Europe_Elects. Please note that coding instructions specified citizens to always have a national scope, therefore all citizens must fall into this category since citizens still vote for national candidates in the EP elections.

Europeanized edges in #EP2019

To analyze who communicates with whom and whether the communicative interactions transcend national borders (i.e. the scope of edges), the analysis will now turn from the actor level (i.e. nodes) to the level of communicative interactions (i.e. edges) between actors in the debate. Due to the comparatively low numbers of economic and cultural actors, these groups are excluded from subsequent analyses.

Edge scope is determined based on the country background and scope of the actors based on the role from which they communicate on Twitter. For example, an interaction between two actors with a national actor scope from the same country (e.g. citizens from Germany) is a national edge while a link between two actors with national actor scope from two different EU countries (e.g. citizens from Germany and France) is a horizontal European edge. An interaction between a German citizen and a German MEP is a (bottom-up or top-down, depending on the direction of the interaction) vertical European edge and an interaction between two MEPs is a supranational European edge.

Figure 6 shows the networks for all four communicative interactions. Edges are colored according to edge scope to visualize national, Europeanized and transnational (i.e. involving users from non-European countries) communicative interactions.

Figure 6. Comparison of edge scopes in mention, retweet, quote, and reply network
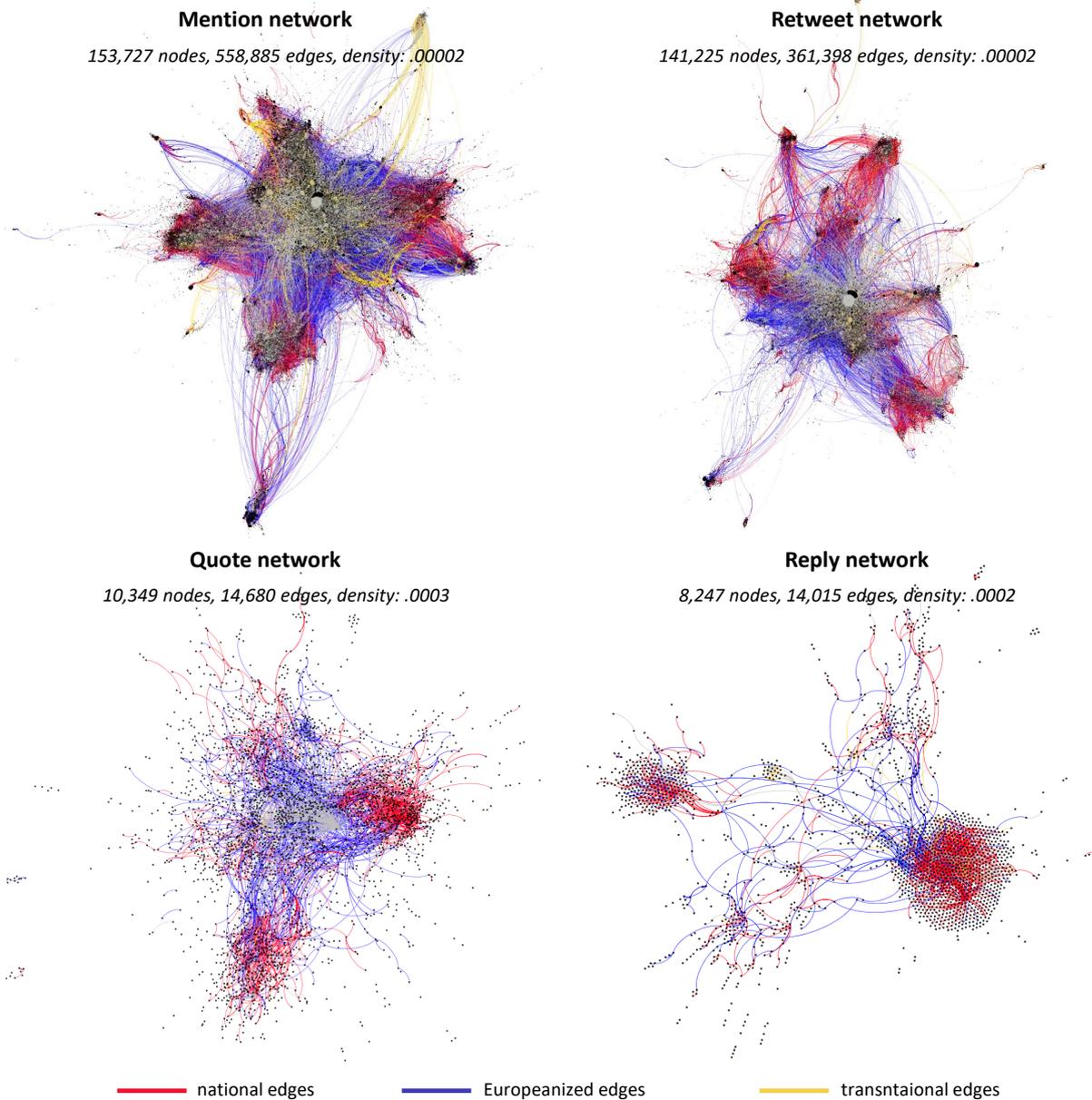
Mention network

153,727 nodes, 558,885 edges, density: .00002

Retweet network

141,225 nodes, 361,398 edges, density: .00002

Quote network

10,349 nodes, 14,680 edges, density: .0003

Reply network

8,247 nodes, 14,015 edges, density: .0002

national edges Europeanized edges transntaional edges

Note. Directed networks. Layout: ForceAtlas2 (Gephi). Only largest component and nodes with degree > 2 depicted. Only coded edges depicted (~21%). Node size and node color fixed. Edge color based on edge scope.

Mentions. Mentions are used considerably more frequently than other communicative interactions by all actors in the debate. Since mentioning someone in a tweet does not require extensive language skills or even high levels political knowledge, the mention network shows considerably high proportions of Europeanized (33 %) and transnational (4 %) ties. Figure 6 also provides insights into the network structure of the different interaction networks. National edges (red) dominate at the periphery while the center of the network is dominated by Europeanized edges (blue). Transnational edges (yellow) play a minor role and mostly include English-speaking countries in North America (i.e. USA and Canada) as well as Australia. When differentiating between vertical and horizontal Europeanization (Koopmans & Statham, 2010b,

p. 39), it becomes apparent that vertical Europeanization (bottom-up: 15 %, top-down: 5 %) is more frequent than horizontal Europeanization (5 %). Put differently, communication between actors from the national and the European level occurs more frequently than communication between (national) actors from different EU member states. However, this is a general tendency across all networks and not unique to the mention network, which can be explained by increased attention to and communicative interaction with European level politicians during the EP elections.

Figure 7. Edge scope of sending actors per actor group in the mention network
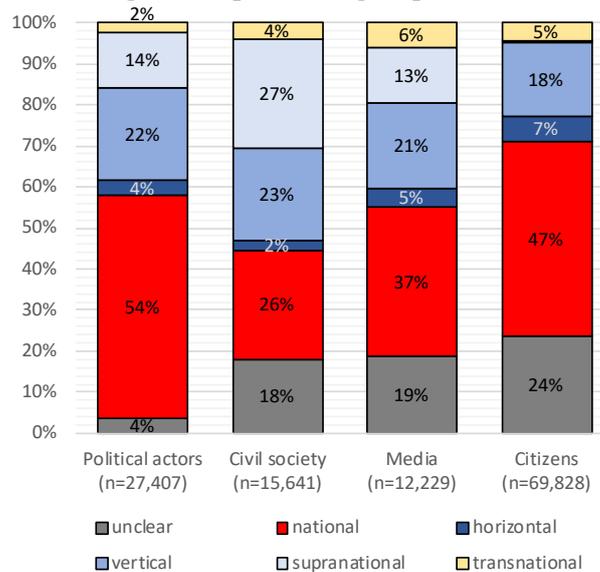
Note. *National ties* occur between two actors from the same country. *Horizontal ties* occur between two actors with national actor scope from different European countries. *Vertical ties* occur between national and European level actors from European countries. *Supranational ties* occur between actors with European actor scope. Per definition, citizens cannot be involved in supranational ties because they always have national scope. *Transnational ties* include all ties where the sending or the receiving actor is based in a non-European country.

Especially *civil society actors* show comparatively high levels of Europeanized communicative interaction with overall 52 percent of Europeanized edges. Breaking this down to the different forms of Europeanization, 27 percent of civil society's edges have a supranational European scope (i.e. European civil society actors mention other European level actors in their tweets); 23 percent of edges are instances of vertical Europeanization of which bottom-up communication (i.e. national civil society actors address the European level) makes up approximately 10 percent and top-down communication (i.e. European level civil society addresses national level actors) accounts for almost 13 percent of edges. Civil society actors thus act as intermediaries between the national and the European level and can be considered important drivers of Europeanization in the mention network, closely followed by *media actors* with a total of 39 percent of interaction focusing either on the horizontal, the vertical, or the supranational level. *Political actors'* mention activity primarily focusses on the national level

with 54 percent of interactions. This is somewhat surprising given the EP election context. However, taking into consideration that EP elections are still confined to member states instead of a supranational electoral system, mutual support of national level politicians and election candidates is plausible. Furthermore, bottom-up vertical as well as supranational (14 %, respectively) mentions are also quite frequently used by political indicators, underlining the importance of electoral support between politicians from the national and the European level as well as between MEPs. Finally, *citizens'* communicative interactions in the mention network are mostly focused on the national level with 47 percent of ties. It is important to note that, by definition, citizens cannot be senders of top-down vertical communicative interactions and they cannot be involved in supranational communication because they always have a national actor scope due to their involvement in national electoral processes. However, Figure 7 also shows that 18 percent of their interaction are instances of (bottom-up) vertical Europeanization, indicating that they address European level institutions and politicians at least to some extent in their tweets.

Concerning the impact of actors' political leaning on their degree of Europeanized communicative interactions (Table 28 in Appendix C), national edges are generally more frequent than Europeanized communication across political ideologies. However, some notable exceptions can be observed. First, Christian democratic actors initiate supranational communication (22 %) particularly frequently. A more detailed look at the accounts involved in these interactions shows that this is due to increased communicative interaction between individual MEPs as well as party accounts of the European People's Party (EPP) in the context of EP election campaigning (e.g. @EPP, @DaraMaurphyEPP, @ManfredWeber, @Esther_de_Lange, @JunkerEU). Second, and in contrast to Christian democrats, nationalist actors exhibit a particularly strong communicative focus on the national level. In line with previous research on the issue agendas of right-wing populists' Facebook communication about the 2019 EP election (Heft, Pfetsch, Voskresenskii, & Benert, 2022), right-wing nationalist actors' focus on national communication can be explained by their issue ownership of anti-EU and anti-migration issues (Poier, Saywald-Wedl, & Unger, 2017) and typical populist communication styles that include anti-Elitism (Ernst et al., 2019). Third, special issue actors' communicative interactions focus more strongly on the European level (including supranational (19 % of ties), bottom-up vertical (17 % of ties), and top-down vertical (10 % of ties) Europeanization) and less strongly on the national level (33 %) than those of other actors. Special issue actors include the Brexit party and its supporters as well as certain pro-EU challenger parties and organizations such as Volt. Thus, a particular communicative focus on

the European level for both, Brexit-related actors as well as pro-EU actors, can be expected – albeit for different strategic reasons.

Turning to individual accounts and their roles for Europeanization in the mention network, a look at hubs, authorities, and brokers is in order. Table 11 provides an overview over the ten most important hubs (i.e. users with highest outdegrees), authorities (i.e. users with highest indegrees) and brokers (i.e. user with highest betweenness centrality) in the mention network. Please note that no information about individual accounts is provided for citizens due to privacy reasons.

Table 11. Top 10 hubs, authorities, and brokers in the mention network

	Hubs				Authorities				Brokers			
	User name	Actor group	Actor scope	Political leaning	User name	Actor group	Actor scope	Political leaning	User name	Actor group	Actor scope	Political leaning
1	gmh_upsa	MED	NAT	Special issue	Europe Elects	MED	EURO	Non-partisan	Europe Elects	MED	EURO	Non-partisan
2	D66	POL	NAT	Liberal	AfD	POL	NAT	Nationalist	D66	POL	NAT	Liberal
3	anony-mous	CIT	NAT	Green	KRLS	POL	EU	Ethnic Minor.	ALDEParty	POL	EU	Liberal
4	Nacio-digital	MED	NAT	Liberal	Good-winMJ	CIV	NAT	Non-partisan	Tobias Schminke	MED	EURO	Non-partisan
5	E_Hun yadi	CIV	NAT	Special issue	Scott Presler	MED	NAT	Nationalist	Politico Ryan	MED	EURO	Non-partisan
6	anony-mous	CIT	NAT	Other	watch_union	MED	NAT	Left	Timmer-mansEU	POL	EU	Social demo.
7	anony-mous	CIT	OTH	Other	Joerg_Meuthen	POL	EU	Nationalist	DylanC Marshall	MED	EU	Liberal
8	anony-mous	CIT	NAT	Other	LeaveEU Official	CIV	EU	Special issue	EPP	POL	EU	Christ. demo.
9	anony-mous	CIT	NAT	Special issue	groen-links	POL	NAT	Green	Deutsch-landVolt	POL	EU	Special issue
10	anony-mous	CIT	NAT	Other	Die_Gruenen	POL	NAT	Green	green-party_ie	POL	NAT	Green

Note. Accounts of citizens are anonymized for privacy reasons. Hubs are nodes with highest outdegree centrality scores. Authorities are nodes with highest indegree centrality scores. Brokers are nodes with highest betweenness centrality scores.

Hubs are important for the Europeanization of networked public spheres because they exhibit considerable communication activity and thus provide attention to other (European) users in the debate through high outdegrees. Even though hubs can potentially come from all actor groups, citizens often occupy this role in the mention network indicating that they are of considerable importance in the debate in terms of communication activity and the distribution of attention by mentioning other users. At the same time, citizens do not play important roles as authorities or brokers. Authorities are important for the Europeanization of networked public spheres because they receive attention from other actors in a debate. Brokers are important because they have the potential to bridge structural holes and thus affect information flows and act as connector of otherwise sparsely connected groups. Both roles are primarily occupied by elite actors from media and politics, underlining the elite-centered nature of the discussion about

the 2019 EP elections, even on Twitter. However, positions as authorities and brokers are often occupied by actors from the European level, while hubs are mostly actors from the national level. This is in line with the comparatively high degrees of bottom-up vertical Europeanization and with the nature of the EP elections in general, in which one would expect national actors to provide increased attention to European level actors. The only civil society account among the top 10 authorities in the mention network is @LeaveEUOfficial, a pro-Brexit civil society organization.

Retweets. Retweets are focused on the distribution of contents. They provide a relatively low threshold for communicative interaction since users can simply forward contents of others without adding any additional information. As such, they are expected to be subject to strong homophily effects since the lack of additional information in retweets means that users cannot disagree with or elaborate on the forwarded content. Thus, literature on the strategic use of retweets indicates that they are often interpreted as endorsements or at least in a positive way (Engelmann, Kloss, Neuberger, & Brockmann, 2019, p. 3572). Figure 6 shows that, similar to the mention network, edges with a European scope (blue) can be observed primarily in the center of the retweet network, while edges with a national scope (red) are more frequent in the periphery. Europeanization in the retweet network is lower than in the mention network: Only 27 percent of edges in the retweet network have European scope and only 2 percent have a transnational scope, while national edges account for 44 percent of interactions. A more detailed picture of vertical and horizontal Europeanization in the retweet network is provided by Figure 8.

Civil society actors show the strongest Europeanization in their communicative interaction: Supranational (23 %) and vertical Europeanization (21 %) account for similar proportions, while horizontal Europeanization is again rather low (3 %) and only 22 percent of their interactions target national level actors. Again, bottom-up vertical interactions are more common than top-down vertical edges across all actor groups indicating that national level actors retweet contents from European level actors generally more frequently than vice versa. *Politicians* show a high proportion of national communicative interactions (58 %) despite the EP election context, which indicates that the national level is more important for the communication of political actors, which supports the second-order assumption of EP elections.

Figure 8. Edge scope of sending actors per actor group in the retweet network
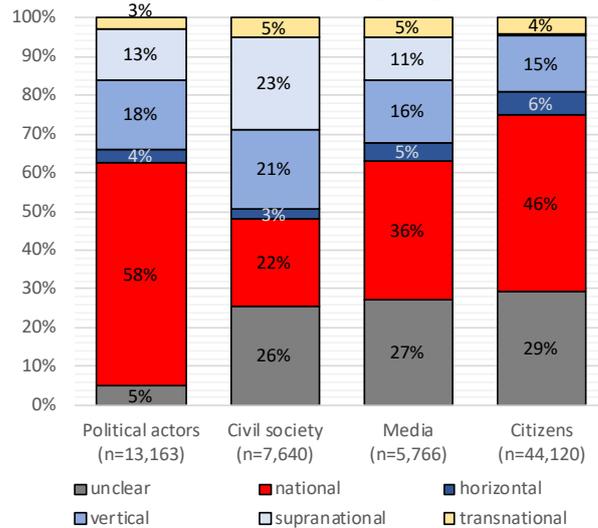
Note. *National ties* occur between two actors from the same country. *Horizontal ties* occur between two actors with national actor scope from different European countries. *Vertical ties* occur between national and European level actors from European countries. *Supranational ties* occur between actors with European actor scope. Per definition, citizens cannot be involved in supranational ties because they always have national scope. *Transnational ties* include all ties where the sending or the receiving actor is based in a non-European country.

Furthermore, horizontal Europeanization (4 %) is as low as in the mention network, which indicates that politicians mostly retweet contents of actors from their own countries (creating national edges), followed by contents of actors from the European level – albeit to a considerably lesser extent – but not so much those of national level actors from other European countries. Put differently, despite the introduction of pan-European Spitzenkandidaten, communicative interactions do not occur particularly often between political actors from different EU member states. This is also true for *citizens* whose retweeting activity is mostly focused on the national level (46 %). However, citizens do act as initiators of Europeanized communication since they retweet European level actors regularly and thus account for 14 percent of bottom-up vertical and 6 percent horizontal communicative interaction in the retweet network.

With regard to political leaning (Table 28 in Appendix C), especially Christian democrats and special issue actors focus on supranational Europeanization more strongly than other actors. Furthermore, nationalist actors focus their retweets even more strongly on the national level than their mention activity. Thus, nationalist actors not only address actors with the same national backgrounds particularly often, but they also forward posts from actors from the same countries particularly often. At the same time, retweets with a Europeanized scope – and this holds for all kinds of Europeanized edges but is particularly pronounced for supranational retweet activity – are particularly infrequent for nationalist actors. While nationalists do engage in bottom-up vertical mention activities (i.e. they address actors from the European level) in

about 10 percent of their communicative interactions, Europeanized retweets are low for all forms of Europeanized edges. This can be explained by strategic usages of different communicative interactions. While right-wing nationalist actors mention European level actors, retweeting European actors' posts and thus providing salience to their contents and issues is not in line with the communicative goals with right-wing nationalists. Nationalist actors have repeatedly been shown to drive anti-EU narratives and EU-skepticism (Dutceac Segesten & Bossetta, 2019; Heft, Pfetsch, et al., 2022; Pfetsch, Benert, & Heft, 2021).

Table 12. Top 10 hubs, authorities, and brokers in the retweet network

|	Hubs				Authorities				Brokers			
	User name	Actor group	Actor scope	Political leaning	User name	Actor group	Actor scope	Political leaning	User name	Actor group	Actor scope	Political leaning
1	anony-mous	CIT	NAT	Nationa-list	Europe Elects	MED	EURO	Non-partisan	Politico Ryan	MED	EURO	Non-partisan
2	anony-mous	CIT	NAT	Other	AfD	POL	NAT	Nationa-list	Terry Reintke	POL	EU	Green
3	anony-mous	CIT	NAT	Special issue	Goodwin MJ	CIV	NAT	Non-partisan	Alberto Nardelli	MED	EURO	Left
4	anony-mous	CIT	NAT	Other	Scott Presler	MED	NAT	National ist	EPinNL	POL	EU	Non-partisan
5	anony-mous	CIT	NAT	Other	watch_union	MED	NAT	Left	Nv Ondarza	CIV	EURO	Non-partisan
6	IsThisAB0t	OTH	OTH	Other	KRLS	POL	EU	Ethnic Minor.	Keohane Dan	CIV	EURO	Non-partisan
7	giuseppe_michel	CIV	EU	Special issue	LeaveEU Official	CIV	EU	Special issue	E_Hunyadi	CIV	NAT	Special issue
8	Pirate PartyINT	POL	NAT	Special issue	Alberto Nardelli	MED	EURO	Left	Bas Eickhout	POL	EU	Green
9	Hello Euromat	CIV	EU	Non-partisan	groen-links	POL	NAT	Green	Shanehe neghan	MED	GLOB	Non-Partisan
10	m5GgW436vg6IN4I	CIV	GLOB	Ethnic minor.	Die_Gruenen	POL	NAT	Green	anony-mous	CIT	NAT	Special issue

Note. Accounts of citizens are anonymized for privacy reasons. Hubs are nodes with highest outdegree centrality scores. Authorities are nodes with highest indegree centrality scores. Brokers are nodes with highest betweenness centrality scores.

Turning to the question of most of important accounts in the retweet network, it becomes apparent that citizens are important as hubs in the debate providing visibility and attention to media and politicians – and less frequently to civil society actors – who themselves act as authorities and brokers in the network. Compared to the other networks, the relevance of civil society actors from the national and European level as authorities and brokers in the debate indicates that retweets are particularly important for the strategic communication of this actor group. Civil society actors are especially important as drivers of Europeanization across all interaction types (Table 27 in Appendix C). Taking the EP election context into consideration, this suggests that civil society actors use retweets frequently to provide attention to tweets of strategic importance to their goals. As the results from Chapter 5.2 and Chapter 6 will explain in more detail, these tweets frequently address EU policies related to economic, trade, and climate policies indicating that civil society actors are not only important drivers of Europeanization in terms of communicative interactions between national and European actors,

but they also act as brokers that bridge structural holes and allow for the diffusion of European policy discussion in the debate. As Table 12 also shows, an individual citizen is also among the most important brokers in the retweet network. This underlines previous research about citizens-elite interaction on social media platforms and shows that citizens are important attention providers online in general but that they can also succeed to achieve considerable importance and influential network positions in specific issue-publics themselves (Ausserhofer & Maireder, 2013; Maireder & Schlögl, 2014).

Quotes. The quote network presented in Figure 6 is considerably smaller than the mention and the retweet networks. National edges (red) occur in the periphery, while Europeanized edges (blue) make up the center of the network and transnational edges (yellow) are rather infrequent for this interaction type (2 %). Generally, one can observe the highest Europeanization (38 % of edges) across all actor groups in this network, while national communication accounts for 48 percent of edges.

Figure 9 shows interesting differences between actor groups: while civil society actors, media, and citizens are all more strongly focused on the national level when quoting other users' contents, politicians' use of quotes is more strongly Europeanized in relative terms than their use of mentions and retweets (compare Figures 7 and 8), meaning that politicians quote European level actors more often compared to mentions and retweets.

Figure 9. Edge scope of sending actors per actor group in the quote network
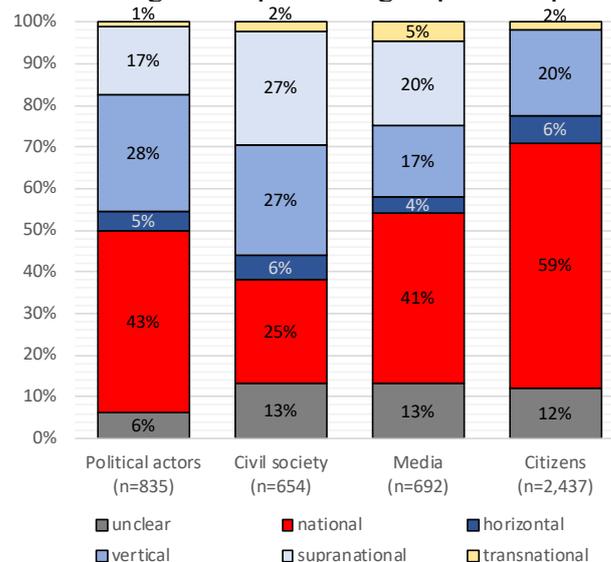
Note. *National ties* occur between two actors from the same country. *Horizontal ties* occur between two actors with national actor scope from different European countries. *Vertical ties* occur between national and European level actors from European countries. *Supranational ties* occur between actors with European actor scope. Per definition, citizens cannot be involved in supranational ties because they always have national scope. *Transnational ties* include all ties where the sending or the receiving actor is based in a non-European country.

Similarly, the communication initiated by *civil society actors* is especially focused on the European level in the quote network with 27 percent of vertical and supranational Europeanization, respectively. Differentiating between bottom-up and top-down vertical communication, it becomes apparent that both variants are used almost equally frequently (13 % and 14 %, respectively). This very balanced picture of quote interactions indicates that civil society actors target the national and the European level equally with their communication strategies. As such, they not only foster high degrees of Europeanization by focusing more strongly on Europeanized communication than other actor groups, but they also act as potential intermediaries between citizens and national as well as European politicians and can thus impact the perceived democratic legitimacy of the EU.

In terms of political leaning, the quote network shows some particularities. First, results support the general tendency that quotes foster stronger Europeanization than the other interactions (Table 28 in Appendix C). Even right-wing nationalists communicate with a bottom-up vertical European (15 % of edges) and even a top-down vertical European (9 % of edges) scope quite frequently. As in the mention and retweet networks, special issue actors (50 % of edges) and Christian democrats (40 % of edges) are overall also quite Europeanized in their use of quotes on Twitter. Green actors are also particularly Europeanized in their quoting strategies, especially compared to their use of other interaction types: overall, 42 percent of their quotes are either horizontal, vertical, or supranational European communication. As will become apparent when discussing the results of the Structural Topic Modelling in Chapters 5.2 and 6, this is related to the salience of a discussion about European climate, economic, and trade policies, which is taken up by the Greens and discussed with a European level due the importance of transnational communication for climate protection.

In terms of hubs, Table 13 once again emphasizes the importance of citizens as initiators of communication and providers of attention in the quote network. Similarly, the most important hubs come from the national level, supporting the finding that national actors are important as providers of attention and diffusion of information. Authorities are exclusively political or media elites, some of which come from the European level: in addition to @EuropeElects, which is also the most important actor in terms of indegree for the retweet and mention network, accounts of European institutions such as @Europarl_EN (i.e. the English account of the European Parliament) and @EU_Commission (i.e. the account of the European Commission) as well as individual MEPs such as @guyverhofstadt (Guy Verhofstadt, ALDE/Renew fraction) can be identified. As such, European politicians and institutions – as well as national and European media – receive considerable attention as sources of information in the quote network.

Table 13. Top 10 hubs, authorities, and brokers in the quote network

	Hubs				Authorities				Brokers			
	User name	Actor group	Actor scope	Political leaning	User name	Actor group	Actor scope	Political leaning	User name	Actor group	Actor scope	Political leaning
1	anonymous	CIT	NAT	Other	Europe Elects	MED	EURO	Non-partisan	Europe Elects	MED	EURO	Non-partisan
2	ballyhea14	CIV	NAT	Left	Britain elects	MED	NAT	Non-partisan	Krichter CPH	POL	EU	Special issue
3	anonymous	CIT	NAT	Special issue	D66	POL	NAT	Liberal	Deutsch-landVolt	POL	EU	Special issue
4	anonymous	CIT	NAT	Other	Europarl_EN	POL	EU	Non-partisan	Politico Ryan	MED	EURO	Non-partisan
5	anonymous	CIT	NAT	Other	Guyver-hofstadt	POL	EU	Liberal	oconnell hugh	MED	NAT	Liberal
6	watch_union	MED	NAT	Left	Politico Ryan	MED	EURO	Non-partisan	Grace OSllvn	POL	NAT	Green
7	anonymous	CIT	NAT	Social demo.	NOS	MED	NAT	Non-partisan	dom hannigan	POL	NAT	Social demo.
8	trouw schmidt	MED	NAT	Non-partisan	VVD	POL	NAT	Liberal	PvdA	POL	NAT	Social demo.
9	anonymous	CIT	NAT	Other	gavreilly	MED	EU	Liberal	LodewijkA	POL	NAT	Social demo.
10	anonymous	CIT	NAT	Special issue	EU_Commission	POL	EU	Non-partisan	PES_PSE	POL	EU	Social demo.

Note. Accounts of citizens are anonymized for privacy reasons. Hubs are nodes with highest outdegree centrality scores. Authorities are nodes with highest indegree centrality scores. Brokers are nodes with highest betweenness centrality scores.

Finally, important brokers in the debate are also media and political elites from the national and European levels, indicating their importance to bridge structural holes in the quote network and guarantee information flows between different actors and member states. Quotes are more language dependent than mentions retweets, which explains the higher importance of national level brokers than in the other two networks.

Replies. Figure 6 and Figure 10 both indicate that the reply network produced relatively few Europeanized edges (24 %) compared to the retweet, quote, and mention network. This can be explained by the fact that replying to a tweet requires a considerable level of language skills in order to (1) understand and (2) actively answer to the topics and statements of the original tweet. Figure 10 shows that *media actors* and *citizens* are particularly confined to the national level in their reply activity.

As a result of the language dependency in this network, the degree of Europeanization is generally low across all actor groups. As Figure 10 shows, *civil society actors* are again the actor group that focusses most strongly on Europeanized communicative interactions. However, national edges still account for 48 percent of all ties initiated by civil society actors. The strongest national focus exhibit *media actors*, whose replies focus on national actors from the same country in 74 percent their communicative interactions. This is interesting given the EP election context: apparently, national news media are especially important as information providers even in the context of European elections.

Figure 10. Edge scope of sending actors per actor group in the reply network
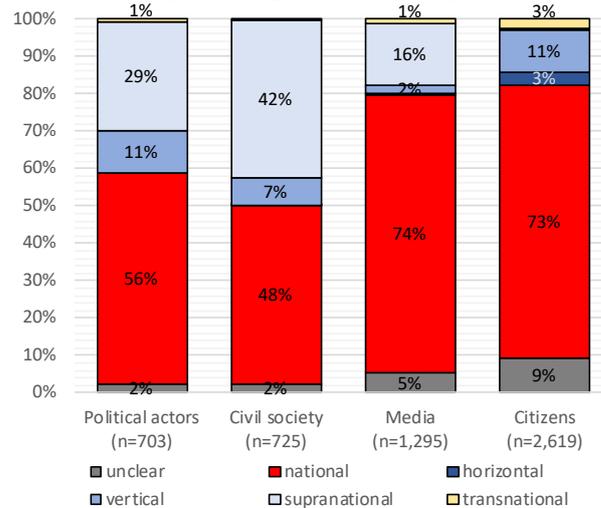
Note. *National ties* occur between two actors from the same country. *Horizontal ties* occur between two actors with national actor scope from different European countries. *Vertical ties* occur between national and European level actors from European countries. *Supranational ties* occur between actors with European actor scope. Per definition, citizens cannot be involved in supranational ties because they always have national scope. *Transnational ties* include all ties where the sending or the receiving actor is based in a non-European country.

Next to language effects (i.e. recipients preferring news in their mother tongue), this result may be explained by effects related to selective exposure and media repertoires (i.e. recipients deliberately choosing media they are familiar with (Hasebrink & Popp, 2006)) as well as news values (i.e. cultural and geographical closeness results in national media reporting about MEP candidates from their own country and election results' impact on national politics (Galtung & Ruge, 1965; Harcup & O'Neill, 2017)). *Political actors*, on the other hand, show a stronger focus on the European level with 29 percent of replies occurring between European level actors (i.e. supranational) and 11 percent of replies accounting for vertical Europeanization (bottom up: 6 %; top-down: 5 %).

Nationalists are even more likely to initiate reply interactions with a national scope than other groups (Table 28 in Appendix C). Since communicative interactions create attention to actors' contents, elite blaming by nationalist actors in the context of the EP elections may have been performed as non-mention, which describes the act of talking about users on social media platforms without explicitly linking to their profiles. This prohibits providing attention to users by creating digital links to their profiles.

Table 14. Top 10 hubs and authorities in the reply network

	Hubs				Authorities			
	User name	Actor group	Actor scope	Political leaning	User name	Actor group	Actor scope	Political leaning
1	D66	POL	NAT	Liberal	D66	POL	NAT	Liberal
2	anonymous	CIT	NAT	Nationalist	VVD	POL	NAT	Liberal
3	anonymous	CIT	NAT	other	TimmermansEU	POL	EU	Social democratic
4	anonymous	CIT	NAT	Nationalist	guyverhofstadt	POL	EU	Liberal
5	anonymous	CIT	NAT	Green	thierrybaudet	POL	NAT	Nationalist
6	anonymous	CIT	NAT	Nationalist	NOS	MED	NAT	Non-partisan
7	anonymous	CIT	NAT	Special issue	geertwilderspvv	POL	NAT	Nationalist
8	anonymous	CIT	NAT	Other	groenlinks	POL	NAT	Green
9	anonymous	CIT	NAT	Nationalist	wierdduk	MED	NAT	Nationalist
10	SELibDems	POL	NAT	Liberal	MinPres	POL	NAT	Liberal

Note. Accounts of citizens are anonymized for privacy reasons. Hubs are nodes with highest outdegree centrality scores. Authorities are nodes with highest indegree centrality scores. Brokers are not calculated for the reply network due to the specific characteristics of the interaction type. See Chapter 4 for a detailed discussion.

Table 14 shows the Top 10 hubs and authorities for the reply network. In line with the language dependency of different communicative interactions in the analysis and the results presented in Figure 10, the importance of national level actors as hubs and authorities becomes apparent. Second, the prevalence of Dutch actors among the authorities in the reply network is striking, indicating the increased communicative activity of Dutch citizens in this network, who act as hubs and provide attention to politicians' contents. Thus, communicative interactions are indeed used differently by actors from different countries and replying to politicians' tweets was particularly frequent in the context of election campaigns in the Netherlands.

Homophily

Considering potential homophily effects, descriptive results generally show considerable effects for political leaning of actors but less pronounced effects for the actor group variable. Actor group-related homophily effects (see Table 15) are particularly pronounced for politicians, who direct between 62 percent (quotes) and 80 percent (mentions) of their interactions towards other politicians. This implies strategic communication in the election campaign context. Media actors direct between 43 percent (mentions) and 91 percent (replies) to other media actors, while civil society and citizens are more diverse in their communicative interaction. This indicates that elite actors are more prone to actor group-related homophily effects across all networks.

Table 15. Homophily effects of actor groups (in % of edges)

Edges to	Political actors	Economic actors	Civil society	Media	Cultural actors	Citizens
	Mentions					
own group	79.93	13.11	33.12	43.00	3.08	14.45
other groups	20.07	86.89	66.88	57.00	96.92	85.55
Total	100.00	100.00	100.00	100.00	100.00	100.00
	(n=27,407)	(n=2,021)	(n=15,641)	(n=12,229)	(n=909)	(n=69,828)
	Retweets					
own group	74.19	14.29	38.08	62.56	1.65	19.89
other groups	25.81	85.71	61.92	37.44	98.35	80.11
Total	100.00	100.00	100.00	100.00	100.00	100.00
	(n=13,163)	(n=826)	(n=7,640)	(n=5,766)	(n=545)	(n=44,120)
	Quotes					
own group	61.68	32.69	36.24	65.32	-----	19.08
other groups	38.32	67.31	63.76	34.68	-----	80.92
Total	100.00	100.00	100.00	100.00	-----	100.00
	(n=835)	(=52)	(n=654)	(n=692)	(n=29)	(n=2,437)
	Replies					
own group	78.38	26.19	79.31	91.20	32.35	41.77
other groups	21.62	73.81	20.69	8.80	67.65	58.23
Total	100.00	100.00	100.00	100.00	100.00	100.00
	(n=703)	(n=126)	(n=725)	(n=1,295)	(n=34)	(n=2,619)

Note. Only categories with n≥30 depicted.

Table 16. Homophily effects of political leaning (in % of edges)

Edges to	Left	Green	Soc. Dem.	Liberal	Christ. Dem.	Con-serv.	Nation-alist	Ethn. Minor.	Special issue	Non-part.
	Mentions									
own group	39.03	61.91	61.98	51.46	65.14	25.72	64.43	52.44	42.01	51.36
other groups	60.97	38.09	38.02	48.54	34.86	74.28	35.57	47.56	57.99	48.64
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
	(n=8,414)	(n=12,500)	(n=9,204)	(n=6,918)	(n=3,613)	(n=2,834)	(n=12,555)	(n=2,930)	(n=16,455)	(n=10,946)
	Retweets									
own group	39.14	64.30	55.58	52.28	61.05	23.06	69.90	48.99	45.23	64.50
other groups	60.86	35.70	44.42	47.72	38.95	76.94	30.10	51.01	54.77	35.50
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
	(n=4,841)	(n=6,510)	(n=4,719)	(n=3,400)	(n=1,702)	(n=1,704)	(n=6,898)	(n=1,631)	(n=9,110)	(n=5,003)
	Quotes									
own group	26.05	37.19	35.16	48.75	58.33	21.70	36.83	37.50	41.46	66.67
other groups	73.95	62.81	64.84	51.25	41.67	78.30	63.17	62.50	58.54	33.33
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
	(n=403)	(n=442)	(n=385)	(n=322)	(n=96)	(n=106)	(n=438)	(n=40)	(n=536)	(n=642)
	Replies									
own group	74.04	64.33	80.89	72.50	81.42	67.06	35.76	-----	58.71	91.81
other groups	25.96	35.67	19.11	27.50	18.58	32.94	64.24	-----	41.29	8.19
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	-----	100.00	100.00
	(n=286)	(n=343)	(n=361)	(n=524)	(n=113)	(n=85)	(n=685)	(n=9)	(n=604)	(n=781)

Note. Only categories with n≥30 depicted. Agrarian actors and electoral alliances are not depicted due to limited numbers of edges.

The effects of homophily related to political leaning (see Table 16) vary across different ideologies. While political homophily is generally strong for actors with green, social democratic, liberal, and Christian democratic leanings, actors with left and conservative beliefs focus their communication less strongly on the own group. However, a more detailed look at the communicative interactions between political leanings (Table 28 in Appendix C) shows that left actors still direct large parts of their communication at politically similar groups (i.e. greens

and social democrats). The same applies for conservatives, who direct most interactions towards nationalists and Christian democrats.

Retweets were expected to show the strongest political homophily since they do not allow to add additional information to the forwarded content. However, contrary to expectations, replies show even stronger homophily effects. The only exception to this tendency are nationalist actors, who direct 64 percent of their replies to contents from actors with different political leaning. As with conservatives' mention, retweet, and quote activity, this might be explained by interaction between other actors located to the right of the political spectrum (i.e. conservatives, Christian democrats). Alternatively, nationalists might direct their replies to other political leaning to express criticism, which will be discussed in more detail when turning to the issues discussed in the debate (Chapter 5.2).

Summary

Taken together, four general points stand out from the descriptive analysis of the four networks: (1) civil society actors emerge as important actors for the Europeanization of networked public spheres, (2) citizens are important hubs in the debate who direct attention to the political level, (3) politicians and media actors are still the most important authorities on Twitter, (4) homophily related to political leaning is particularly important for tie-formation between actors.

First, this indicates that civil societies actors do have the potential to integrate networked public spheres through their social media communication and points to their importance as intermediaries between the national and European level as well as between citizens and politicians. The comparatively high degrees of communicative interaction between civil society and politicians indicate that social media platforms provide better opportunity structures for the communication of civil society actors than Web 1.0 technology (Bennett & Segerberg, 2012). Second, citizens participate in the #EP2019 debate frequently and provide important input for the political level, which is a necessary but not sufficient precondition for the democratic legitimacy of the EU. In how far, this input results in communicative output and feedback from politicians is discussed in Chapter 6. However, the elite-centered communication of politicians already indicates limited potential for democratic communication on Twitter. Finally, the strong effects of political homophily may result in cross-national communicative interactions and therefore Europeanization when ideological ties are strategically used more frequently than nationally anchored ties. In order to analyze in how far homophily effects of actor group membership and political leaning can predict tie-formation between actors and whether the

effects can override homophily effects related to the country and language backgrounds, ERGMs are calculated and discussed in the next chapter. In how far political homophily fosters the salience of political conflict lines in the Twitter discourse is discussed in Chapter 7.

5.1.2 Explaining Tie-Formation in the #EP2019 discourse

The remainder of this chapter focusses not only on the description of Europeanization – or lack thereof – of the Twitter debate about the 2019 EP election campaign, but on the explanation of tie-formation in the networks. To this end, individual ERGMs have been calculated for each network in order to account for the specific structural effects that arise from the different usages of mentions, retweets, quotes, and replies by users and the resulting network structures. The aim of the inferential approach is to explain tie-formation in the #2019EP debate on Twitter and to analyze the hypotheses posited in Chapter 3.2 (see Table 1).

For each network, three models have been calculated. All models include the structural effects, the sender and receiver effects related to actor group and political leaning as well as the homophily effects related to actor group and political leaning. Additionally, Model 1 includes homophily effects related to the country background of actors; Model 2 includes homophily related to the language of the actor (i.e. account language of the Twitter account); and in order to test language- and country-related homophily effects against each other, Model 3 includes both, country- and language-related homophily effects. The effects presented in Table 17 are non-standardized ERGM coefficients. They represent the change in the log-odds (similar to logistic regressions) given the other parameters in the model. Thus, a "significant parameter estimate indicates the associated configuration is observed more [given positive values, V.B.] than expected (had the parameter been 0), given the other effects in the model" (Lusher & Robins, 2013c, p. 197).

Table 17. ERGM results for the quote and reply network

	Quotes						Replies					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	country		language		country and language		country		language		country and language	
Structural effects (endogenous)												
Edges (Intercept)	-6.091***	(.227)	-6.055***	(.240)	-6.196***	(.230)	-4.859***	(.279)	-4.839***	(.294)	-5.091***	(.289)
Reciprocity (mutual)	.199	(.517)	.560	(.493)	.192	(.508)	2.396***	(.680)	2.639***	(.651)	2.246***	(.648)
Triadic closure (gwesp)[1]	1.834***	(.121)	1.995***	(.118)	1.801***	(.121)	.588*	(.281)	.785**	(.265)	.509†	(.263)
Simple connectivity (2path)	-.405***	(.032)	-.412***	(.033)	-.407***	(.032)	-.489***	(.073)	-.518***	(.071)	-.500***	(.071)
Popularity (idegree):	-.209	(.195)	-.238	(.194)	-.213	(.190)	-.014	(.244)	.007	(.249)	.029	(.240)
Activity (odegree):	-.620***	(.166)	-.630***	(.162)	-.623***	(.167)	-.841**	(.263)	-.786**	(.258)	-.809**	(.262)
Actor-attribute effects (exogenous)												
Sender and receiver effects: Actor group												
Sender: Political actors	-.368*	(.169)	-.118	(.165)	-.377*	(.169)	-.928**	(.314)	-.553†	(.301)	-.893**	(.315)
Sender: Civil society	-.298†	(.175)	-.116	(.174)	-.320†	(.180)	-.569*	(.274)	-.141	(.267)	-.539*	(.274)
Sender: Media	-.355†	(.189)	-.125	(.189)	-.333†	(.182)	-1.445***	(.285)	-.966***	(.283)	-.1.412***	(.280)
Sender: Citizens:	.540***	(.126)	.762***	(.122)	.515***	(.129)	-.014	(.162)	.247	(.151)	-.137	(.159)
Receiver: Political actors	.755*	(.337)	.596†	(.338)	.722*	(.331)	.562†	(.332)	.494	(.312)	.575†	(.337)
Receiver: Civil Society	.368	(.347)	.159	(.354)	.297	(.352)	.160	(.379)	.118	(.355)	.022	(.378)
Receiver: Media	.844*	(.336)	.654†	(.341)	.808*	(.329)	-.065	(.327)	-.050	(.305)	-.150	(.328)
Receiver: Citizens	.143	(.362)	-.010	(.355)	.075	(.354)	-.150	(.341)	-.169	(.351)	-.205	(.359)
Sender and receiver effects: Political leaning												
Sender: Left	-.151	(.163)	-.125	(.167)	-.115	(.171)	-.134	(.463)	-.332	(.485)	-.249	(.471)
Sender: Green	-.043	(.148)	-.035	(.151)	-.043	(.152)	-.142	(.382)	-.277	(.369)	-.258	(.392)
Sender: Social dem.	.108	(.142)	.063	(.136)	.092	(.145)	-.095	(.646)	-.403	(.598)	.016	(.589)
Sender: Liberal	-.113	(.205)	-.046	(.195)	-.065	(.206)	.634	(.391)	.786*	(.372)	.694†	(.383)
Sender: Christian dem.	-.591	(.363)	-.620†	(.366)	-.608	(.375)	-.696	(1.035)	-.822	(.944)	-.827	(.885)
Sender: Conservative	-.194	(.262)	.313	(.261)	-.244	(.258)	-.814	(.594)	-.748	(.633)	-.762	(.589)
Sender: Nationalist	-.037	(.165)	.074	(.164)	.013	(.162)	.460**	(.166)	.663***	(.157)	.535***	(.161)
Sender: Special Issue	.271†	(.146)	-.230	(.148)	.257†	(.152)	.679**	(.217)	.440*	(.213)	.672**	(.215)
Sender: Non-partisan	-.016	(.171)	-.028	(.172)	-.027	(.178)	-.127	(.301)	-.219	(.288)	-.183	(.272)
Receiver: Left	.047	(.357)	-.018	(.353)	.024	(.354)	.360	(.391)	-.037	(.383)	.224	(.409)
Receiver: Green	.526†	(.308)	.453	(.304)	.475	(.303)	.385	(.351)	.118	(.343)	.171	(.352)
Receiver: Social dem.	.731*	(.301)	.650*	(.303)	.676*	(.298)	1.128**	(.351)	.814*	(.334)	1.233***	(.352)
Receiver: Liberal	1.115***	(.288)	1.046***	(.288)	1.102***	(.282)	1.339***	(.277)	1.241***	(.266)	1.297***	(.283)
Receiver: Christian dem.	.527	(.337)	.413	(.332	.444	(.340)	0.857**	(.328)	.556†	(.319)	.765*	(.329)
Receiver: Conservatives	.028	(.449)	-.180	(.434)	-.054	(.442)	.441	(.359)	.457	(.348)	.486	(.372)
Receiver: Nationalist	.403	(.322)	.422	(.318)	.425	(.316)	.606*	(.300)	.599*	(.284)	.591†	(.307)
Receiver: Special issue	.771*	(.312)	.625*	(.307)	.722*	(.312)	.473	(.389)	.108	(.385)	.440	(.410)
Receiver: Non-partisan	1.123***	(.283)	1.006***	(.282)	1.082***	(.281)	.640*	(.286)	.432	(.269)	.630*	(.286)

Table 17. (continued)

	Quotes						Replies					
	Model 1 country		**Model 2** language		**Model 3** country and language		**Model 1** country		**Model 2** language		**Model 3** country and language	
Homophily												
Homophily: Actor Group	.371**	(.115)	.422***	(.353)	.369**	(.117)	.079	(.256)	.018	(.261)	.006	(.260)
Homophily: Pol. leaning	1.071***	(.126)	1.133***	(.119)	1.081***	(.122)	.452	(.283)	.729**	(.268)	.469[†]	(.275)
Homophily: Country	1.415***	(.081)			1.276***	(.081)	1.816***	(.131)			1.579***	(.136)
Homophily: Language			.810***	(.080)	.489***	(.082)			1.218***	(.116)	.847***	(.127)
AIC		6110		6317		6076		2717		2812		2671
BIC		6477		6684		6453		3039		3135		3002
Nodes (N)		300		300		300		170		170		170
Edges (N)		1065		1065		1065		545		545		545

Note. Coefficients are non-standardized ERGM-result coefficients. Standard errors are given in parentheses.

[1] Geometrically edgewise shared partner distribution. Decay fixed at 0.

Significance levels: † p<.1, *p<.05, **p<.01, ***p<.001

General results and structural effects

Generally, the ERGM results depicted in Table 17 confirm the descriptive analysis as well as the assumptions about the structural differences between edge types, which emerge from actors' strategic communicative decisions as well as structural effects of network self-organization. It is important to note that all important effects stay consistent across all models, indicating that significant effects related to actor attributes pertain independently from country- and/or language-related homophily effects. However, since AIC and BIC values indicate that the best models were obtained when both, country and language effects, are included, subsequent discussions of actor attribute-related effects concentrate on the results of Model 3 for the quote and the reply network.

Taken together, the structural effects capture the typical sparsity of online communication networks well, as indicated by the negative parameters for the edges, connectivity, popularity, and activity terms. While the popularity-parameter (idegree) is not significant, indicating no generally popular nodes in the networks (i.e. independently of actor attributes), the activity-parameter (odegree) is negative and significant. This indicates that – not taking actor-attributes into account – nodes tend to initiate ties equally. Please note that the structural activity and popularity parameters are included as controls for the actor attribute-related sender and receiver effects discussed below (see Lusher, Koskinen, & Robins, 2013) for a detailed discussion of parameters and their combined interpretation in ERGMs).

The twopath-term is negative and significant in both networks (Quotes: b=-.407***, SE=.032; Replies: b=-.500***. SE=.071), which indicates that there are less two-paths than one would expect given the other model parameters. Since two-paths are an indicator for connectivity (Lusher & Robins, 2013a, p. 44), significant negative twopath-parameters show that those actors who are the most active in the network, are not the most popular (i.e. those that send most ties do not receive them, resulting in elite-centered and unequally distributed attention dynamics in communication networks). Lastly, triadic closure (gwesp) as a control for the structural effect of network self-organization is positive and significant in both networks (Quotes: b=1.801***, SE=.121; Replies: b=.509†, SE=.263). However, in line with the theoretical expectation about the communicative nature of reply interactions (compare Table 3), the effect is stronger in the quote network.

Contrary to H2, reciprocity is positive and significant. The effect is only significant in the reply network (b=2.246***, SE=.648), but not in the quote network (b=.192, SE=.508). Thus, actors tend to reply to someone who replies to their content. This makes sense taking the effort of

reply-interactions into account: since replying to someone's content is more strongly associated with a particular content- and actor-related communication than other interaction types (see Table 3), actors are more likely to reciprocate the communicative interaction. Thus, replies are of particular importance for questions related to democratic legitimacy: they are not only the most demanding interaction type, but they also tend to be reciprocated.

Actor-attribute related effects

Sender effects. Turning to the effects and the hypotheses related to actor attributes presented in Table 17, ERGMs show mixed results. First, H1a posited sender effects related to actor groups, namely that politicians and citizens are more likely to initiate ties than civil society and media actors. ERGM coefficients show mixed results for H1a: while a positive and significant sender effect exists for citizens in the quote network (b=.515***, SE=.129), the effect is not significant (and negative) in the reply network (b=-.137, SE=.159). Thus, citizens significantly act as initiators of ties in the quote, but not in the reply network. Contrary to H1a, sender effects for politicians are negative in both networks (Quotes: b=-.377*, SE=.169; Replies: b=-.893**, SE=.315), indicating that politicians are significantly less likely to initiate ties. Such negative sender effects are also found for civil society and media actors in both networks, indicating that only citizens act as initiators of ties and they do so only in the quote network.

Second, sender effects related to the political leaning of actors have been included in the models as a control for actor group effects. Significant sender effects with p<.05 significance can only be found in the reply network for nationalist (b=.535***, SE=.161) and special issue actors (b=.672**, SE=.215). Thus, nationalist and special issue actors are more likely to reply to tweets than actors with other political leanings. Special issue actors may include, for example, Brexit party actors and their supporters or Volt and their supporters.

Receiver effects. Receiver effects measure popularity derived from certain actor attributes. H1b postulates popularity related to actor groups. In line with the elite-centered nature of discourses about the EU and European integration (Walter, 2017a, 2017b; Wessler et al., 2008) it is expected that politicians and media as elite actors in the discourse are more likely to receive ties than non-elite actors (i.e. citizens and civil society actors). Again, results for actor group-related receiver effects postulated in H1b are only partially supported by the empirical findings: in the quote network, positive and significant receiver effects can be found for politicians (b=.722*, SE=.331) and media actors (b=.808*, SE=.329) while no significant effects are observed for citizens and civil society actors. Thus, H1b can be excepted for the quote network: elite actors' contents are indeed more likely to be quoted than contents from non-elite actors.

However, the effect disappears in the reply network. While the parameter is still positive for politicians, it is only significant on the p<.10 significance level (b=.575[†], SE=.337). For media actors, the parameter is negative and not significant, indicating that media actors are not more likely to receive replies than other actor groups.

Second, receiver effects related to the political leaning of actors has been included in the models. The results show that actors with social democratic (Quotes: b=.676*, SE=.298; Replies: b=1.233***, SE=.352) and liberal (Quotes: b=1.102***, SE=.282; Replies: b=1.297***, SE=.283) political leaning exhibit strong receiver effects while Christian democratic (b=.765*, SE=.329) and nationalist actors (b=.591[†], SE=.307) exhibit significant receiver effects only in the reply network, indicating that they receive more replies than actors with other political leaning. Taken together, the results for the receiver effects indicate that political leanings in line with large political groups in the EP (e.g. EPP, S&D, ALDE (Renew)) received most attention, nationalists being the exception. Additionally, receiver effects of social democratic actors are also explained by the attention to the social democratic lead candidate Frans Timmermans (@TimmermansEU).

Homophily effects. Finally, H1c through H1f postulate different homophily effects. First, H1c states that ties are more likely to occur between actors from the same actor group than between actors from different actor groups. This effect is positive in both networks, but significant effects can only be found in the quote network (b=.369**, SE=.117), indicating that homophily effects related to belonging to a certain actor group are not significant predictors of tie-formation in the reply network. In combination with the significant effects of reciprocity in the reply network, this result is especially interesting in the light of democratic legitimacy because it suggests that (a) ties between citizens and politicians are more likely to occur in the reply network and (b) these ties are more likely to be reciprocated. Similarly, H1d postulates that actors with the same political leaning are more likely to establish ties than actors with differing political leanings. Here, positive and significant effects emerge in both networks (Quotes: b=1.081***, SE:.122; Replies: b=.469[†], SE=.275).

H1e postulates homophily effects for country- and language background of actors. Put differently, it is expected that ties are more likely to occur between actors from the same country or with the same language background than between actors with different country- or language backgrounds. First, country and language effects are positive and significant across all models, rendering general support for H1e. Furthermore, both – country and language effects – stay consistently significant, positive, and substantial across all models and both networks,

irrespective of including only one or both effects. This suggests that country as well as language effects are important predictors for tie-formation, irrespective of other variables in the models.

Comparing the effects of country- and language-related homophily (H1f), the results show that country effects (Quotes: b=1.276***, SE=.081; Replies: b=1.579***, SE=.136) are generally stronger than language effects (Quotes: b=.489***, SE=.082; Replies: .847***, SE=.127) when both are included in the same model. Furthermore, language estimates are higher in the reply than in the quote network, which underlines the particular importance of language skills in the reply network compared to other interaction types. However, since ERGM coefficients are unstandardized they cannot be compared across models with different network sizes easily. Therefore, the odds are calculated for a tie to occur based on the intercept (i.e. edges-term) and the language- and country-effects for each network while keeping all other parameters constant. First, the baseline probability of a tie occurring in the quote and the reply network is 0.203 percent and 0.611 percent, respectively. This again indicates the sparsity of online communication networks. The probability increases only slightly to 0.331 percent in the quote network when including language-related homophily-effects. The probability for a tie to be present increases to 0.725 percent, when including country-related homophily effects. Effects for actor group and political leaning related homophily are equally small, resulting in a probability of 0.294 percent for actor group related homophily effects and 0.597 % for effects related to the political leaning of actor. In the reply network, the probability of a tie increases to 1.414 percent when the actors share the same language and to 2.895 percent when they come from the same country. Actor group related homophily effects result in a tie probability of 0.615 percent in the reply network and homophily effects of the political leaning of actors increases to 0.973 percent, which indicates that the effects of political leaning are stronger than those of actor group membership. Overall, the comparison of homophily effects lends support for H1f, since especially country-related homophily effects show higher estimates and probabilities for tie-formation in both networks than the other nodal attributes. The only exception to this is the effect of political leaning in the quote network, which is at least stronger than the language-, albeit not than the country-related homophily effect. This indicates that political leaning of actors may have transnationalization effects and may override language as a predictor for tie-formation in the quote network.

Taken together, the results indicate that the strong effects of country- and language-related homophily are likely to result in nationalized rather than Europeanized communicative ties in the 2019 EP elections. However, language effects – which have been discussed as a crucial factor in traditional/offline news reporting (Gerhards, 2015) – for hindering Europeanization

are not the only factor that prevent tie-formation between actors from different EU member-states. Country-backgrounds are also important predictors for tie-formation with a strong homophilic tendency in the quote and the reply network. This is most likely due to the still nationally anchored EP elections: since MEPs are still elected by a national electorate and the introduction of transnational Spitzenkandidaten is only symbolic, it makes sense for most actor groups to focus communicative efforts primarily on actors from the same country.

5.2 Topics in the #EP2019 debate: Synchronicity of issue agendas

In order to get a complete picture of the Europeanization of networked public spheres, it is not only important to understand who engages in communication with each other in the sense of vertical and horizontal Europeanization as suggested by Koopmans and Erbe (2004), but also which issues become salient in public debates and can thus be perceived by people in various countries (Eder & Kantner, 2000).

STM results

Topic modelling is based on all original tweets excluding retweets with #EP2019 between April 1, 2019 and 31 May, 2019. The model with K=25 topics provided the best results in terms of statistical measures as well as human interpretability. Table 18 provides an overview over topic labels, expected topic proportions, and example words (FREX and highest probability) of the final topic solution. FREX words are the most frequent words with high exclusivity for a given topic (Roberts et al., 2019, p. 11) while example words with the highest probability – as the name suggests – are those with highest probability for a topic.

Generally, the STM results show that European as well as nationally specific topics became salient in the context of the 2019 EP elections on Twitter. *European topics* are defined as those in which European issues, events, and policies, are discussed from an overarching European perspective instead of from the perspective of a single country. Thus, European topics do not necessarily have to be discussed in various member states in order to be identified as having a European issues scope. European topics include the discussion of European policies (e.g. Topic 8, Topic 18), the debate about the EU commission presidency (Topic 19) as well as various election and campaign related topics (e.g. Topic 1, Topic 13). In addition, one can also observe the emergence of Eurosceptic and Euro-critical topics related to general political apathy (Topic 21) as well as dissatisfaction with and administrational burdens of voting in the EP elections (Topic 11). *National topics* include nationally specific discussions of campaigns and election results (e.g. Topic 2, Topic 12, Topic 23).

Table 18. STM results: topic labels, expected topic proportions (in %), example words (FREX and highest prob) (N=440,815 documents)

K	Topic Label	Topic Prop.	Example Words (FREX)	Example Words (Highest Prob)
5	Voter mobilization and Sunday question	9.377	spd, #europawaehlen, #foryourope, #pulseofeurope, nrw, fdp, cdu	european, election, parliament, #elections2019, #election2019, europe, afd
1	General calls to vote in EP elections	8.122	turnout, station, polling, forget, #thistimeimvoting, #euelection, vote	vote, #euelections2019, time, #thistimeimvoting, turnout, year, polling
2	EP election results: Focus Brexit Party (UK)	7.497	ukip, gefa, dem, britian, efdd, lib, gain	party, brexit, poll, result, green, seat, leave
8	Changes in economic, trade and climate policy	6.066	environmental, economic, sustainable, economy, development, reason, transition	europe, climate, need, change, policy, must, strong
12	Discussion of EP election polls and results (NL)	5.553	pvda, sgp, groenlinks, wilder, #christenunie, peacock, groenlink	d66, vvd, pvda, fvd, netherland, news, dutch
13	Pre-election analyses of EU and national political landscapes	5.265	analysis, article, medium, influence, politic, minute, opinion	political, politic, state, member, read, much, medium
15	EP Campaigns: kickoffs	4.439	come, exiting, round, övp, shortly, discuss, festival	come, campaign, start, week, election, talk, next
17	Promotion of envipillar public debates with MEPs about climate policies	4.373	student, tomorrow, #generationvote, see, forward, #heusi, inside	today, see, look, great, tomorrow, candidate, young
23	Irish local elections 2019 and EP election results (IRE)	3.802	casey, walsh, #mnw, peter, wallace, maria, #rtept	count, elect, dublin, mep, south, ireland, candidate
9	Spanish parliamentary elections 2019 and Catalonia Conflict (ES)	3.781	puigdemont, #ourvoteourright, #krl, dignity, diem25, equality, orimarch	right, democracy, think, europe, wing, real, democratic
11	Administrational burdens of voting as EU citizen	3.777	#ep19dk, woman, yes, #dkpol, thursday, postal, complain	vote, already, #europawahl2019, woman, yes, sunday
19	Debate about EU Commission presidency	3.551	orban, fidesz, manfred, president, viktor, sweden, #svpol	group, epp, president, commission, liberal, government, social
24	Dutch right-wing supporters and Nexit (NL)	3.520	#notmyeu, #notmypact, #notmyun, #banislamisation, preferably, #leaveeu, #thierrybaudet	#stemzeweg, stop, nexit, pvv, anti, vote, away
16	Promotion of Spitzenkandidaten debate	3.322	debate, #maastrichtdebate, #baseickhout, watch, #votepirate, #somoseuropa, #sou2019	debate, live, leader, candidate, tonight, watch, video
22	Protests against resettlement of Iranian refugees (#-spamming)	3.168	#iranianrefugeesinturkey, #resettlement4iranian, help, refugee, shape, corner, association	make, future, voice, help, hear, part, europe
20	British general elections 2019 (UK)	3.015	c4news, newsnight, #bbcaq, #skynews, lbc, #cleanbrexit, #wato	labour, brexit, referendum, north, west, tory, #brexitpartyuk
6	Eurosceptic and right-wing voices in Irish local elections 2019 and EP elections (IRE)	2.848	#divorceref, abortion, err, dog, #imvoting, god, #prolife	#le19, ireland, #ep19, love, poster
21	Doubts in parties and elections (political apathy)	2.795	work, page, class, continue, parliamentarian, doubt, together	work, together, europe, check, everyone, continue, tell
14	Promotion of Pegida demonstration in Dresden (#-spamming)	2.690	#dementiapledge, #standup4water, #dementia, sachsen, pledge, pegida, #nopegida	support, thank, candidate, find, animal, sign, pledge
18	Financial policies and costs of social policies	2.605	per, pension, cost, billion, adult, struggle, euro	tax, pay, public, euro, money, housing, service
3	Tactics and voter mobilization of anti-Brexit parties (UK)	2.462	#activesnp, #remainvoter, #columeastwood, #votesnp, team, tactical, fantastic	good, message, send, team, libdem, region, proud
10	Problems with voter registration	2.343	ballot, box, day, kid, school, expect, #hfpledge	day, ballot, expect, always, election, sign, paper
25	Citizen's perspective on EP election results	2.011	know, give, like, people, way, hope, idea	people, like, now, give, get, good, way
4	Campaign of challenger parties (NL)	1.900	#volteuropa, #voltnederland, #stemvolt, #cdaeuropa, volt, #stemzeweg, #votevolt	#votevolt, volt, link, party, story, grow, program
7	Acknowledgement of Guaido in Venezuela (#-spamming)	1.723	#lfi, #ifop, #eélv, #larem, #academyofrock, #européennes2019, indie	france, macron, twitter, french, facebook, single, #europeennes2019

Note. FREX: most frequent words with high exclusivity per topic. Highest prob: words with highest probability per topic. (Roberts et al., 2019, p. 11)

All topics will be discussed in more detail and with regard to actor group differences, political leanings of actors and country backgrounds in the following[7]. But first, a brief look at three issues that are not directly related to the 2019 EP elections or the campaign is necessary. These are instances of *hashtag-spamming*, in which actors deliberately include a variety of trending but seemingly unrelated hashtags to a tweet for visibility. It has been described as a form of "agenda surfing (Schenk, 2007, p. 446), wherein one's own preferred topics are attached to larger societal debates" (Knüpfer, Hoffmann, & Voskresenskii, 2022, p. 1015). It is similar to but has to be distinguished from hashtag-hijacking, which has been observed in various contexts (e.g. #MeToo, #DoctorsSpeakUp). Hashtag-spamming is described as a strategy of challengers, mostly from the radical right, to integrate their own frames and narratives into discourses that achieve a high degree of attention at a certain point in time on social media platforms (Bradshaw, 2022, p. 1; Knüpfer et al., 2022, p. 1014).

In the #EP2019 debate on Twitter, three topics related to hashtag-spamming can be identified (compare Table 18). First, Topic 22 (*Protests against resettlement of Iranian refugees*) provides an example of hashtag-spamming, since the tweets do not relate to the EP elections or campaign in any way and include a variety of unrelated hashtags. This is an instance of (Iranian) social movement activism on Twitter using the 2019 EP elections as an event of increased attention in order to gain visibility for their issue, namely criticism of the resettlement of refugees from Iran. This topic is also more salient for citizens and civil society actors than for politicians and media actors. Additionally, aggregating the topic proportions according to the country of origins of the tweeting actors indicates that 71 percent of the tweets about this topic originate from actors in Turkey.

Second, Topic 14 (*Promotion of Pegida demonstration in Dresden*), which accounts for about 2 percent of estimated topic proportions, is an example of hashtag-spamming by radical right actors to promote their own issues and events on social media platforms. Research shows that radical right actors frequently use this strategy to promote their beliefs and events to larger audiences. Another recent example of radical right hashtag-spamming and hashtag-hijacking include feminist (Dempsey Willis, 2020; Knüpfer et al., 2022) and vaccine-related (Bradshaw, 2022) Twitter debates. As the top words indicate, in addition to a variety of seemingly unrelated hashtags (e.g. #standup4water and #dementia), top words relate to the German region Sachsen and Pegida. This topic is mostly addressed by accounts with right-wing and nationalist political leaning and are in favor of Pegida and the AfD. This suggests that hashtag-spamming was used

---

[7] Detailed data can be found in the online appendix (https://github.com/benertv/Europeanization_on_Twitter).

successfully by radical right-wing actors in the context of the 2019 EP elections to attribute attention to radical right events.

Finally, Topic 7 (*Acknowledgement of Guaidó in Venezuela*), which accounts for slightly under 2 percent of estimated topic proportions provides another example of hashtag-spamming. Here, unrelated hashtags (e.g. #academyofrock) are combined with #EP2019 and references to France and French president Emmanuel Macron. Even though not directly related to the 2019 EP elections, this topic relates to the EU acknowledging Venezuela's' interim President Guaidó as official head of state after former President Maduro neglected an EU ultimatum for free and fair elections in February 2019.

European Topics

In total, thirteen European topics can be identified in the 2019 EP election debate, which together account for a total of 58 percent of topic proportions. Thus, European topics play an important role in the Twitter communication in the context of the 2019 EP elections. European topics include a variety of topics that discuss the EP elections and campaigns from a European perspective. For example, Topic 5, (*Voter mobilization and Sunday question*, 9 %), Topic 1 (*General calls to vote in the EP elections,* 8 %) and Topic 13 (*Pre-election analyses of EU and national political landscapes,* 5 %) focus on the EP elections from a European perspective and provide examples of general voter mobilization. These topics are also among the most salient topics in the debate.

Furthermore, European topics include discussions of European policies and politics, indicating that Twitter was not only used for election campaigning by politicians, but that the EP elections also led to an event-related increase of debates about European policies and politics on social media. For example, Topic 8 (*Changes in economic, trade and climate policy,* 6 %) and Topic 18 (*Financial policy and cost of social policies,* 3 %) discuss European policies. These discussions take place among a variety of different actor groups with citizens and civil society actors (8 %, respectively) gaining significant voices in the debates. This is a crucial aspect of Europeanization (Eder & Kantner, 2000), since these topics provide instances of shared issue agendas of European topics in various countries (e.g. 16 % in the Czech Republic, 12 % in Belgium, and 11 % of expected topic proportions in Germany) (see Figure 11). These discussions are also crucial for the democratic potential of Twitter communication for the legitimacy of the EU since they provide citizens and civil society with the possibility to engage in direct communication about European level policies with political actors. Also, the importance of discussions about matters related to question of economy, trade, and finances is

in line with previous Europeanization research and related to strong decision-making competencies of the EU in these fields (Kriesi et al., 2007, p. 52).

Similarly, the salience of Topic 19 (*Debate about EU Commission presidency,* 4 %) highlights the importance of European level politics for various actor groups – at least in the context of the EP elections. The actor distribution shows that the topic was discussed mostly be media actors (6 %), highlighting their role as information providers about European politics. At the same time, the debate about the EU Commission presidency is an obvious case for European level politics to become salient even in the communication of citizens (3 %), due to its peculiar outplay in the 2019 EP elections, where neither of the previously introduced Spitzenkandidaten (i.e. Manfred Weber (EPP, Germany) or Frans Timmermans (SD, Netherlands)) was selected as Commission president by the European Parliament. As such, this debate became a showcase of the problems related to the democratic legitimacy of the EU derived from the unaccountability of the Commission president to the citizens of the EU.

Furthermore, a variety of topics related to Eurosceptic sentiments become salient on Twitter. First, Topic 21 (*Doubts in parties and elections (political apathy)*, 3 %) provides an example of general dissatisfaction with political decision-making articulated in the context of the 2019 EP election campaign. Furthermore, Topic 11 (*Administrational burdens of voting as EU citizens*, 4 %) and Topic 10 (*Problems with voter registration*, 2 %) express difficulties with organizational aspects of voting in the EP elections in various countries.

Figure 11. Expected topic proportions of European topics in top 12 countries (in %)
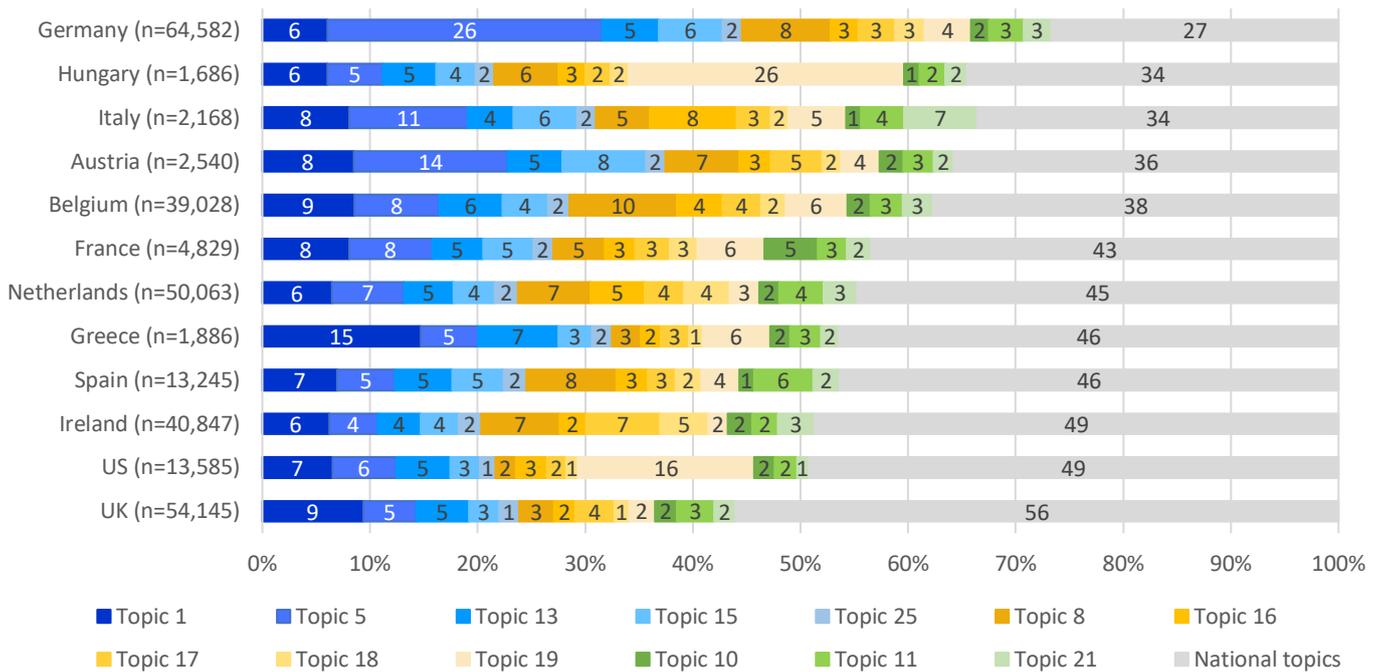
Note. Only countries with at least 1,500 tweets depicted. A complete topic distribution by countries can be found in the online appendix. N refers to number of modelled documents per country. For topic labels see Table 18. Blue: Mobilization and campaign topics. Orange: EU policies and politics topics. Green: Eurosceptic topics and voting problems. Grey: National Topics.

When it comes to the Europeanization of networked public spheres, it is necessary that these topics with a European scope are discussed in various European countries so that citizens have access to the same information (Eder & Kantner, 2000). Figure 11 depicts the topic proportions of European topics for all countries from which at least 1,500 tweets were sent during the period of analysis. National differences exist in the salience of European issues: first, differences arise regarding the proportions of national versus European topics addressed in the context of the EP elections. Second, actors from different countries focus on different European topics in their Twitter communication. For example, Topic 5 (*Voter mobilization and Sunday question*) is of special importance in German-speaking countries (i.e. Germany and Austria), but also receives comparatively high topic proportions in other countries. Furthermore, the debate about *changes in economic, trade, and climate policies* (Topic 8) is salient in various countries – the exceptions being Greece, the UK, and the US – thus providing an example of a transnational discussion of European level policies on Twitter. Topic 18 (*Financial policies and costs of social policies*), however, accounts for comparatively low topic proportions in most countries, indicating that the topic only played a minor role as a campaign issue. It achieved slightly more attention in Ireland and the Netherlands (5 % and 4 %, respectively) – two countries with particularly salient Euroscepticism in the #EP2019 debate.

Changes in topic proportions: variation over time

Based on the election campaign context of the case study, it makes sense to assume variations of topic proportions over time due to changing communication strategies in the course of election campaigns. More specifically, one might expect topics related to the EU in general as well as topics related to election results to become more salient in the run up to the election. Figure 12 depicts the change in expected topic proportions for EU-level policy topics (Topic 8 and Topic 18) in the course of the #EP2019 debate on the tweet level. While the debate about *changes in economic, trade, and climate policies* receives considerable attention in the early as well as the hot campaign phase, discussions of *financial policies* play a slightly less important role in the debate. However, it becomes apparent that expected topic proportions for both topics stay relatively stable in the run up to the election and only drop slightly during the EP elections and in the post-election phase afterwards.

Figure 12. Topic proportions of European-level policy issues over time
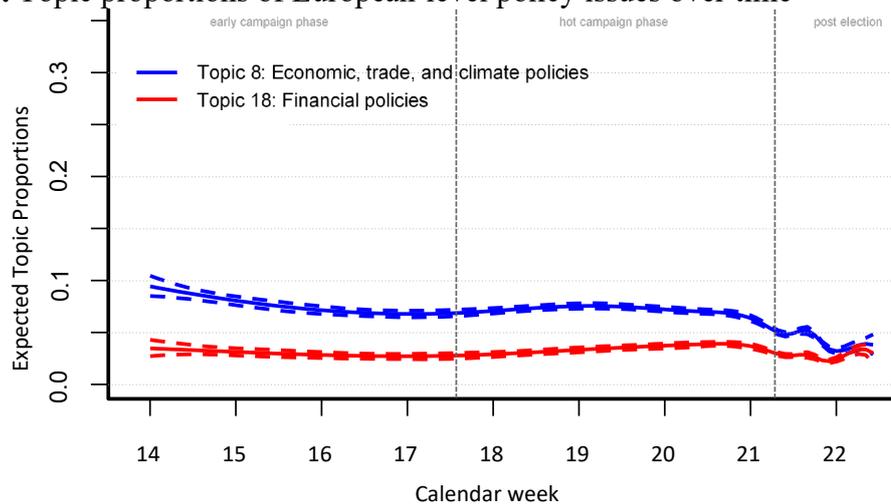
Changes in topic proportion of topics related to European-wide election campaigning and mobilization (Figure 13) are in line with general expectations about how one would expect campaign related communication to vary over the course of an election campaign: while proportions for all campaign and mobilization topics remain more or less constant over the whole campaign period, direct *calls to vote in the EP elections* (Topic 1) strongly increase right before the elections take place in the first EU member states (i.e. 23 May 2019, when elections took place in the UK and the Netherlands). The topic proportions remain high until elections were held in all member states (i.e. 26 May 2019).

Figure 13. Topic proportions of European-campaign and mobilization over time
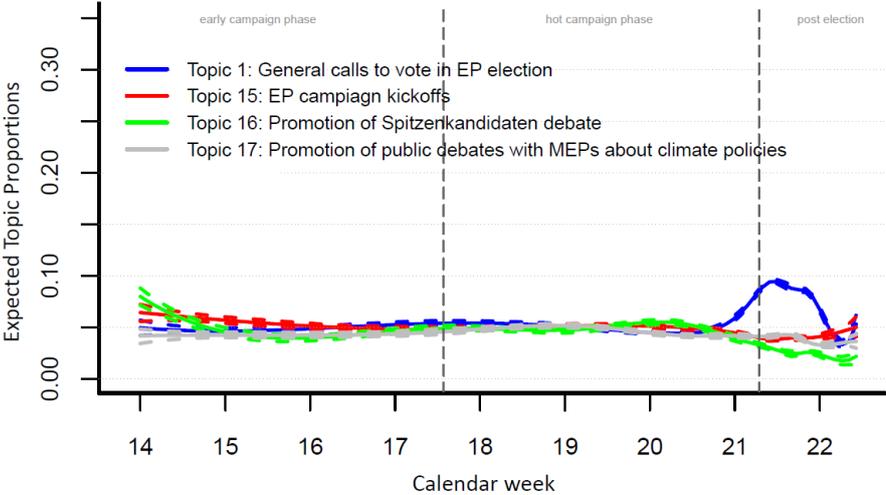
Figure 14 depicts the changes in the expected topic proportions of issues related to European-wide discussions of the EP elections and its societal impact on various levels. Compared to the topics depicted in Figure 13, the more general discussions of the EP elections depicted in Figure 14 do not have a mobilization or campaign component. They rather address the general impact of the elections in terms of administrational burdens for EU citizens in certain countries (e.g. when voting in a country of residency that does not correspond to ones' official citizenship), or the debate about the Commission presidency, which took a special turn in the 2019 elections with the appointment of Ursula von der Leyen as Commission President. Generally, the topics depicted in Figure 14 are discussed largely with regard to the impact of EP elections' and European decision-making processes' impact on citizens. The fact that the expected topic proportions for these topics remain more or less constant throughout the whole period of analysis with only minor variation during the election period suggests a continued relevance of these topics in the course of the 2019 EP elections.

Figure 14. Topic proportions of European-level pre-election analyses and discussions over time

121
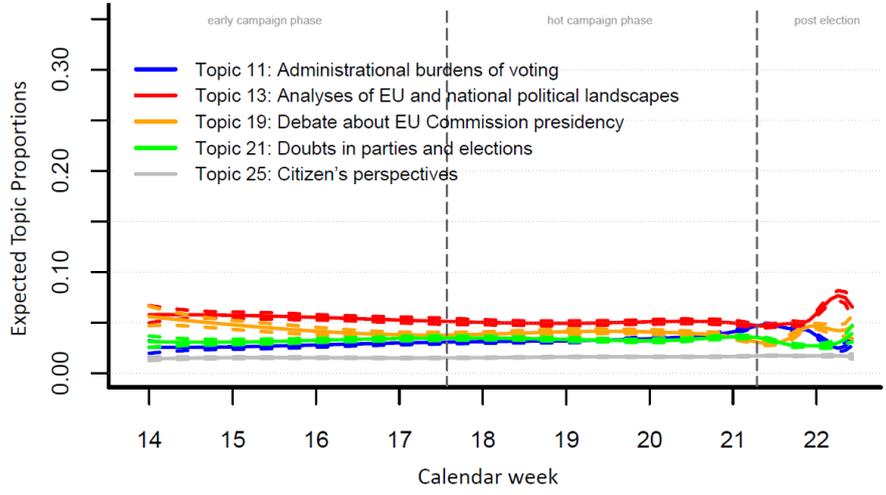
Overall, the changes in the different types of European-level issues show that topic proportions for most topics remain relatively constant in the pre-elections and campaign period. During election days and the immediate post-election period, slight variations occur, which can be explained by the importance of communicating election results after the elections and in turn increasing proportions for these topics. Especially the continued and comparatively high proportions of Topic 8 (*Changes in economic, trade, and climate policies*) shows the importance of European level policies in the 2019 EP elections.

Nationally-specific Topics

Nationally-specific topics are those that are discussed from national rather than a European perspective. In total, nine national topics emerged in the context of the 2019 EP election debate on Twitter, which account for approximately 34 percent of expected topic proportions. National topics are marked in Table 18 by including the countries' abbreviation in parentheses in the topic labels. Two kinds of national topics could be identified in the #EP2019 debate on Twitter: (1) national campaigning and voter mobilization for the 2019 EP elections as well as (2) national elections and EP election results from a national perspective. For example, topics related to national campaigns and voter mobilization in the Netherlands include *voter mobilization of Dutch challenger parties* (Topic 4, 2 %) and the *Nexit debate* driven by right-wing Dutch citizens (Topic 24, 4 %). Second, nationally specific discussions of elections and election results become salient in the Netherlands (e.g. Topic 12: *Discussion of EP election polls and results in the Netherlands*, 6 %), in Ireland (e.g. Topic 23: *Irish local election 2019 and EP election results*, 4 %), and in the UK (Topic 2: *EP election results: Focus Brexit Party (UK)*, 7 %). Thus, in line with previous research (Bene, Magin, et al., 2022), the salience of topics related to countries which held national elections in proximity to the 2019 EP elections indicates that social media communication about European issues and the EP elections is higher when national elections coincide with EP elections. The generally high salience of Topic 2 in the Twitter discussion can be explained by the importance of the EP election results in the UK in the context of the Brexit negotiations. This is also reflected in the fact that – even though being a topic with a clear national focus on the UK – the topic becomes salient across various European countries and therefore provides evidence for the Europeanizing power related to politicization and (European) crises (Heft, 2017; Hutter & Kriesi, 2019; Kriesi, 2016).

Finally, it is important to note that nationally specific topics become salient for countries that are generally very present in the debate due to the specific functioning of topic models. While this might underestimate the salience of nationally specific topics from countries with lesser

Twitter activity in the #EP2019 debate (i.e. because these few tweets are summarized in other topics instead of creating a distinct topic), the resulting topic solution is still useful to analyze which issues – and countries – did gain significant attention in the overall debate. Put differently, if Twitter activity from (actors in) specific countries is generally low and the topics did not become salient as distinct topics in the data, one might argue that they did also not achieve significant attention in the overall debate.

Changes in topic proportions: Variation over time

Figure 15 indicates that changes in the topic proportions of nationally-specific discussions of election results (i.e. Topics 2, 6, 9, 12, 20, and 23) depend on country-specific context conditions. While Figure 15 shows stark increases for some topics in the run up to the debate, others remain constant over the whole period of analysis. The most obvious increases can be observed for Topic 23 (*Irish local elections 2019 and EP election results*) and Topic 2 (*EP election results: Focus Brexit Party*).

Figure 15. Topic proportions of nationally-specific discussions of election results over time
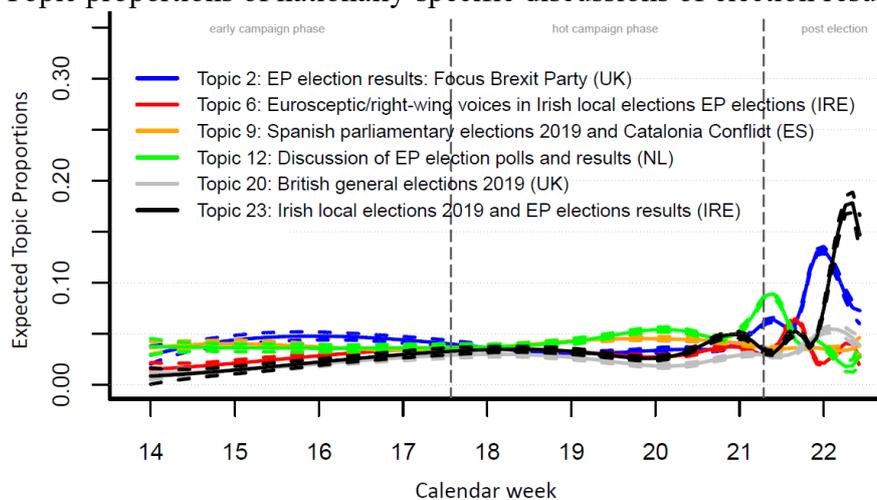
For all issues – and thus for all countries depicted in Figure 15 – these variations correlate with the actual election dates. In Ireland, the 2019 EP election took place on the 24 May 2023, and was combined with local elections. These local elections sparked the salience of right-wing voices and sentiments, as an increase in Topic 6 (*Eurosceptic and right-wing voices in Irish local elections and EP elections*) indicates. Conversely, the British general elections 2019 as well as the Spanish parliamentary elections 2019 did not take place simultaneously with the 2019 EP elections but in December and November 2019, respectively. This emphasizes the importance of national elections when discussing European elections und thus provides additional indication for the second-order nature of EP elections (Reif & Schmitt, 1980) – at

least in specific countries. In addition, the emergence of several national topics about discussions of election results indicates that results were discussed with national contexts and interpretations in mind even though mobilization for voting spanned across several EU countries.

Differences in issue agendas across actor groups

To analyze actor differences in addressing (European) topics, the STM results are aggregated on the level of actor groups in Figure 16 (see also Table 30 in Appendix E). For a more detailed analysis, political leaning and the country level[8] are taken into consideration. Noteworthy differences in issue agendas across actor groups occur whenever the expected topic proportions of a group exceed the expected topic proportions of the overall debate as reported in Table 18.

Political actors. Politicians and parties are expected to use Twitter for mobilization of voters and general campaign-related communication in the run up to the EP elections. Indeed, political actors show high proportions of Topic 5 (*Voter mobilization and Sunday question*, 12 %) in their Twitter communication. However, European policies (Topic 8: *Changes in economic, trade, climate policies*, 9 %; and Topic 18: *Financial policies and cost of social policies*, 3 %) are also addressed significantly more frequently by politicians than most other actor groups. Thus, political actors do not only mobilize potential voters through direct calls to vote in the EP elections, but also directly campaign on European issues. Here, differences between politicians with different political leanings are of special interest. In line with research about pro- and anti-EU parties' and organizations strategies on whether to address European issues in the context of EP elections (Kriesi et al., 2006), one would expect parties and challengers from the right side of the political spectrum to focus more strongly on European issues, while challengers in favor of the EU and European integration should try to de-politicize European policies.

---

[8] Tables 30 to 31 provide an overview over the STM distribution per political leaning and country of sending actors across all actor groups. Detailed STM results for each individual actor group is provided in the online appendix.

Figure 16. STM results aggregated by actor groups
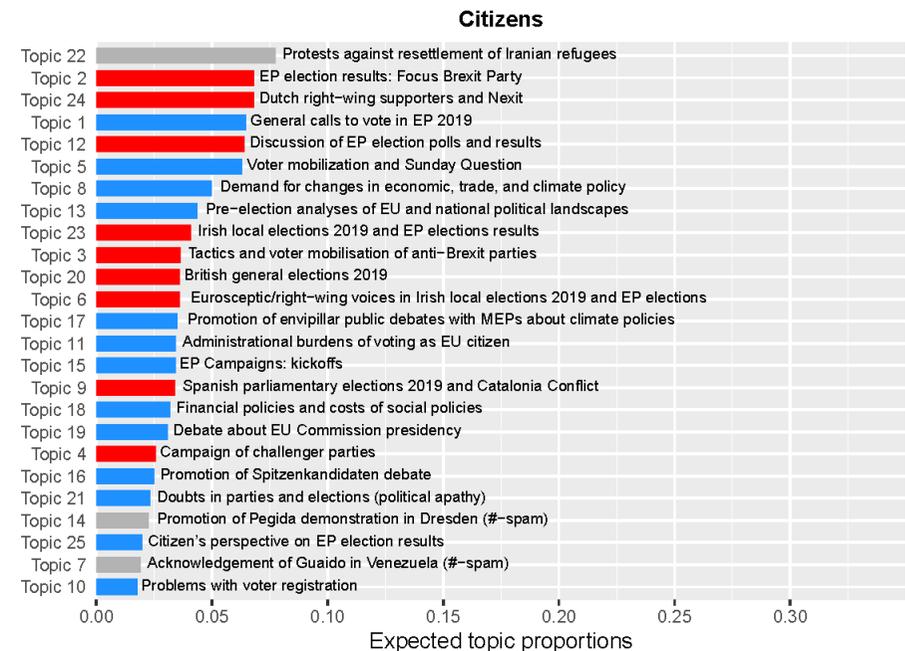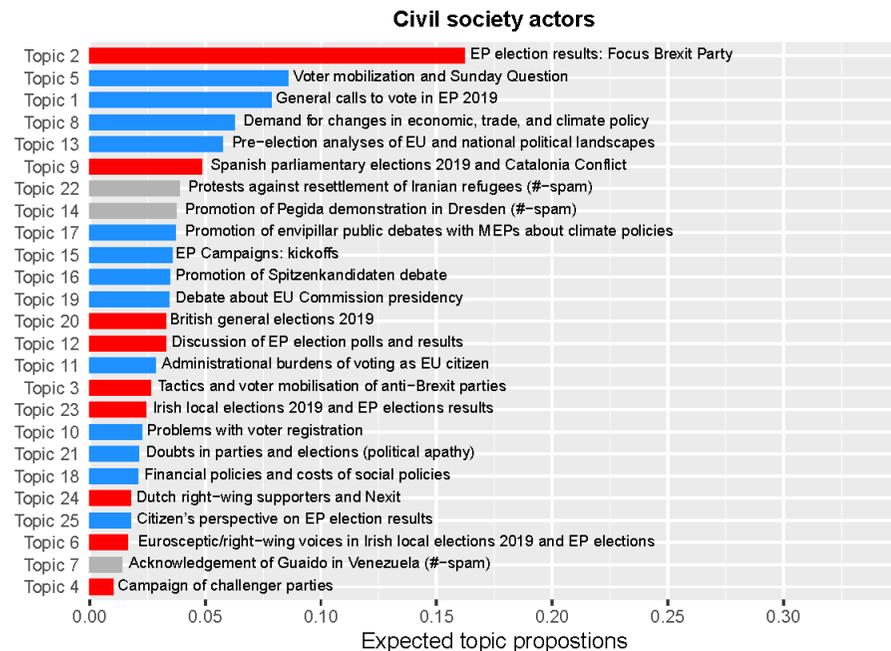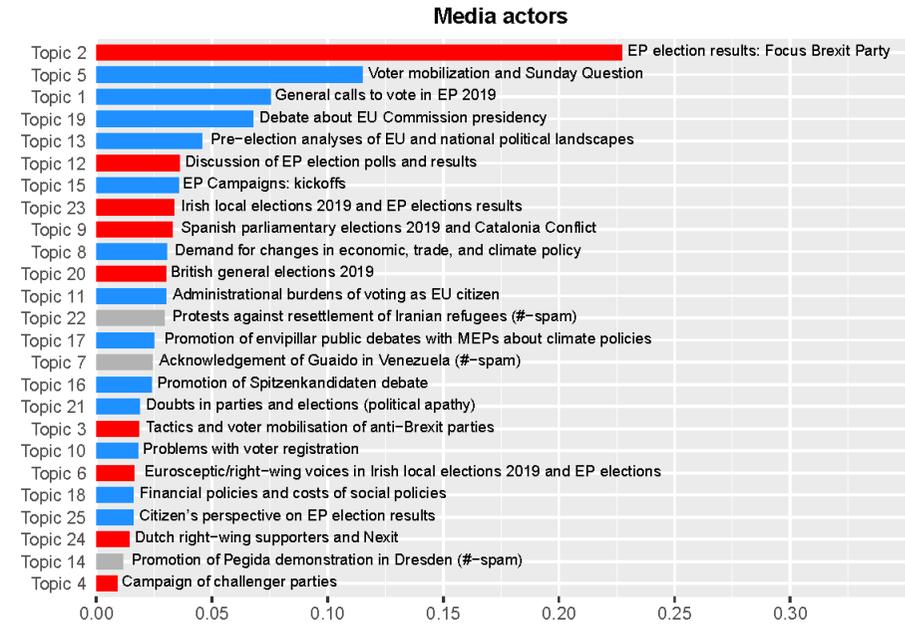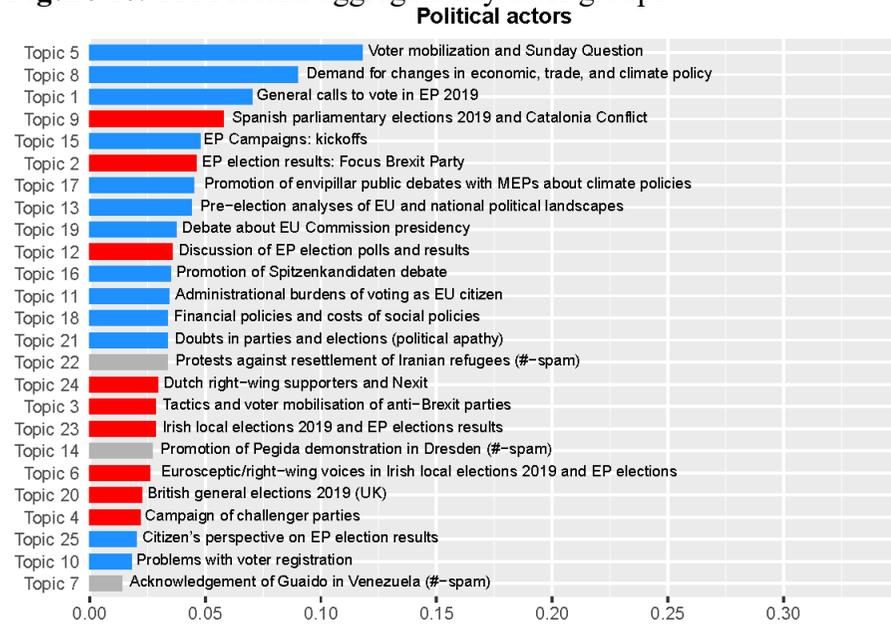
Note. Blue: European topics. Red: National topics. Grey: Hashtag-spamming of unrelated topics.

Including the political leaning of political actors into the analysis shows that this is not the case for the discussion about *economic, trade and climate policies* (Topic 8), which is generally high across the political spectrum – albeit a little less pronounced for conservative and nationalist politicians and parties. The fact that political actors from the right try to de-emphasize the issue more strongly than others might be in line with the emergence of an environmental conflict which plays out between a progressive *climate emergency* side and a traditional *populist retrotopian* side (Hanusch & Meisch, 2022; for a detailed discussion of an (emerging) environmental conflict line see Chapter 7.2). Further noteworthy differences in politicians' issue agendas arise across different political ideologies. For example, Topic 23 (*Irish local elections 2019 and EP elections results (IRE)*) is more frequently addressed by political actors with Christian democratic or conservative political leaning than by others. Similarly, Topic 4 (*Campaign of challenger parties (NL)*) is the second most important topic for special issue politicians and parties while ranking extremely low for all other political actors. This indicates that not only citizens and civil society actors used Twitter successfully to address their topics in the context of the EP elections, but Twitter also provided an opportunity structure for challenger parties to mobilize on their issues.

Finally, Topic 9 (*Spanish parliamentary elections and Catalonia conflict*, 6 %) provides an example of a national topic with high salience among political actors. The country distribution of aggregated topic proportions indicates it is indeed Spanish politicians who address the issue more frequently than political actors from other countries. Regarding political leaning, this topic is frequently addressed by politicians with an agrarian and an ethnic minority political leaning. This is in line with the literature on the Catalan conflict as a national manifestation of the center-periphery cleavage (Lipset & Rokkan, 1990). A detailed description of how this conflict plays out in the 2019 EP election debate on Twitter is provided in Chapter 7.2.

Civil society. Civil society actors are important intermediaries between politicians and citizens (Habermas, 1996, p. 354). In the context of the EP elections, they are also important intermediaries to target the seemingly distant EU level of political decision-making (Özdemir & Rauh, 2022; Tilly, 2004). Figure 16 shows that Topic 2 (*EP election results: Focus Brexit Party*) is the most addressed topic by civil society actors, followed by election mobilization (Topic 5: *Voter mobilization and Sunday question* and Topic 1: *General calls to vote in the EP elections*) as well as European-level policy discussions about *economic, trade, and climate policies* (Topic 8). As such, the aggregated issue agenda of this actor groups is relatively

strongly Europeanized and provides important discussions of European policies as well as information and mobilization for the EP elections.

Taking the scope of actors into consideration, it becomes apparent that civil society movements and organizations from the European level focus more strongly on (European) policy-related topics than their national counterparts: for example, Topic 2 with its focus on the Brexit party's election results is mostly discussed by national civil society actors from the UK (24 %), while movements and organizations from the European level focus more strongly on Topic 8 (*Changes in economic, trade, climate policies*, 8 %) and Topic 13 (*Pre-election analyses of EU and national political landscapes*, 6 %). However, *voter mobilization* (Topic 5, 7 %) and *calls to vote in the EP elections* (Topic 1, 10 %) are also part of European civil societies' issue agenda.

Furthermore, civil society organizations from the far right of the political spectrum (i.e. conservatives and nationalists) act as drivers of Topic 14 (*Promotion of Pegida demonstration in Dresden*, 21 %). And indeed, a more detailed look at the accounts that emphasized this topic in their Twitter communication shows a dominance of accounts with a clear connection to the German radical right movements *Pegida* and the nationalist party *AfD*. Conversely, civil society actors from the left of the political spectrum communicate about the *Spanish parliamentary election and the Catalonian conflict* (Topic 9, 14 %), *the resettlement of Iranian refugees* (Topic 22, 6 %), and *voter mobilization* (Topic 1, 7 %).

Scientific institutions and individual scientists play a special role for the Europeanization of networked public spheres. The results of the network analysis and communicative interactions presented in Chapter 7.1 show that civil society actors act as drivers of Europeanization of networked public spheres through the communicative interactions. This is underlined when taking the issue agendas of actors into account: first, civil society organizations with a Green and environmental focus, address *changes in the economic, trade, and climate policies* (Topic 8, 17 %) particularly often and therefore act as drivers of politicization of European issues and thus also as drivers of Europeanization. Second and similarly, scientific actors play a crucial role in addressing issues related to the European level: they provide scientific discussions of the *EP election results in the UK* and in the context of the Brexit negotiations (Topic 2, 11 %) and they discuss *nationally specific election landscapes* in the run up to the EP elections (Topic 13, 10 %). Furthermore, Topics 15 (*EP campaigns: kickoffs*) and 16 (*Promotion of Spitzenkandidaten debate*) both account for about 5 % of scientists issue agendas and are thus addressed more frequently than by other actors in the debate. Taken together and in line with

previous research (Koopmans, 2007, p. 201), scientific actors are important drivers of European issues in the run up to as well as in the aftermath of the 2019 EP election debate on Twitter by providing scientific insights and interpretations.

Media. Even though media and journalists have lost their exclusive gatekeeping functions in social media communication environments (Bruns, 2005, 2009a), they may act as aggregators and providers of information and mostly focus on those issue that relate to reporting about election campaigns and results. Figure 16 supports this assumption: the most salient topics in the issue agendas of media actors are Topic 2 (*EP election results: Focus Brexit Party*, 23 %) and Topic 5 (*Voter mobilization and Sunday question*, 12 %). The increased media attention to Topic 2 is explained by the European-wide importance of the EP election results in the UK for the Brexit negotiations. Topic 19 (*Debate about EU commission presidency*, 7 %) also plays an important role in media's Twitter communication, showing that European level politics and the debate about the Spitzenkandidaten-process and the European commission presidency have caused media attention. In terms of Europeanization, media are indeed important sources of information about EP election campaigns in the run up to the election, election results shortly after the election, Brexit, as well as European politics. Even though media actors play limited roles as drivers of Europeanization in terms of direct communicative interactions with other users on social media platforms, they are important providers of information, which can then be observed and re-distributed through quotes and retweets by other actors in the debates as shown by the results in Chapter 5.1. This indicates that traditional media functions with regard to Europeanization and democratic legitimacy are closely mirrored on social media platforms.

Citizens. Finally, citizens do not need to mobilize an electorate to vote in the EP elections and they do not have certain journalistic roles or routines to adhere to. Therefore, their issue agendas are expected to depict individual differences and beliefs, which makes generalizations across the actor group more difficult than for professionalized and organized actor groups.

Figure 16 shows that citizens indeed address different topics in their Twitter communication about the 2019 EP elections than other actor groups. Excluding hashtag-spamming, the most important topics for citizens are Topic 2 (*EP election results: Focus Brexit Party*, 7 %) and Topic 24 (*Dutch right-wing supporters and Nexit*, 7 %). Moreover, taking political leaning into account shows that (Dutch) citizens with nationalist political leaning are the primary driver of the Nexit debate (Topic 24, 22 %) in the EP election discussion on Twitter. Generally, the topic distribution reflects the high number of Dutch citizens in the 2019 EP election debate since Topic 12 (*Discussion of EP election polls and results (NL)*) generally scores rather high in terms

of expected topic proportions. Citizens from the left of the political spectrum, on the other hand, focus more strongly on environmental policies.

These results indicate three important findings: first, citizens' issue agendas differ from that of politicians, media, and even civil society actors. Second, citizens focus more strongly on nationally specific communication than on European level issues and policies. And third, right-wing and Eurosceptic citizens fundamentally influence the issue salience of right-wing topics and Eurosceptic sentiments in the context of the 2019 EP elections on Twitter – especially in the Netherlands. This indicates that Twitter does provide the potential for citizens to put their issues on the agenda, even in the context of European-wide events such as the EP elections.

Summary

Summing up, the Twitter debate about the 2019 EP elections fostered the salience of nationally specific and European topics. Especially the discussion around changes in economic, trade, and climate policies (Topic 8) is discussed by politicians and civil society from various countries and the European level and can therefore be interpreted as a truly European issue. The 2019 EP elections did act as drivers of Europeanization in terms of topic salience, as Topics 18 (*Financial policy and costs of social policies*) and 19 (*Debate about EU Commission presidency*) show. However, a variety of topics that depict Eurosceptic sentiments and dissatisfaction with the constant set up of the EU and its democratic legitimacy could be observed (e.g. Topics 10, 11, 21). This begs the question of Twitter's potential to foster communicative interaction between society and political actors, which might decrease the democratic deficit of the EU.

6 Twitter and democratic legitimacy: Reciprocity of edges in #EP2019

Social media platforms in general and Twitter in particular have the potential to enhance democratic legitimacy in terms of responsiveness and accountability by enabling direct communication and feedback between citizens and politicians (Bovens, 2007; Bruns, 2009a; M. Castells, 2008; Meijers et al., 2019). First, the option to directly address politicians in a tweet to point towards issues of citizens' importance may provide input legitimacy and provides a precondition for politicians' responsiveness to society's demands. Second, Twitter offers the potential for feedback between citizens or civil society and politicians as well as for publicly addressing discontent with politicians' decisions and actions, which is a crucial precondition for the accountability of political actors. In addition, the potential for transnational communication in networked public spheres makes direct communication between citizens and

European politicians and institutions possible. This direct communication between political actors from the national as well as the European level and the electorate may provide a precondition for increasing responsiveness and accountability of European level political actors and thus for increasing democratic legitimacy of the EU on the input and the output level. Thus, interactions between (collective and individual) European level political actors are of major interest for the (potential) democratic legitimacy of the EU, because their communicative interactions with citizens on Twitter are important preconditions for their potential responsiveness.

Furthermore, politicians and parties from the national level may act as intermediaries between the national and European level of decision-making. Due to language differences and the technocratic nature of EU level policies and communication (Özdemir & Rauh, 2022), citizens may perceive national politicians as less distant and more approachable and thus direct their communicative interactions more strongly towards the national than the European level. This makes the national level an important aspect of analysis as well. Similarly, media and civil society actors can act as intermediaries between the (national and European) political level and citizens by condensing public opinion. Thus, Chapter 6.1 will focus on communication from citizens, civil society, and media towards national and European politicians as a precondition for democratic legitimacy of the EU on the input level. From a network perspective, the analysis investigates whether communicative input from citizens and civil society targets national and European politicians and whether these ties are reciprocated.

Responsiveness and accountability require that politicians perceive the opinions and demands of the electorate, act accordingly, and communicate their actions to the citizens as the forum of accountability (Bühlmann & Kriesi, 2013, p. 47). Communicative interactions from (European and national) politicians are a precondition for and can thus be used as an indicator of whether political actors communicate their decisions and actions to the electorate as suggested by Bovens (2007, p. 450). Since Twitter offers the possibility to directly communicate (policy) decisions to the public, the similarity of topic agendas of citizens and politicians can be used as an additional indicator for accountability and responsiveness: when citizens and politicians address the same issues in their Twitter communication, this suggests that political decision-making processes involve those topics that are important for the electorate. Thus, Chapter 6.2 focusses on the outgoing communication of national and European politicians from a network perspective as a precondition for democratic legitimacy on the output level. Additionally, the similarity of topic agendas of citizens and civil society actors on the one hand and politicians from the national and the European level on the other hand will be analyzed.

6.1 Communicative interaction in #EP2019 and input legitimacy

Input legitimacy requires the possibility for mutual observation of the political system and society through mass media's news reporting (Meijers et al., 2019, p. 1724; Schmidt, 2013, p. 9) and elections, in which citizens – in modern democracies – are offered the electoral choice between a variety of parties with different programs and issue positions (Habermas, 2006, p. 418). Nowadays, these traditional forms of establishing responsiveness are complemented by direct communication on social media platforms. Figure 17 depicts the proportions of communicative interactions between actors from the national and European levels for each network. It shows that national politicians are generally addressed more frequently than European level actors, which underlines the second-order nature of European elections. Furthermore, citizens are generally most active in addressing other actors, but receive considerably fewer interactions themselves – especially from national and European politicians.

Figure 17. Communicative interaction between national and European actors
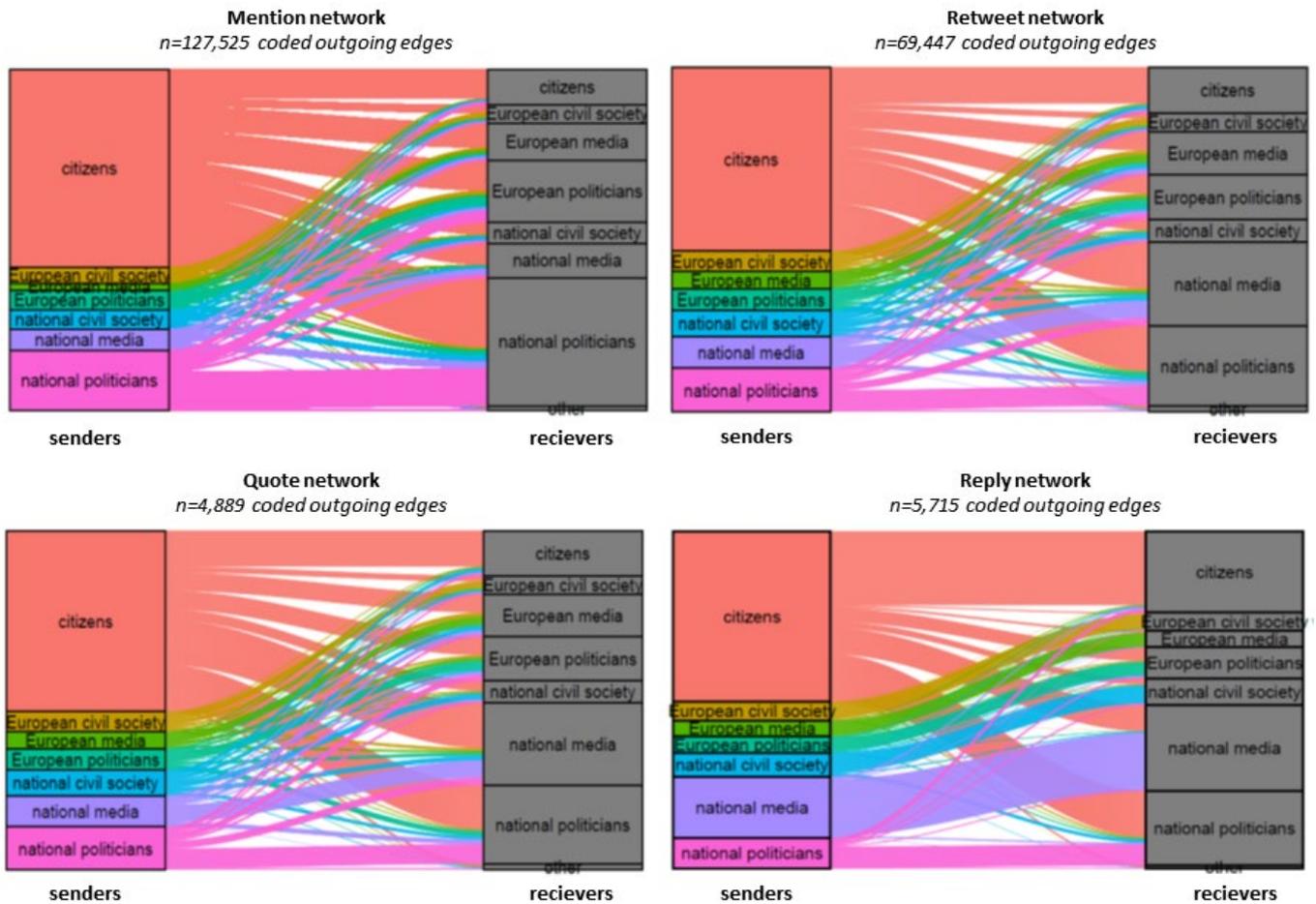
Note. Based on coded outgoing edges of depicted groups of senders.

Communicative input to the European level

Table 19 provides detailed information about the communicative interactions for mentions, retweets, quotes, and replies directed at European political actors by actor group and political leaning of the sending actor. Overall, citizens address European politicians most frequently. This holds for all interaction types. Second, nationalist citizens address European politicians particularly frequently in the quote (17 %) and the reply (30 %) network, while citizens with special issue-related political leaning are particularly active in the mention (15 %) and the retweet (21 %) network. In line with previous research, this indicates that nationalist citizens comment on European issues and contents to express their disagreement and Eurosceptic sentiments (Michailidou et al., 2014; Michailidou, 2015).

Political actors address also European politicians in their Twitter communication often. However, interesting patterns emerge across party families: for example, politicians from green, social democratic and nationalist parties are most active in addressing European politicians across all networks. Civil society actors with special issue and green political leaning address European politicians particularly frequently. Additionally, green actors generally address the European level frequently in their communication (see Chapter 5), presumably because of the transnational nature of climate protection policies. Media actors, however, initiate communicative ties to European level politicians less frequently than do the other actor groups. When media actors do address European level politicians directly by initiating actual digital links, these come from non-partisan media institutions and journalists. Again, this tendency holds across all networks, but is most pronounced in the quote network with 49 percent of edges to European politicians coming from non-partisan media and least pronounced in the reply network, where 31percent of the edges come from non-partisan media.

Role of citizens. Twitter's potential for the democratic legitimacy of the EU lies in the possibility to directly address European level politicians and bring relevant issues to their attention. And indeed, citizens address European politicians more often than other actor groups in absolute terms (n=15,155 edges). They do so mostly by mentioning (n=10,248 edges, 68 %) or retweeting their contents (n=4,469 edges, 29 %), while more engagement-focused communicative interactions, namely quotes and replies, are used much less frequently (i.e. n=240 edges (2 %) and n=198 (3 %), respectively). Furthermore, citizens with nationalist political orientation address political actors from the European level particularly often in the context of the #EP2019 debate, indicating that considerable proportions of the interaction between citizens and European politicians and institutions on Twitter is driven by Eurosceptic

sentiments. This trend was also identified for comment sections of online news sites (Michailidou et al., 2014, p. 99), indicating polarization about the EU, which is openly expressed on social media platforms.

Role of civil society. Civil society actors are important drivers of Europeanization in networked public spheres (see Chapter 5). However, in terms of vertical (bottom-up) Europeanization and especially when addressing European level politicians to put societal issues on the agenda, the results show that civil society actors direct relatively little communicative input to European politicians (n=3,364 edges), most of which are mentions (n=2,708 edges, 80%) or retweets (n=558 edges, 17 %). Interactions that may include discussion and actual contestation of EU politicians' tweets on the content level (i.e. quotes and replies) are scarce (i.e. n=62 and n=36 edges, respectively). Furthermore, communicative input from civil society mostly comes from a small set of political orientations: climate and environmental (i.e. Greens) organizations and movements, special issue organizations (e.g. pro- and anti-Brexit movements, or EU-focused movements such as @PulseofEurope and @UNHCR_de), and non-partisan actors with scientific backgrounds target European level politicians in their Twitter communication. This shows that it depends on the topics of interest to social movements and NGOs whether they target political actors from the national or the European level in their Twitter communication.

Role of media. Media can also act as intermediaries for input legitimacy by condensing public opinion and making it perceptible for European political actors. However, a closer look at the communicative interactions from media actors to European level politicians indicates that this is not often done by addressing the European level directly: ties from media actors to European politicians are overall rather scarce (n=2,282) compared to the other actor groups. If media actors address European politicians, they do so by mentioning (n=1,870 edges, 82 %) and sometimes retweeting (n=306 edges, 13 %), while quotes (n=80, edges, 4%) and replies (n=29 edges, 1 %) play only a minor role. This indicates that addressing European level politicians mostly happens in the context of news reporting on Twitter (i.e. by mentioning European politicians in their tweets) and much less frequently by retweeting contents from European politicians. Interaction with the contents of EU politicians' tweets in terms of quoting and replying, however, does not happen often. This raises the question whether this can be attributed to the second order nature of the EU and European elections or whether similar results can be identified for national politicians.

Table 19. Edges to European politicians by actor groups and political leaning of sending actors (in %)

Political leaning of senders	Political actors				Civil society				Media				Citizens			
	Mention network	Retweet network	Quote network	Reply network	Mention network	Retweet network	Quote network	Reply network	Mention network	Retweet network	Quote network	Reply network	Mention network	Retweet network	Quote network	Reply network
Left	8.07	7.23	8.85	9.77	6.09	4.66	25.81	8.33	2.03	3.27	3.75	-----	5.19	5.69	10.83	3.03
Green	11.99	9.47	10.94	7.91	16.69	12.19	11.29	16.67	5.40	7.52	6.25	-----	6.21	3.71	10.42	7.07
Soc. Dem.	9.28	5.79	13.54	5.12	3.62	3.58	6.45	11.11	4.55	3.92	22.50	-----	3.78	2.58	5.83	7.07
Liberal	10.30	10.23	7.29	6.51	1.03	1.97	0.00	0.00	9.79	2.94	10.00	-----	3.10	3.71	1.67	2.02
Christ. Dem.	14.80	16.06	11.98	14.42	1.62	0.18	0.00	8.33	1.18	0.33	0.00	-----	0.69	0.65	0.42	0.00
Conservative	1.67	1.12	1.56	0.47	0.18	0.18	0.00	0.00	1.28	0.33	0.00	-----	1.57	1.40	2.92	2.02
Nationalist	13.81	8.11	4.17	0.47	5.10	3.76	0.00	5.56	4.44	6.86	2.50	-----	9.88	6.32	17.08	30.30
Ethnic min.	2.61	3.12	0.52	44.65	0.48	0.72	0.00	41.67	1.55	1.63	0.00	-----	4.65	5.29	0.00	13.64
Special Issue	23.87	35.64	0.52	9.77	29.91	45.16	0.00	8.33	7.81	5.56	0.00	-----	15.29	21.20	0.83	3.03
El. Alliance	0.06	0.00	29.17	0.00	0.00	0.00	17.74	0.00	0.00	0.00	2.50	-----	-----	-----	-----	-----
Non-partisan	2.74	2.88	11.46	3.26	29.28	20.79	20.97	5.56	43.96	37.58	48.75	-----	-----	-----	-----	-----
unclear	0.48	0.28	0.00	7.44	3.03	1.61	1.61	2.78	0.91	2.94	1.25	-----	2.38	1.73	0.83	0.00
uncoded	0.07	0.04	0.00	0.00	2.95	5.20	16.13	0.00	17.11	27.12	2.50	-----	47.25	47.71	49.25	34.85
Total (%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	-----	100.00	100.00	100.00	100.00
Total (n)	7,055	2,503	192	215	2,708	558	62	36	1,870	306	80	26	10,248	4,469	240	198

Note. Agrarian political leaning as well as replies for media actors not listed because less than 30 cases (edges). Citizens cannot be non-partisan actors or part of electoral alliances.

Table 20. Edges to national politicians by actor groups and political leaning of sending actors (in %)

Political leaning of senders	Political actors				Civil society				Media				Citizens			
	Mention network	Retweet network	Quote network	Reply network	Mention network	Retweet network	Quote network	Reply network	Mention network	Retweet network	Quote network	Reply network	Mention network	Retweet network	Quote network	Reply network
Left	7.45	7.92	6.52	10.61	9.99	8.70	28.57	6.06	3.43	2.33	21.62	-----	6.91	7.63	5.98	3.39
Green	21.52	23.86	25.16	17.88	23.94	31.75	16.07	24.24	6.89	13.15	4.05	-----	7.58	7.46	9.49	4.72
Soc. Dem.	20.56	18.81	16.46	16.06	4.31	2.96	7.14	0.00	6.38	11.53	1.35	-----	6.36	6.74	10.19	3.54
Liberal	11.87	10.15	14.29	14.24	0.72	0.54	3.57	1.52	11.21	11.18	6.76	-----	3.66	3.63	5.10	2.80
Christ. Dem.	8.53	8.26	7.45	9.09	1.50	0.27	1.79	0.00	1.37	0.58	1.35	-----	0.78	1.12	0.53	0.00
Conservative	4.78	4.83	5.59	7.88	0.42	0.36	0.00	0.00	3.02	2.33	1.35	-----	1.92	2.03	2.99	1.18
Nationalist	13.12	16.30	11.18	6.06	10.41	12.02	1.79	9.09	6.54	16.53	1.35	-----	12.75	10.34	13.71	31.56
Ethnic min.	1.36	0.71	0.31	0.30	1.41	0.36	0.00	0.00	0.41	0.35	0.00	-----	1.38	0.88	1.23	0.15
Special Issue	8.08	6.69	10.56	7.88	24.54	18.03	10.71	50.00	6.00	4.77	2.70	-----	9.75	8.34	10.54	6.34
Non-partisan	1.82	1.91	1.55	8.18	20.26	21.88	23.21	9.09	32.22	7.92	37.84	-----	-----	-----	-----	-----
unclear	0.52	0.39	0.62	1.52	0.27	0.63	0.00	0.00	1.68	2.68	12.16	-----	2.79	3.11	1.05	3.98
uncoded	0.09	0.14	0.00	0.00	2.24	2.51	5.36	0.00	20.86	26.66	9.46	-----	46.12	48.73	39.19	42.33
Total (%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	-----	100.00	100.00	100.00	100.00
Total (n)	14,784	7,231	3,22	330	3,342	1,115	56	66	3,150	859	74	29	23,859	11,024	569	678

Note. Agrarian and electoral alliance political leaning as well as replies for media actors not listed because less than 30 cases (edges). Citizens cannot be non-partisan actors.

Communicative input to the national level

In addition to European politicians also national politicians can be addressed directly on social media platforms and thus act as intermediaries between national electorates and the European level. As Figure 17 shows, national politicians receive considerably more interactions, most of which are initiated by citizens or other national politicians. Table 20 summarizes the communicative interactions for mentions, retweets, quotes, and replies directed at national political actors by actor group and political leaning of the sending actor.

Political actors, civil society, and citizens with special issue-related political leaning address national politicians and institutions particularly frequently, especially in the mention and retweet networks. In the case of political actors, special issue-related political leaning includes politicians from the Brexit Party, the Pirate Party, and Volt. Furthermore, political actors from Green and social democratic parties address national politicians particularly often. For example, in the quote network, 25 percent of all ties towards national politicians come from Green politicians. Social democratic politicians address the national level slightly less frequently: 21 percent and 19 percent of edges to national politicians in the mention and retweet network, respectively, come from social democratic politicians. This pattern holds across all networks and indicates that debates about environmental and social policies are discussed at the European level. As such, climate change and environmental policies do not only function as a driver of politicization and Europeanization as argued in the previous chapters, but they also have the potential to increase democratic legitimacy of the EU on the input level through online communication. Non-partisan actors target the national political level in their Twitter communication frequently. This group mostly includes public service broadcasting media actors and civil society actors with scientific backgrounds. While this underlines the elite and technocratic nature of the EU and European elections, it might also lead to an increase in democratic legitimacy on the input level because media and scientific elites can act as intermediaries between citizens and national politicians.

In contrast to these rather positive tendencies with regard to the democratic legitimacy, Table 20 shows that politicians and citizens with a nationalist political leaning target politicians and institutions frequently in their communication. This is even more pronounced with regard to the national than the European level, which indicates generally high levels of right-wing citizens' and politicians' Twitter use in the context of the 2019 EP elections. For example, almost 32 percent of all replies directed at national politicians come from ordinary citizens with

a nationalist political leaning. In the mention and quote networks, nationalist citizens account for 13 percent and 14 percent of ties towards national politicians, respectively.

Role of citizens. Citizens do target national politicians most often in absolute terms (n=36,130 edges) and are therefore important initiators of communicative ties in the context of the 2019 EP elections. Most of the interactions are mentions (n=23,869 edges, 66 %) or retweets (n=11,024 edges, 31 %) while quotes and replies are used much less frequently (i.e. n=569 edges (2 %) and n=678 edges (2%), respectively). Furthermore, it has been pointed out that citizens with nationalist political orientation are especially active in addressing European level political actors in the context of the #EP2019 debate. A similar and even slightly more pronounced trend can be observed regarding citizens' communication with political actors from the national level. Taking the context of the 2019 EP elections into consideration, this implies that Eurosceptic and anti-EU narratives were not only targeted at the European but also at the national level. This interpretation is supported by the results of the Structural Topic Modelling and the salience of several radical right and Eurosceptic topics in the debate (see Chapter 5.2) as well as the emergence of several Brexit and Nexit conflict lines in the community structure of the networks (see Chapter 7.2).

Role of civil society. Direct communication from civil society actors to national politicians occurs slightly more frequently than to European politicians, but civil society actors still direct relatively little communicative input to national politicians (n=4,579 edges), most of which are mentions (n=3,342, 73 %) or retweets (n=1,115, 24 %). Furthermore, communicative input from civil society mostly comes from a small set of political orientations: climate and environmental (i.e. Greens, @IEEP_eu) organizations and movements, special issue movements, and non-partisan actors with scientific backgrounds target national level politicians in their Twitter communication. This suggests that civil society actors use Twitter mostly to communicate their own issue agendas in the form of original tweets, in which they mention national politicians to gain their attention. While this provides communicative input to the political level, actual discussion about issues via quotes or replies is limited.

Role of media. A look at media's direct communicative interactions with national politicians indicates that the national level is not significantly more important than the European level as a target of media actors' communication. Ties from media actors to national politicians are overall rather scarce (n=4,112) compared to other actor groups. If media actors do address national politicians, they do so by mentioning (n=3,150, 77 %) and sometimes retweeting (n=859, 21 %), which indicates that addressing national politicians mostly happens in the

context of news reporting on Twitter (i.e. by mentioning national politicians in their tweets) and much less frequently by retweeting contents from politicians. Actual interaction with the contents of national politicians' tweets through quoting and replying does not happen often. However, this does not necessarily mean that media do not fulfill their democratic functions (Koopmans & Erbe, 2004, p. 99). Rather, direct interaction with European as well as national politicians is not a significant part of news distribution on social media platforms. For one thing, this reflects traditional roles of journalists as gatekeepers and important information providers. For another thing, research on the use of social media by journalists indicates that traditional journalistic roles as information providers still apply and that these are rather used for the promotion of news articles and research purposes rather than interactions with politicians (Bodrunova et al., 2018; Bruns et al., 2016). This results in media actors being important authorities in Twitter debates, but not important hubs (Kapidzic et al., 2019).

Reciprocated communication with politicians

Addressing European and national politicians to increase input legitimacy is only part of the picture. Especially from the perspectives of citizens, it is an important precondition for (perceived) democratic legitimacy and satisfaction with politicians that their input is acknowledged and considered in political decision-making (Bühlmann & Kriesi, 2013, p. 47). Put differently, Twitter's potential for direct communication between citizens and (European) politicians may have positive effects on citizens' perceptions of input legitimacy when they can communicate their concerns directly to those in power. If these concerns are not addressed, democratic legitimacy as well as satisfaction with European politicians and the EU may decrease (Rasmussen, 2017).

One option for politicians to acknowledge citizens' communication is to reciprocate incoming communication, which provides a symmetrical communication situation in the sense that if a tie exists from a citizen to a political actor, then a second exists from this political actor to the citizens. Further options include asymmetrical communication such as politicians initiating communication towards citizens and politicians taking up citizens' issue agendas and address the same topics in their Twitter communication. The last two options will be discussed in detail in Chapter 6.2.

Table 21. Reciprocated edges to national and European politicians from actor group (in %)

come from…	Reciprocated edges to national politicians in network				Reciprocated edges to European politicians in network			
	Mentions *n=8,887*	*Retweets* *n=2,842*	*Quotes* *n=56*	*Replies* *n=257*	*Mentions* *n=3,771*	*Retweets* *n=1,012*	*Quotes* *n=55*	*Replies* *n=166*
Pol. actors	76.69	74.98	94.64	96.50	81.91	86.56	76.36	100
Civil society	5.74	5.56	1.79	0.78	7.16	3.26	0.00	0.00
Media	3.41	4.29	0.00	0.00	3.00	1.68	0.00	0.00
Citizens	12.93	14.22	3.57	2.72	7.13	6.82	23.64	0.00
Other	1.23	0.95	0.00	0.00	0.80	1.68	0.00	0.00
Total (%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table 21 shows which proportion of reciprocated edges to European and national politicians for each network are initiated by which actor group. Overall, reciprocated incoming ties are slightly higher for national political actors than for European politicians. Reciprocated communication is higher in the reply network for both national (23 %, n=257) and European (35 %, n=166) politicians. However, it has to be considered that replies are generally the least frequent interaction type resulting in low amounts of replies to politicians' tweets in absolute terms in the first place. It is striking that all of the n=166 reciprocated replies from European politicians are initiated by other politicians, while replies from other actor groups are never reciprocated. This indicates a very elite-center nature of feedback and engagement of European politicians.

Communication from political actors is generally most often reciprocated compared to the other actor groups. This holds across all four networks. However, different patterns for reciprocated edges towards national and EU politicians emerge across networks: the tendency to reciprocate edges from political actors is slightly more pronounced on the European than on the national level, at least for the mention and retweet network. In the quote network, on the other hand, national politicians (95 %, n=56) reciprocate edges from other politicians more frequently than European politicians (76 %, n=55). Overall, engagement with and feedback for the input from other actors mostly happens between political elites – on the national as well as the European level. However, citizens do receive feedback in terms of reciprocated edges from national politicians in the mention and the retweet network, indicating attention to and interaction with their contents.

Considering the context of the 2019 EP elections and campaigning, this underlines the importance of citizens' interactions with politicians' contents on social media platforms for campaign and mobilization purposes (Pfetsch et al., 2021). Election campaigns are important time periods for politician-citizen interaction. Thus, one can expect that the levels of

reciprocated communication as well as communication with citizens in general (see also Chapter 6.2) are higher in the context of this analysis than in routine times of politics.

Civil society actors achieve less attention than ordinary citizens in absolute terms and in direct comparison based on all reciprocated edges. While they mention politicians frequently, these ties are not often reciprocated. The comparatively low levels of reciprocated communicative interaction between civil society and national as well as European politicians suggests that civil society actors do not generally succeed as intermediaries for input legitimacy. The results from Chapter 5 rather indicate that civil society actors use Twitter mostly to connect with other civil society organizations in other EU member states (i.e. horizontal Europeanization) to mobilize on specific issues, such as economic, trade, and climate policies.

Contrary to expectations (H2), ERGM results show that the general tendency for reciprocity in the reply network is positive and significant (compare Table 17), indicating that replying as a relatively cost-intensive communicative interaction in terms of language and issue knowledge needed to engage in replies results in increased likelihood for feedback. Thus, it seems as if replying to politicians' contents should theoretically be the most important strategy to receive reciprocity for communicative input. However, the descriptive results presented in this chapter paint a different picture. It has been shown that politicians reciprocate reply communication (almost) only when they come from other politicians. Thus, despite a significant ERGM parameter for reciprocity, the democratic potential of reply communication is limited.

6.2 Communicative interactions in #EP2019 and output legitimacy

Democratic legitimacy of the EU also requires communicative output from the political level. While this output does not necessarily have to occur via Twitter, the easy and direct nature of communication on social media platforms without journalists as gatekeepers as well as Twitter's special importance for political communication (Jungherr, 2016) make it a potentially important channel for politicians to communicate with their electorates. However, research on the Twitter use of politicians shows that they use Twitter rather to broadcast information than to interaction with citizens (e.g. Fazekas et al., 2021; Magin et al., 2017) and especially MEPs have been shown to communicate inside their "Brussels bubble" (Haman et al., 2023, p.416).

Communicative output of European politicians

In terms of communication activity, national politicians are more than three times as likely to initiate mentions or retweets and two times as likely to initiate quotes and replies as European politicians (see Table 22). Furthermore, most ties (e.g. up to 85 % in the reply network) are

directed at other politicians. While national as well as European politicians mostly address European actors in their Twitter communication, some differences exist in their use of different communicative interactions. For example, national politicians address other political actors most often in the form of mentions, while European politicians focus most of their replies on contents of other politicians. In combination with the comparatively lower communication activity of European politicians, this indicates that national politicians focus more strongly on posting original contents – in which they link to other politicians – while European politicians interact with other politicians' contents by replying to tweets more frequently in relation to their overall communication activity. Politicians' communicative output in the sense of interaction with citizens and civil society actors is generally quite low on Twitter, which suggests that its potential to increase output legitimacy is not exhausted, especially by European level actors.

Table 22. Edges from national and European politicians to actor groups (in %)

	Edges from national politicians in network				Edges from European politicians in network			
	Mentions	*Retweets*	*Quotes*	*Replies*	*Mentions*	*Retweets*	*Quotes*	*Replies*
address…	*n=20,657*	*n=10,124*	*n=550*	*n=452*	*n=6,590*	*n=2,971*	*n=282*	*n=242*
Pol. actors	80.84	75.27	60.18	75.22	77.91	71.32	65.25	84.71
Civil society	5.22	6.30	9.09	5.75	8.48	11.68	8.16	5.79
Media	7.65	9.23	23.64	5.31	9.53	10.77	23.05	5.37
Citizens	4.96	7.75	5.45	12.83	2.84	4.81	2.84	4.13
Others	1.33	1.45	1.64	0.89	1.24	1.42	0.70	0.00
Total (%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Addressing citizens. Table 22 shows that communication with citizens initiated by European politicians is generally low across all networks. Especially in the mention (3 %, n=187 edges) and quote (3%, n=8 edges) networks, citizens receive less attention from politicians than from other actors in the debate. Thus, even in the immediate context of the European elections, which provide a crucial time period to achieve democratic legitimacy through high voter turnouts, European politicians' Twitter communication is not strongly focused on the interaction with the electorate to increase output legitimacy. Compared to other actor groups, tweets from ordinary citizens receive slightly more attention from European politicians, with roughly 5 percent (n=143 edges) of politicians' retweets reposting citizens' tweets. Also, 4 percent (n=10 edges) of replies by European politicians target ordinary citizens. Taken together, this shows that European politicians are aware of citizens' tweets and occasionally engage with them. However, both in absolute and relative terms, communicative interactions that directly address ordinary citizens are rather rare. This underlines the elite nature of European level communication (see also Chapter 5 as well as Adam, 2007a; Walter, 2017b). The findings show that European politicians are at least slightly more active in responding to communicative input from the electorate, even though they rarely initiate communication with ordinary citizens.

Addressing civil society. Communicative output of (European) politicians directed at civil society actors may provide an increase in perceived output legitimacy because civil society actors can act as intermediaries between (European) politicians and citizens. Generally, civil society actors are addressed slightly more frequently than citizens. As Table 22 shows, civil society actors are especially important as targets of incoming ties in the retweet network (12 %, n=347 edges), indicating that their contents are perceived by European level political actors and forwarded to the European bubble. In the mention and quote networks, civil society actors receive about 8 percent (n=559 and n=23 edges, respectively) of the incoming ties. All in all, this indicates that European politicians perceive civil society actors' communication and interact with it in terms of retweets and quotes and sometimes address them in the form of mentioning in them in their communicative output.

Addressing media. While media actors do not address European politicians often in their own communication, they are quite important targets of communication for the European level. Table 22 shows that they are retweeted (11 %, n=320 edges) and quoted (23 %, n=65 edges) quite frequently compared to other actors and the general communicative output of European politicians. This underlines media's importance as information providers, which is then distributed further by European politicians. Furthermore, media actors are targets of about 10 percent (n=628 edges) of the mentions initiated by European politicians, which indicates that European politicians actively address media actors in order to put their issues and policies on the media agenda. In the context of the 2019 EP elections, the news reporting that is perceived and forwarded by European politicians is mostly related to election polls and results. However, the fact that European politicians monitor media reporting on Twitter and address journalists and media accounts in their communicative output to provide input for news reporting suggests that media actors do serve as intermediaries for democratic legitimacy even on Twitter.

Communicative output of national politicians

Turning to direct interactions sent by national politicians, the results suggest an elite-centered communication with other politicians being the most important targets of national politicians' communication in all networks (see Table 22). However, compared to the communication of their European counterparts, national politicians focus even more strongly on mentioning (81 %, n=16,699 edges) and retweeting (75 %, n=7,620 edges) other politicians and slightly less strongly on quoting (60 %, n=331 edges) and replying to (75 %, n=340, edges) their tweets.

This can be explained by the election campaign context of the analysis, but it also underlines the importance of the national level communication for European elections.

Addressing citizens. National politicians address citizens more often than do European politicians, in absolute terms (see Table 22). Importantly, replying to citizens' tweets accounts for 13 percent (n=58 edges) of national politicians' ties in this network. Citizens are therefore the second most important receivers of ties by national politicians in the reply network, which suggests an increased communicative output towards the electorate, at least in relation to the generally limited output in absolute numbers. On the one hand, this is likely – at least partly – the result of the EP election campaign context of the present analysis, which possibly results in an overestimation of politician-citizen interaction. However, potentially positive effects on the democratic legitimacy of the EU that may arise from the fact that national politicians perceive citizens' tweets and take the time to reply to them should apply regardless of whether the communication occurs during election or routine times of politics.

Addressing civil society. Civil society actors receive less attention from national than from European politicians in relative terms across all networks. In absolute terms, however, national politicians still initiate more edges towards civil society actors than European politicians do due to the higher communicative activity on the national level. Civil society actors play a more important role as addressees of national politicians' communication in the quote network (9 %, n=50 edges), while they play minor roles for politicians' communication strategies in the other networks. This indicates that communicative output, especially in the form of mentioning civil society actors and replying to their tweets is not a common practice for national politicians. A more detailed look at the most important accounts in terms of indegrees from national politicians' ties shows that mostly collective civil society accounts with national as well as European scope such as @DiEM_25, @Wahlrecht_de, and @deineuropa are addressed by national politicians, not accounts of individual activists.

Addressing media. Similar to their European counterparts, national politicians address considerable proportions of their communicative output to the media. Media actors are the second most important actor group as addressees of politicians' communicative ties in the quote network (24 %, n=130 edges) and in the retweet network (9 %, n=934 edges). Thus, national and European politicians show similar communication strategies towards media actors on Twitter. Mentioning (8 %, n=1,580 edges) and replying to media actors (5 %, n=24 edges) play less important roles, but in absolute terms still provide mass media with important communicative political output to report to the electorate.

Do politicians and citizens communicate about the same policies?

Addressing citizens and civil society actors can provide an important precondition to increase the (perceived) accountability of politicians, because politicians signal that they perceive the issues put on the agenda by citizens and are willing to address them. However, politicians can also be responsive to the demands of their electorate without directly addressing them in their Twitter communication. Thus, the similarity of issue agendas of citizens and politicians as communicated on Twitter can serve as an indicator of this indirect form of responsiveness and accountability.

Figure 16 depicts the differences of topic proportions between actor groups. It shows similar topic proportions for citizens and politicians for some topics (e.g. Topic 1: *General calls to vote in EP elections* and Topic 5: *Voter mobilization and Sunday question*), but large differences for other topics (e.g. Topic 24: *Dutch right-wing supporters and Nexit (NL)*). In addition to Figure 16, Table 30 in Appendix E summarizes the topic proportions from the STM across actor groups to provide a detailed picture of actors' topic agendas in the #EP2019 debate. It shows that *political actors* mostly communicate about Topic 5 (*Voter mobilization and Sunday question*, 12 %), Topic 8 (*Changes in economic, trade and climate policy*, 9 %), and Topic 1 (*General calls to vote in EP elections*, 7 %). Thus, in line with expectations about the strategic communication of political actors in times of elections campaigns, their Twitter communication in the run up to and during the 2019 EP elections strongly focuses on campaign content and voter mobilization with concrete policies playing secondary roles. Distinguishing between European and national politicians only slightly changes this picture: national politicians emphasize campaign communication to a larger extent than their European counterparts (Topic 5, 13 %). This can be explained by the still nationally anchored voting system of EP elections: since MEPs are still elected by the national electorates from their respective countries, a specifically nationally focused campaign communication is the logical consequence.

Citizens, show a different topical focus in their Twitter communication. However, it is difficult to perceive citizens as a uniformly communicating actor group due to individual preferences and country backgrounds of the individuals. Ordinary citizens can communicate issues of his or individual concern without having to strategically act towards an overarching goal. The highest-ranking topics in citizens' topic agenda not related to instances of hashtag-spamming focus on *EP election results: Focus Brexit Party (UK)* (Topic 2, 7 %) and *Dutch right-wing supporters and Nexit (NL)* (Topic 24, 7 %), again pointing towards the prevalence of Eurosceptic sentiments in social media communication. None of the top topics discussed by

citizens ranks high in politicians' topic agenda and citizens with anti-EU sentiments from the right of the political spectrum succeeded in putting anti-EU discussions on the agenda in the context of the 2019 EP elections. Pearson correlation of topic proportions that includes all topics finds a medium correlation between citizens and politicians issue agendas (r=.48).

Civil society actors address a quite similar topic agenda on Twitter as politicians. While the most important topic for this actor group is *EP election results: focus Brexit Party (UK)* (Topic 2, 16 %), they also frequently address *voter mobilization and Sunday question* (Topic 5, 9 %) and *changes in economic, trade and climate policy* (Topic 8, 6 %). However, the difference in the issues agendas of national and European level civil society actors is quite striking: While civil society actors with national scope (i.e. confined to a specific European country) focus very strongly on election campaigning and election results related topics such as Topic 2 (24 %), Topic 5, (10 %), and *general calls to vote in EP elections* (Topic 1, 7 %); European level movements and civil society organizations emphasize election and Brexit related election communication (Topic 1, 10 % and Topic 2, 9 %) as well, but focus much more on European level policies about climate, trade, and economy in their communication than national organizations (Topic 8, 8 %).

Thus, issue agendas of civil society and political actors are overall quite similar. Pearson correlation of topic proportions of the two actor groups supports this result (r=.58). This underlines the importance of civil society as intermediaries between the political system and citizens, especially on the European level. While the issue agenda of ordinary citizens differs more strongly from that of political actors (i.e. politicians focus on campaign communication while citizens focus on issue-related communication), civil society actors offer condensed communicative input to politicians, who in turn communicate similar issues in their communicative output.

Summary

Summing up, four general trends can be distinguished, which relate to politicians', citizens', media actors', and civil society actors' communication activities, respectively. *Political actors* from the European level show significantly lower communication activity in terms of initiation and reciprocity of ties than their national counterparts. In line with previous research, national and European political actors mostly focus on elite-centered communicative interactions with other political actors and the media when they initiate communicative ties, while citizens and civil society actors are addressed less frequently. However, the results for the reciprocity of ties shows that citizens are not generally ignored by politicians when citizens initiate the

communication. It must be pointed out that levels of reciprocity are slightly underestimated in the analysis, because cross-network reciprocity (e.g. a citizen mentions a politician in their tweet and the politicians replies to it) is not taken into consideration.

Citizens address national and European politicians frequently and thus provide communicative input for politicians to respond to and consider in their decision-making processes. Even though national politicians are addressed more frequently in comparison, communication directed towards political actors from the European level is also frequent in absolute terms. Thus, while there is room for improvement of politician-citizens interaction on the output side of democratic legitimacy, citizens do provide communicative input to the national and the European level. In line with the results presented in Chapter 5 and with previous research (Gerhards, 2015; Özdemir & Rauh, 2022), language barriers as well as the technocratic communication of MEPs on Twitter still hinder bottom-up vertical Europeanized communication between citizen and European politicians and make the national level the more likely target of citizens' communication – despite real-time translation options and English as the lingua franca. In addition, low levels of reciprocity may hinder increasing (perceived) democratic legitimacy, which might discourage citizens from further interaction. Eurosceptic voices are quite pronounced in the issues communicated by citizens and their communicative input, which largely comes from right-wing citizens. This might increase delegitimizing debates on Twitter and even lead to the emergence of new European level conflict lines (Kriesi, 2020; Treib, 2021).

Media actors are important addressees of political communication, but do not address the political level often in terms of outgoing communicative interaction. Thus, communication practices of collective media accounts as well as individual journalists still closely mirror those of traditional mass media. This has been described as a shift from gatekeeping to gatewatching functions of media actors in networked public spheres (Bruns et al., 2016). With regard to the democratic legitimacy of the EU, media actors are therefore still important for condensing and interpreting public opinion on the input side and policy decisions and election results on the output side in order to provide opportunities for mutual observation between the political system and citizens in networked public spheres.

Finally, *civil society actors* can act as intermediaries between the national and the European level. While communication from national and European politicians towards civil society actors is limited, the two groups show similar topical foci in their Twitter communication about the 2019 EP elections, which becomes salient as an overlap of societal communicative input to and communicative out by political actors. Especially European politicians and European level civil

society actors focus on the same policies (i.e. economic, trade, and climate policies). The results indicate that civil society actors engage in communication about the same topics in the context of the 2019 EP elections.

7 Political conflict lines in the #EP2019 debate

The third research question focusses on the salience of political conflict lines in the 2019 EP election debate on Twitter. Based on the assumption that communicative interactions on social media platforms as well as the mobilization of certain conflicts by politicians and challengers are the result of conscious strategic communication, conflict lines should become visible in the community structures of the four networks (Enyedi, 2005, p. 699). Before turning to the question in how far and which conflict lines became salient in the Twitter debate about the 2019 EP elections, general results of the community detection will be presented to identify overarching community-building mechanisms in the four networks. Actor-issue-constellations are investigated in all communities with more than 100 nodes. In the following, example communities will be used to point towards the overarching trends of community-building as well as salience of conflict lines. The results for all communities with more than 100 nodes can be found in the online appendix.

7.1 Community-building mechanisms in the #EP2019 debate

Table 23 provides an overview over the community detection results per network. It becomes apparent that higher modularity scores correspond to a higher number of detected communities and smaller community sizes on average. Community structures differ based on the communicative interaction they depend on. For example, replies can be considered more demanding forms of communicative interactions due to the high degree of interest in as well as (political) knowledge about the issue and attention to the original content needed to reply to a tweet. Replies occur less frequently but are more likely to be reciprocated and do not display the same amount of transitivity as other communicative interactions (compare Table 19). This results in a community structure with many communities with fewer average members per group and high modularity. Conversely, mentions are the least demanding interaction type because they do not depend on language skills or the understanding of other tweets. Thus, mentions account for the largest network with the lowest number of communities with more than 136 members on average. Modularity scores are generally high for all four interaction types, indicating that all networks display strong community structures (Blondel et al., 2008, p. 2; Newman & Girvan, 2004, p. 8).

Table 23. Results of Multilevel community detection algorithm per network

Network	Edges	Nodes	Communities	Modularity	Average no. of members	Communities with >100 nodes
Mentions	588,885	153,727	1,128	.79	136.32	32
Retweets	361,398	141,225	1,289	.81	109.56	44
Quotes	14,680	10,349	1,378	.84	7.51	24
Replies	14,015	8,247	1,825	.86	4.52	14

Analyzing the actor-issue constellation in all communities with more than 100 nodes for each network, two general patterns of communicative interaction emerged. First, actors from the left-to-center of the political spectrum are more diverse in their linking patterns than actors from the right. Second, citizen-dominated communities are more strongly fragmented by political leaning than elite communities. These patterns will be discussed in detail below.

Pattern 1: the diverse left. First, across all interaction modes actors from the left-to-center of the political spectrum (equivalent to Hooghe & Marks' (2018) categorization of GAL actors) are found to establish more ideologically and transnationally diverse linking patterns than actors located more on the right side of political leaning (equivalent to Hooghe & Marks' (2018) categorization of TAN actors). This includes actors from left, green, social democratic, and liberal party families. While these actors often connect to various other left-wing actors and to actors from diverse countries when discussing particular issues, right-wing communities are not only rather separated in terms of ideology (i.e. right-wing clusters usually do not contain many actors with left-leaning political orientations), but also in terms of transnationality. This finding holds across all networks and issues of the analyzed tweets. This is in line with research on the communication strategies of political actors on European issues: Eurosceptic challengers have been shown to drive conflict over European integration in order to mobilize against a pro-EU consensus (Hobolt & de Vries, 2015; Hutter & Borbáth, 2019; Kriesi et al., 2006). The community structures indicate that right-wing challengers do so without linking to EU actors or converging political leanings often.

Although nationally confined right-wing communities can be found for various countries in all subgraphs, transnational right-wing communities that cut across national borders do not emerge. This finding is underlined by the degree of transnationalization as measured by the scope of communicative interactions between actors with different political leanings (compare Table 28 in Appendix C), which shows that actors with conservative and nationalist beliefs send and receive considerably fewer ties with transnational and European scopes than left-wing actors. While this makes sense topic-wise (i.e. nationalist actors mobilize national voters based on national issues), diverging results have been found for Facebook (Heft, Pfetsch, et al., 2022)

and Hyperlinks (Heft, Mayerhöffer, Reinhardt, & Knüpfer, 2020). Thus, Twitter was not used primarily by radical right parties to create transnational alliances in the context of the 2019 EP elections, but rather to mobilize national electorates.

Pattern 2: fragmented citizens. Second, citizen-dominated communities generally show a stronger fragmentation by political leaning in their community-structures than other actor groups. This underlines the interpretation that linking behavior on Twitter follows strategic decisions, especially by elite actors. Cross-ideological cooperation in the sense of communicative interactions can be considered strategic resources for political actors and civil society (M. Castells, 2008, p. 90). For citizens, however, strategic concerns are less important in their Twitter communication and the links are considered to be based more strongly on personal opinions and beliefs (Santoro, 2022, p. 119). This tendency is especially pronounced in communities dominated by right-wing citizens. Two explicit examples for this will be discussed in the Chapter 7.2 with regard to the Brexit and Nexit debates.

Figure 18 depicts the community structure of the mention, retweet, quote, and reply network from the #EP2019 debate on Twitter. Colors depict the different communities as identified by the multilevel community detection algorithm implemented in the *igraph*-package (Csardi & Nepusz, 2006). The country- and language-distributions in these networks (Figures 25 and 26 in Appendix F) show that several communities emerged for each country- and language background, indicating that these factors alone are not sufficient to explain the emerging community structure despite their high importance for the explanation of tie-formation (compare ERGM results in Table 17).

Figure 18. Community structures in mention, retweet, quote, and reply network
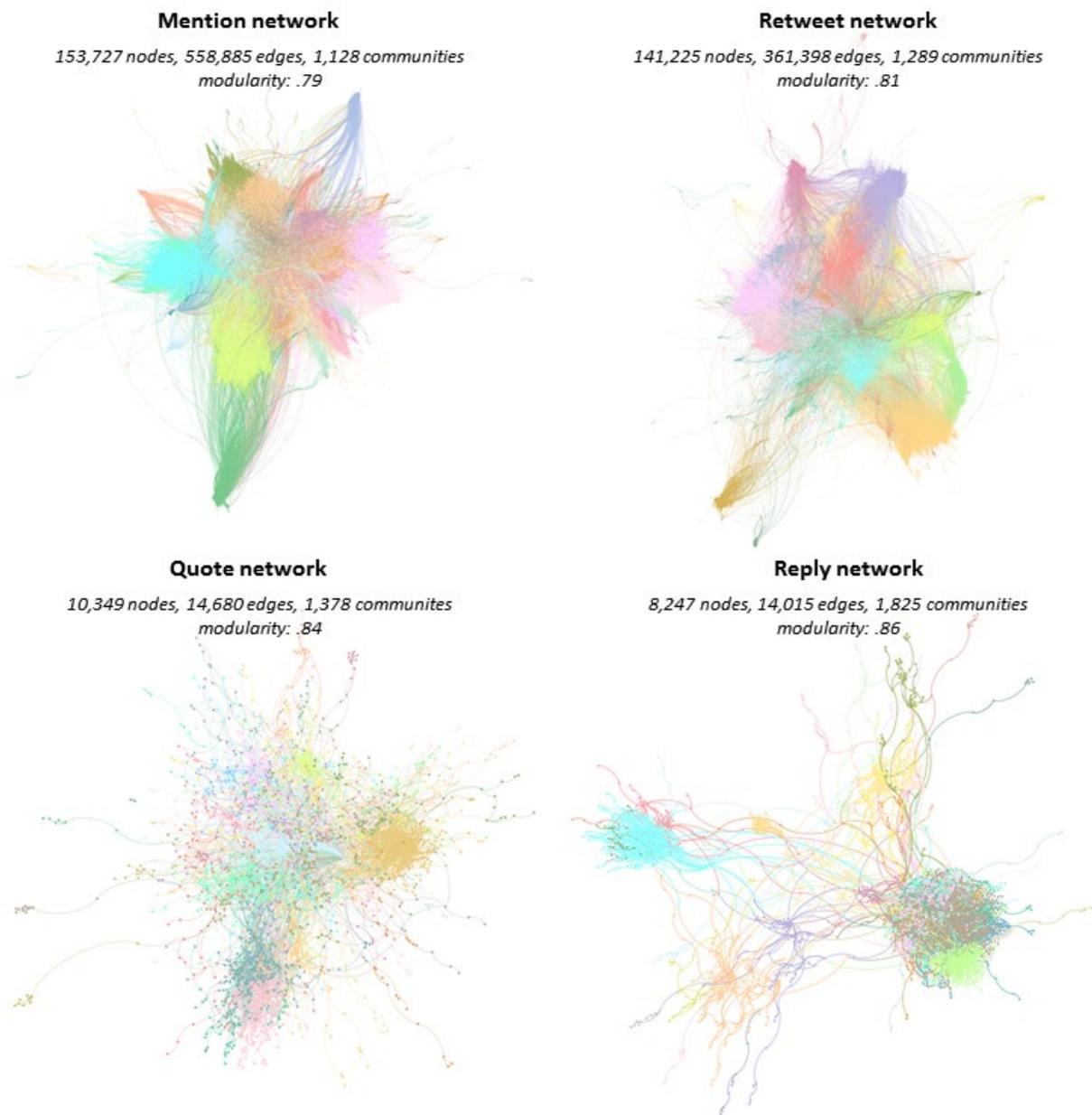
Mention network

153,727 nodes, 558,885 edges, 1,128 communities
modularity: .79

Retweet network

141,225 nodes, 361,398 edges, 1,289 communities
modularity: .81

Quote network

10,349 nodes, 14,680 edges, 1,378 communites
modularity: .84

Reply network

8,247 nodes, 14,015 edges, 1,825 communities
modularity: .86

Note. Directed networks. Layout: ForceAtlas2 (Gephi). Only largest component and nodes with degree > 2 depicted. Node size fixed. Node color based on multilevel community detection; different colors indicate different communities. Edge color based on source node.

Mentions

The actor-issue constellation of communities in the mention network is particularly transnational. This is a result of the affordances (Kreiss et al., 2018) of the communicative interactions on Twitter. Mentions act as referencing links to other Twitter users (i.e. actors) and as such do not necessarily depend on shared languages between actors in order to create connections between them. Put differently, supranational European actors as well as actors from other European member states can be addressed in a tweet independently of the language(s) used and/or whether the language of the tweet is known to the actor who is mentioned. Thus,

mentions indicate attention to actors, but not necessarily discursive interaction between actors (compare Table 3). However, mentioning actors creates digital links to the mentioned actors, which results in increased attention to these actors and in growing prestige. This provides a possible explanation for why left-wing actors do not mention (in terms of actually linking) right-wing actors in their tweets in order to not offer them any attention by third users, and vice versa. This strategic use of communicative interaction on Twitter depending on political ideology has often been discussed in the context of polarization research (Conover et al., 2011; Heft et al., 2017; Himelboim, Smith, & Shneiderman, 2013).

Retweets

Retweet communities are more ideologically fragmented than other communities. However, the general tendency that left-wing actors are more ideologically diverse than right-wing actors is still valid with regard to retweets. Retweets multiply and distribute the contents of tweets into a user's own network. Other than quotes, however, retweets do not allow actors to add their own text, contents, or thoughts to the original tweet so that the user who shares the content does not get the opportunity to disagree with the content. Thus, strategically it makes sense to not retweet content that one does not agree with. In the literature, there is an ongoing debate about whether retweets can thus be interpreted as endorsements of the original content (Metaxas et al., 2014; Molyneux, 2015). However, the actor-constellation shows that retweet communities are strongly ideologically fragmented. This underlines the interpretation that non-endorsements are at least not expressed as retweets. In the EP 2019 debate on Twitter, a variety of communities emerge from different countries and with different ideological positions, in which citizens play important roles in the diffusion of elite actors' contents for mobilizing voters (compare, for example, communities RT569 and M751 in Chapter 7.2).

Quotes

Quotes are a very elite-dominated phenomenon. This becomes apparent in the community structures of the quote network, which are mostly focused on elite actors such as politicians and media but also scientific actors, while citizens are underrepresented compared to the overall debate in most quote communities. Furthermore, transnationalization in the form of actor-constellations with diverse national backgrounds is generally high in the quote communities. Although there are a variety of nationally dominated clusters as well, most quote communities show considerable degrees of European and transnational actor constellations (the latter mostly driven by the presence of actors from the US). Exceptions to this trend are communities dominated by right-wing and nationalist actors.

Replies

In order to reply to a tweet, a user needs to be fluent enough in the tweets language to understand the content and to produce an answer or at least reply in English. Additionally, replies adhere to a different community structure than the other mechanisms since they follow more of an in-star configuration with lower levels of transitivity (compare ERGM results in Table 17). In other words, replies are strongly focused on the specific tweet to which they reply, leading to more segmented and in-star-oriented community structures. In line with results from Chapter 5, reply communities are also more often dominated by actors from one single country than other communities, which can be explained by their strong dependence on language and its high correlation with country-level effects. Additionally, it has been shown that nationalist actors strongly use replies in their communication strategies, resulting in various nationalist reply communities.

7.2 Salience of conflict lines in the community structures of #EP2019

The following chapters discuss which European level conflict lines become salient in the community structure of the networks of the #EP2019 debate. For each network, all communities with at least 100 nodes have then been analyzed according to the coded nodes' characteristics with regard to actor group, political leaning, and country background. All points discussed in the following chapters will be exemplified by the visualization of example communities that can be considered good representations of the features in question. Where applicable, one community has been chosen for each side of the conflict. Where only one side of a conflict becomes salient in the debate, two examples of the salient side of the conflict are presented. In addition, example visualizations are chosen to represent different interaction types in order to show differences in the resulting community structures. Full data for the actor-issue-constellations in all analyzed communities can be found in the online appendix.

Regarding potentially emerging European level conflict lines, three overarching tendencies can be observed in the data, which will be exemplified and discussed in more detail in the following chapters. First, the *European integration conflict* manifests itself as transnationally oriented communities of actors from the left-to-center of the political spectrum on the one hand and nationally fragmented communities of right-wing actors on the other hand. It results in specific cases of pro- and anti-Brexit communities as a concrete and nationally-bounded crystallization of the European integration conflict as well as indicators for a similar development in the Netherlands (i.e. the 'Nexit'). Second, first indicators for a fragmentation of community structures around the question of *environmental protection* as a potentially emerging new

European level conflict can be found in so far as several left-oriented, transnationally connected communities emerge in the data. These communities remain separate from right-wing groups, in which issues of environmental protection do not become salient. In addition to these European level conflicts, the community structure reveals the salience of the conflict around *Catalonian independence* as a national manifestation of the center-periphery cleavage (Lipset & Rokkan, 1990).

7.2.1 The conflict about European integration

A general tendency for left-right-polarization can be observed in many communities across all interaction types. Actors from the left of the political spectrum engage in ideologically more diverse interactions than actors from the right of the political spectrum. This leads to separated right-wing communities emerging for many countries in the analysis, while left-wing communities are connected transnationally more frequently. This can be interpreted in the sense of a demarcation vs. European integration conflict: while nationalist and right-wing actors are fragmented nationally and mobilize national voters based on national issues, those in favor of European integration engage in more transnational mobilization and linking strategies. This tendency becomes apparent in many communities and across all four networks. Two example communities for transnationalized left-oriented and nationalized right-wing communities are provided in Figure 19. Further separate nationalized right-wing communities become salient for many different countries in the debate, including Finland, France, Germany, Ireland, Italy, the Netherlands, Sweden, and the UK.

Figure 19. European integration conflict: example communities from #EP2019

Community RT140: Left-wing mobilization for European issues and voting in EP2019 (4,061 Nodes, 6,994 Edges)

Community RT569: Dutch right-wing citizens discuss anti-EU topics (6,289 Nodes, 23,762 Edges)
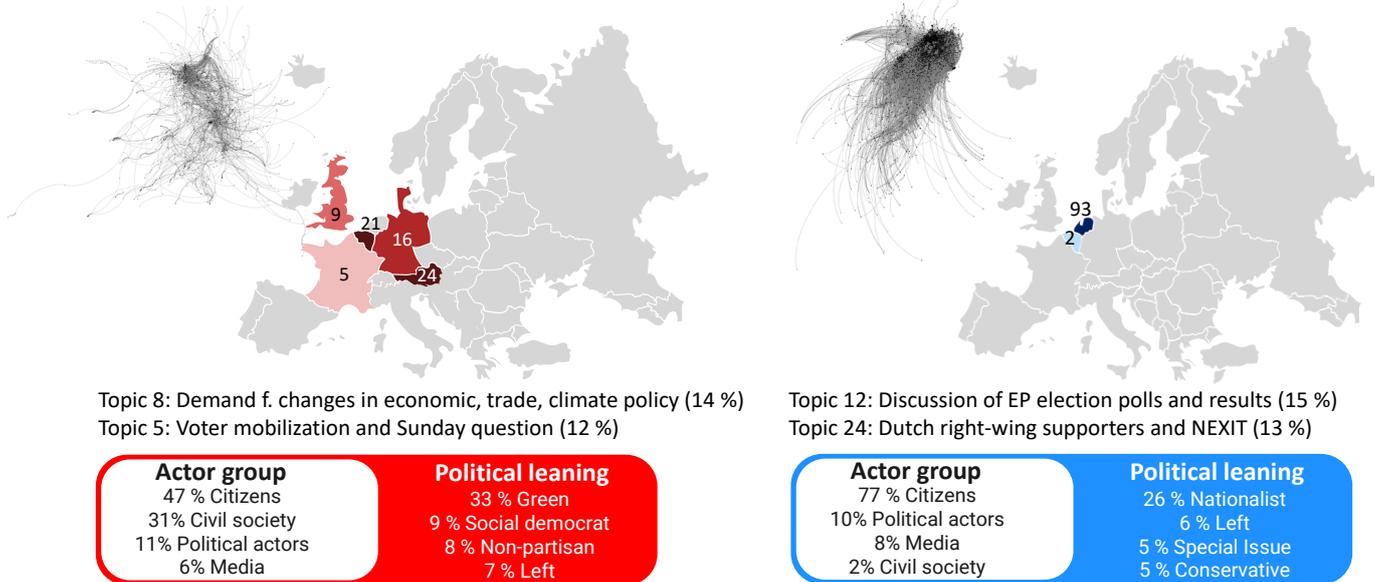
Topic 8: Demand f. changes in economic, trade, climate policy (14 %)
Topic 5: Voter mobilization and Sunday question (12 %)

Actor group	**Political leaning**
47 % Citizens	33 % Green
31% Civil society	9 % Social democrat
11% Political actors	8 % Non-partisan
6% Media	7 % Left

Topic 12: Discussion of EP election polls and results (15 %)
Topic 24: Dutch right-wing supporters and NEXIT (13 %)

Actor group	**Political leaning**
77 % Citizens	26 % Nationalist
10% Political actors	6 % Left
8% Media	5 % Special Issue
2% Civil society	5 % Conservative

Note. Top topics are the two topics with the highest expected probabilities from STM accumulated on the community level. Actor characteristics (group, pol. leaning, country) are based on the manual coding of user profiles. Percentages refer to coded actors per community only. (Up to) the five highest values above one percent are reported per variable. RT refers to the retweet network, values indicate communities as assigned by the multilevel algorithm.

Figure 19 shows an example for the two contrasting sides of a European integration conflict as it becomes salient in the Twitter communication about the 2019 EP elections. On the left, community RT140 from the retweet network exemplifies a left-oriented cluster with many Europeanized communicative interactions. *Civil society actors* (31 %) are overrepresented in this community compared to their presence in the overall debate. This is underlined when looking at the most important nodes in terms of in- and outdegree in this community: civil society actors, especially from national and European environmental organizations, are clearly crucial with regard to attention (i.e. indegree) as well as communication activity (i.e. outdegree). *Citizens* are the largest actor group (47 %) even though they are underrepresented compared to the overall debate. Media and political actors play minor roles in this community (6 % and 11 %, respectively). The country distribution in community RT140 shows clear tendencies for Europeanization, including actors from Austria (24 %), Belgium (21 %), and Germany (16 %). Furthermore, a closer look at the scope of actors reveals that 18 percent of actors come from the European level, indicating the potential for horizontal as well as vertical Europeanization in this community. As such, the community not only exemplifies a pro-European integration perspective, but also indicates that Twitter communication about the 2019 EP elections can indeed foster the Europeanization of networked public spheres by providing the possibility for transnational communication about European issues and policies between non-Elite actors.

Community RT569 in Figure 19 depicts an example of a nationally confined anti-European integration discourse. Citizens (77 %) dominate this community and are overrepresented in comparison to the overall debate, while other actor groups are underrepresented. Furthermore, nationalist political viewpoints (26 %) dominate, followed by left (6 %) and special issue (5 %) actors. The latter include the anti-EU movement *Burgercomité-EU* and organizations, and politicians of the Dutch *Staatkundig Gereformeerde Partij* (SGP), a conservative-calvinist fringe party. Finally, the country distribution shows a clear national orientation (93 % Dutch actors) with only marginal cross-national communicative interactions (2 %). This community is thus dominated by Dutch nationalist citizens, who discuss the 2019 EP election results and polls (Topic 12, 15 %) in conjunction with demands to leave the EU (i.e. 'Nexit') (Topic 24, 13 %). Community RT569 can therefore be interpreted as an example of the anti-European integration or 'demarcation' (Hooghe & Marks, 2018) side of the European integration conflict.

The right-wing orientation in community RT569 is striking. For example, the most active nodes (i.e. outdegree) are exclusively private individuals with explicit references to radical right-parties (especially the PVV) and demands for a Nexit in their user profiles. Additionally, references to *gab.com*, a right-wing alternative for Twitter can be observed. Geert Wilders, head of the radical right *Partij voor de Vrijheid* (PVV), is the most important actor in terms of indegree in this community, followed by right-wing parties such as the *Forum voor Democratie* (@fvdemocratie), and Wierd Duk (@wierdduk), a journalist from the Dutch tabloid paper *De Telegraaf.* Thus, while the communication about and the demand for a Nexit are driven in this community by private citizens with radical right and populist beliefs, attention in terms of retweets is attributed to radical right and populist elites from politics and the media in the Netherlands.

It is noteworthy that Figure 19 depicts two of a variety of communities for both, transnational pro-European as well as nationally confined right-wing communities in the #EP2019 debate which can therefore by seen as examples of an overarching tendency for the pro-European side to establish transnational interactions and the Eurosceptic side to communicate in nationally confined settings. These findings correspond to the distinction of a European integration cleavage between actors with GAL (i.e. green, alternative, liberal) and TAN (i.e. traditional, authoritarian, nationalist) values (Hooghe & Marks, 2018, p. 111). In addition to this overarching salience of a European integration conflict, two national manifestations emerge in the community structure in the form of the Brexit and the Nexit debates.

However, various studies have pointed towards a transnationalization of the radical right in the EU and in European elections (Heft et al., 2020; Heft, Pfetsch, et al., 2022; Hutter & Borbáth, 2019; Pfetsch, Benert, & Heft, 2023; Stier et al., 2021) and scholars have pointed out that a common mobilization of right-wing issues across Europe could have severe consequences for democracy (Caiani & Kröll, 2015; Kriesi, 2014, 2020). Additionally, we have seen the Identity and Democracy (ID) fraction forming in the EP in the aftermath of the last election, in which right-wing parties have underlined their importance in EU level politics. Thus, it remains to be seen whether right-wing parties will continue to gain votes in coming elections and whether a common anti-EU mobilization will take place on the European level. A second option, next to an overarching EU-level cleavage of European integration to emerge would be various national cleavages emerging on the integration vs demarcation question, as has been the case in the UK with Brexit. For a detailed discussion of the Brexit as a cleavage, see below.

Furthermore, we do see the mobilization of European integration vs. demarcation standpoints on the national levels in many countries. This becomes visible in the community structures of all four networks and shows a clear distinction between nationally fragmented right-wing clusters in many countries as well as a variety of transnationally diverse clusters that communicate across borders and involve actors from various European countries. Treib (2021, pp. 182–183) argues that the European integration cleavage is best interpreted as a contemporary and transnational manifestation of the center-periphery cleavage described by Lipset and Rokkan (1990). The traditional center-periphery cleavage is the result of nation-building mechanisms and evolved around administrational and federal structures of (emerging) states and regional areas (Lipset & Rokkan, 1990, p. 101). Similarly, the European integration cleavage can be understood as a conflict that plays out around questions of administrational centralization on the EU level as compared to national sovereignty. It thus manifests itself as conflict between those in favor of European integration and transnationalization and those in favor of demarcation and the protection of national traditions (Treib, 2021, p. 183; see also Hooghe & Marks, 2018; Kriesi et al., 2006).

This interpretation offers an interesting explanation for the overall community structures of the #EP2019 networks since it explains why the demarcation side of the European integration cleavage manifests itself as a national fragmentation of right-wing actors in the community structure of the networks while the integration side becomes salient as transnational communities of left-wing and progressive actors: those in favor of national sovereignty communicate on the national level while those in favor of integration and transnationalization communicate on the European level.

155

Brexit. Various Brexit-related communities can be identified in all four networks of the #EP2019 debate on Twitter, showing the importance of this conflict in the context of the 2019 EP elections. The community structure shows a clear divide between the Remain-side in favor of European integration on the one hand and the Leave-side in favor of nationalization or demarcation (Kriesi et al., 2012).

Figure 20. Brexit as a manifestation of the European integration conflict: example communities
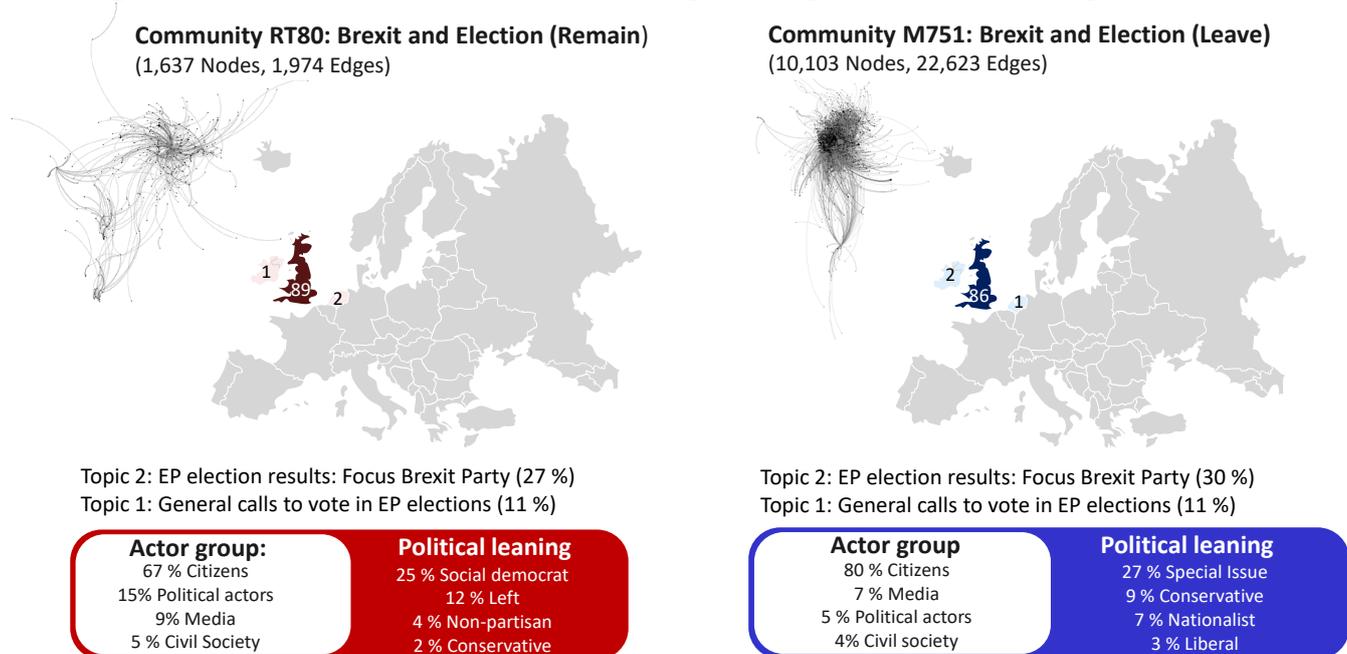
Community RT80: Brexit and Election (Remain)
(1,637 Nodes, 1,974 Edges)

Community M751: Brexit and Election (Leave)
(10,103 Nodes, 22,623 Edges)

Topic 2: EP election results: Focus Brexit Party (27 %)
Topic 1: General calls to vote in EP elections (11 %)

Actor group:	Political leaning
67 % Citizens	25 % Social democrat
15% Political actors	12 % Left
9% Media	4 % Non-partisan
5 % Civil Society	2 % Conservative

Topic 2: EP election results: Focus Brexit Party (30 %)
Topic 1: General calls to vote in EP elections (11 %)

Actor group	Political leaning
80 % Citizens	27 % Special Issue
7 % Media	9 % Conservative
5 % Political actors	7 % Nationalist
4% Civil society	3 % Liberal

Note. Top topics are the two topics with the highest expected probabilities from STM accumulated on the community level. Actor characteristics (group, pol. leaning, country) are based on the manual coding of user profiles. Percentages refer to coded actors only. (Up to) the five highest values above one percent are reported per variable. RT refers to the retweet network, M refers to the mention network. Values indicate communities as assigned by the multilevel algorithm.

Figure 20 shows two examples of opposing communities in terms of Brexit discussion in the 2019 EP election debate. On the left, community RT80 from the retweet network shows a citizen-driven discussion of the Brexit debate from the Remain-perspective. Citizens account for 67 percent of actors in this community, followed by political actors (15 %), media (9 %), and civil society (5 %). Most actors in this community come from the UK (89 %). The political leaning of actors in this community is rather left-oriented, mostly supporting social-democratic (25 %) or left (12 %) beliefs. The most important topics are the discussion of the EP elections results with a focus on the Brexit party (Topic 2, 27 %) and general voter mobilization for the EP elections (Topic 1, 11 %). In this community, attention and communication activity are distributed relatively diversely across actor groups. For example, among the nodes with the highest indegree centrality are politicians from the *Labour* party (e.g. @James_Beckles, @FloEshalomi) as well as media actors, scientists, and even private citizens. In terms

communication activity as measured by outdegree centrality, private citizens and activists with clear Remain-related positions play a crucial role (see Table 36 in Appendix E).

On the right of Figure 20, community M751 from the mentions network exemplifies a large citizen-driven pro-Brexit (i.e. Leave) community with 10,103 nodes and 22,623 edges. Citizens are strongly overrepresented in this community (80 %), while all other actor groups play only minor roles. The most important nodes in this community in terms of indegree centrality include *Tice Richard* (@TiceRichard), *Nigel Farage* (@Nigel_Farage), the party account of the *Brexit Party* (@brexitparty_uk), as well as pro-Brexit civil society organizations (e.g. @ActionBrexit). Furthermore, the communication activity in this community as indicated by high outdegree centrality is mostly driven by private citizens with anti-EU and pro-Brexit references in their Twitter profiles. The pro-Brexit stance of this community becomes apparent not only by the issues discussed, but also by the diversity of political leaning. Special issue actors (23 %) (including the Brexit party with its single-issue manifesto in the 2019 EP elections) are the most important group regarding political leaning, followed by conservatives (9 %).

As for the Remain-focused community RT80, the most important topics are EP elections results with a focus on the Brexit party (Topic 2, 30 %) and general voter mobilization for the EP elections (Topic 1, 11 %). This indicates that communities with different actor constellations can discuss the same issues with completely different outcomes in terms of communicative interactions and network structures. It also shows that actors with contrasting political views tend to talk about the same issues without talking to each other, as research on the fragmentation and polarization of online communication indicates (Heft et al., 2017; Himelboim, Smith, & Shneiderman, 2013).

Figure 20 is an example of a national manifestation of a European integration conflict line. The Remain-side includes those in favor of EU membership of the UK, while the Leave-side of the conflict describes those in favor of the UK leaving the EU. This is in line with previous research on communication about the Brexit referendum on social media platforms. For example, the opposing sides of the Brexit-conflict are shown to reflect in the use of different hashtags on Twitter (Bossetta et al., 2017, p. 67). Additionally, important Brexit-related events are shown to result in high levels of Twitter communication and the topics discussed reflected the arguments of the opposing sides (Del Gobbo et al., 2021, p. 687).

Overall, the Brexit debate fulfills all cleavage criteria established by Bartolini and Mair (1990, p. 215): First, a divide based on the opinion about the EU and European integration has existed

for quite some time in the UK (Ramiro Troitiño, Kerikmäe, & Chochia, 2018, p. 59), which can, second, be considered to establish a sense of group identity (Veltri, Redd, Mannarini, & Salvatore, 2019, p. 29). Third, mobilization of the divide has changed the UK party system in so far as it resulted in the establishment of the *Brexit Party* (Dennison, 2020, p. 127). The Brexit Party was founded on January, 20, 2019 in order to campaign for a fast exit from the EU after the Brexit referendum in 2016 (Dennison, 2020, p. 127). In the 2019 EP elections, the Brexit Party with Farage as lead candidate won 30.5% of votes from UK voters after Theresa May and the Conservatives had lost three parliamentary votes on the Brexit deal with the EU (Dennison, 2020, pp. 127–129). The Brexit Party campaigned extensively on social media and in Leave-dominated constituencies in the UK despite not providing a manifesto or policy positions (Tournier-Sol, 2021, p. 386). After the UK finally left the EU on January 31st 2020, the party was renamed to *Reform UK* and changes its formerly single-issue manifesto (i.e. leaving the UK) to a manifesto strongly aligned with radical right and populist values (e.g. Zulianello, 2020, p. 332). However, Reform UK has not won any seats in any national elections yet. It remains to be seen, whether the party can succeed to mobilize voters on other conflicts now that the Brexit did happen, and the original single-issue party needs to find new conflicts to mobilize on that are not already mobilized by other existing parties in the UK party system (e.g. UKIP). Thus, following Treib (2021), Brexit can be considered a national manifestation of the conflict between those in favor of European integration and those in favor of European integration.

Nexit. Very similar patterns to those of the Brexit cleavage become salient in a second country in the #EP2019 debate on Twitter. In the Netherlands, separated communities of left-wing actors and right-wing actors in favor of the so-called *Nexit* (i.e. demands for a Dutch referendum about its EU membership) emerge in the community structure of the debate. An example community in which the Nexit debate becomes salient is community RT569 from the retweet network described in Figure 19 above. It has been pointed out that community RT569 can be interpreted as the demarcation or anti-European side of a European integration conflict. The emergence of a variety of right-oriented communities in which the discussion a Nexit features prominently (compare, for example communities Q572 from quote network and R1053 from the reply network in the online appendix) points towards strong anti-EU sentiments among Dutch citizens and right-wing politicians.

Additionally, the similarity of actor-issue constellations in the Brexit-Leave community (M751) and the pro-Nexit community (RT569) is striking. Both communities feature radical right politicians and parties among the most important actors in terms of indegrees, while the

communication is driven almost exclusively by private citizens with radical right stances as indicated by the nodes with the highest outdegrees. This does not only provide evidence for the importance of citizens' communication activity for the mobilization of right-wing voters and the spread of right-wing contents on social media platforms. It also shows that Euroscepticism is not only an elite phenomenon, but rooted in parts of society, as suggested by the results of Michailidou and colleagues' (2014) analysis of online news reports and user comments. Therefore, the salience of Nexit-related communities and debates in the #EP2019 Twitter debates emphasizes the emergence of a salient European integration conflict on the side of citizens in some countries.

7.2.3 Climate change and environmental policies: the emergence of a new conflict line?

Previous research has pointed to the potential of different positions about climate issues and policies to be mobilized in terms of conflict lines (Castro & Kammerer, 2021; Chinn, Hart, & Soroka, 2020; Hanusch & Meisch, 2022). For example, not only has the presence of political actors increased in climate change related news in the U.S. while the salience of scientists has decreased (Chinn et al., 2020, p. 119), also the vocabulary used by Republicans and Democrats to refer to climate change and environmental policies has become heavily polarized since 2011 (Chinn et al., 2020, p. 122). These results point towards a shift from a scientific towards a polarized political debate, which may indicate an emerging conflict line that could also emerge on the European level. Such an emerging environmental conflict is described to play out between a science-based climate-emergency side in favor of environmental protection and a right-wing populist side with aversion to change and science in favor of keeping the (technological and societal) status quo (Hanusch & Meisch, 2022).

In the Twitter debate about the 2019 EP elections, the STM results identified an (European) issue with a focus on climate and environmental policies (i.e. Topic 8: *Demand for changes in economic, trade, and climate policies*). This issue accounts for 6 percent of expected topic proportions in the Twitter communication and is thus the fourth most important issue in the #EP2019 debate. This is in line with the general importance of environmental issues in the 2019 EP elections (Ørsten & Vigsø, 2022, p. 150). Furthermore, the issue is mobilized and discussed primarily by green and left-wing actors.

Figure 21. Climate emergency: two example communities

Community Q1108: Parties' mobilization
(298 Nodes, 397 Edges)

Community RT111: Parties' and citizens' mobilization
(3,853 Nodes, 7,059 Edges)
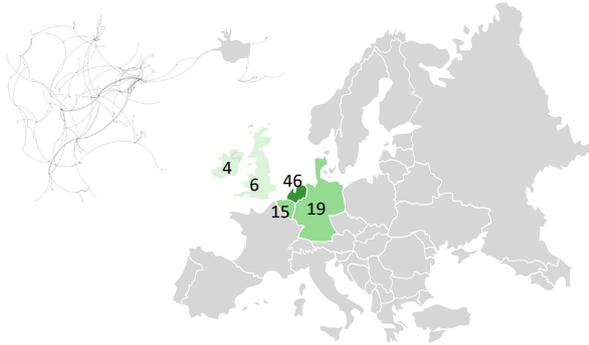
Topic 8: Demand for changes in economic, trade, climate policy (10 %)
Topic 5: Voter mobilization and Sunday question (9 %)

Actor group:	Political leaning
49 % Political actors	61 % Green
25 % Citizens	8 % Special Issue
11 % Civil society	6 % Non-partisan
11 % Media	3 % Social democrat
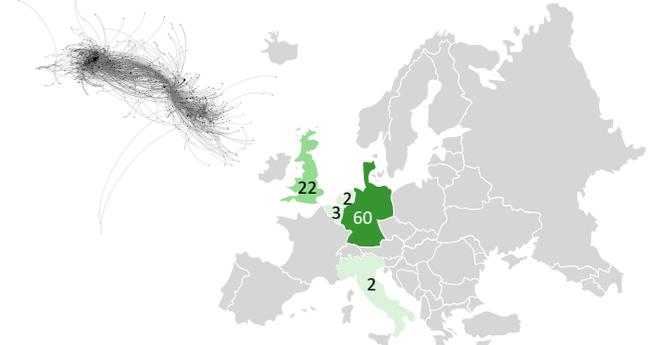
Topic 5: Voter mobilization and Sunday question (15 %)
Topic 8: Demand for changes in economic, trade, climate policy (12 %)

Actor group:	Political leaning
49 % Citizens	53 % Green
34 % Political actors	4 % Left
7 % Civil society	4 % Special Issue
5 % Media	3 % Non-partisan

Note. Top topics are the two topics with the highest expected probabilities from STM accumulated on the community level. Actor characteristics (group, pol. leaning, country) are based on the manual coding of user profiles. Percentages refer to coded actors per community only. (Up to) the five highest values above one percent are reported per variable. RT refers to the retweet network, Q refers to the quote network. Values indicate communities as assigned by the multilevel algorithm.

Figure 21 depicts two examples for communities in which climate related policies are discussed (Topic 8). Community RT111 from the retweet network shows a moderate-size community with 3853 nodes and 7059 edges. Political actors are overrepresented (34 %) in this community compared to their presence in the overall debate. The other actor groups are underrepresented compared to the overall debate, even though citizens still account for 49 percent of all actors in this community. The community is dominated by German actors (60 %), followed by the UK (22 %). The most important topics in this community are voter mobilization (Topic 5, 15 %) and the *demand for changes in economic, trade, and climate policies* (Topic 8, 12 %). The most important nodes with regard to indegree centrality in this community are almost exclusively political actors from Green parties. Nodes with the highest outdegree centrality are mostly private citizens. However, parties and individual politicians do also rank high with regard to outdegree, highlighting the importance of citizens and politicians alike for the mobilization of environmental issues (see Table 37 in Appendix F).

Community Q1108 from the quote network is a rather small community with 298 nodes and 397 edges. It is dominated by Green actors (61 %), followed by special issue actors (8 %) who mostly belong to women's rights and feminist organizations. Typical for quote networks, Q1108 shows a very elite-centered actor group constellation dominated by political actors (49 %) while citizens (25 %) are strongly underrepresented in this community. This also

becomes apparent when looking at the most important nodes in this community: the most important nodes in terms of indegree-centrality belong to the group of political actors. For example, actors with highest indegrees include the Dutch green party *GroenLinks* (@groenlinks), the *European Green Party* (@europeangreens), and the German green party *Bündnis90/Die Grünen* (@Die_Gruenen). Despite the elite-centered nature of quote-interactions on Twitter, some citizens are among the most active users in this community (i.e. highest outdegree-centrality), followed by the individual accounts of politicians (e.g. @TerryReintke, vice president of the Greens/EFA fraction in the EP) and activists. Overall, it becomes apparent, that climate-focused communities rely on an interaction between citizens and elite actors and a strong civil society involvement. Regarding topic distribution in community Q1108, *demands for changes in economic, trade, and climate policies* (Topic 8, 10 %) ranks first, closely followed by voter mobilization in the 2019 EP elections (Topic 5, 9 %). Even though both communities are dominated by actors from a specific country (i.e. Germany and the Netherlands, respectively), they show considerable transnationalization with regard to actor-constellations. This finding underlines the importance of climate related issues and policies for the Europeanization of networked public spheres.

Research on the politicization of climate issues indicates that the conflict evolves around different perceptions of time between *populist retrotopian* perspectives on the one hand and *climate emergency* perspectives on the other (Hanusch & Meisch, 2022, p. 889). Populist retrotopian stances on climate change and environmental protection are closely linked to right-wing populist narratives such as the heartland. Hanusch and Meisch (2022, p. 890) describe the supporters of this side as older, white, male, working-class individuals with lower education who support right-wing populist parties and movements and are resistant to change. Conversely, climate emergency stances with regard to climate change and environmental protection are supported by well-educated, higher income, urban groups and individuals (Hanusch & Meisch, 2022, p. 893). Contrary to populist retrotopian supporters, those in favor of environmental protection can better embrace (social) change and scientific solutions to adapt to these social and environmental challenges due to their high levels of education. Their political leaning is described as heterogenous, including "on the one hand, mainstream liberal currents of the new social movements (feminism, antiracism, multiculturalism, environmentalism, and LGBTQI rights); on the other hand, the most dynamic, high-end 'symbolic' and financial sectors of the U.S. economy" (Hanusch & Meisch, 2022, p. 893). Even though the authors base their description on the case of the U.S., parallels to the political leaning of the actor constellation in the RT111 and Q1108 communities can be observed.

However, the analysis of actor-issue constellations in all communities with more than 100 nodes shows that only one side of a potential environmental conflict becomes salient in the 2019 EP election debate on Twitter. The community structure as well as the STM results (see Chapter 5.2) indicate the salience of pro-environmental protection stances, but do not indicate the emergence of an anti-environmental protection side in the #EP2019 debate. Also, actor-issue constellations do not reveal environmental protection being discussed by far-right and populist groups, as one might expect based on the results provided by Hanusch and Meisch (2022). In line with these results, however, the lack of a cross-ideological discussion of environmental protection reveals that those in favor of and those against environmental protection are indeed distinct social groups that do not engage in debates with each other. Additionally, Green parties as well as environmental movements such as *Fridays for Future* or *Extinction Rebellion* are on the rise in many countries around the world (Della Porta & Portos, 2021; Gunningham, 2019; Slaven & Heydon, 2020) and their mobilization translates into electoral support for Green parties in national elections (e.g. Germany, see Faas & Klingelhöfer, 2022, p. 1514) as well as in the 2019 EP elections, in which the Greens/EFA fraction gained 22 seats compared to the 2014 EP elections (Johansson, Novelli, & Wring, 2022, p. 3; see also R. Hoffmann, Muttarak, Peisker, & Stanig, 2022).

Thus, the missing salience of an anti-climate protectionist side in the context of the #EP2019 might be explained by the strategic decision of anti-environmentalist parties and movements to deliberately de-emphasized climate issues altogether in their Twitter communication. The mobilization strategies of the populist retrotopian side is described to depend on traditional political participation and thus electoral mobilization for right-wing and populist parties, while actors of the climate emergency side are considered to focus on decentralized and networked protest mobilization (Hanusch & Meisch, 2022, pp. 892–896). Social movement research has also repeatedly emphasized the importance of online communication and social media platforms for connective action and online mobilization of social movements (Bennett & Segerberg, 2012; Della Porta, 2013). Thus, the finding that the climate emergency side of an environmental conflict line becomes salient while the populist retrotopian side de-emphasizes the topic in the context of the 2019 EP elections is in line with existing research. This shows that the salience of conflict lines depends on the strategic mobilization of parties and movements (see Enyedi, 2005) and that this assumption holds for social media communication as well.

Furthermore, since the analysis focusses on Twitter communication for the 2019 EP elections, the absence of an anti-environmental mobilization of the conflict does not necessarily mean that

this mobilization did not exist in the election campaign at all. It just means that the mobilization of anti-environmental positions did not happen on Twitter and thus that both sides of the conflict are not necessarily mobilized on the same platforms using the same – or similar – communication strategies.

7.2.3 Catalonian secession: a national manifestation of the center-periphery cleavage

In addition to these two emerging European level conflict lines, the Catalonian cleavage became salient in the STM results as well as the actor-issue constellation of the community structure. The Catalonian cleavage has existed since the 18th century and emerged around the 'asymmetry' between political power and economic power in Spain and Catalonia (A. Castells, 2014, p. 280). It centers around the question of regional autonomy of the economically well-situated Catalonian region and the comparatively less well-situated South. The conflict plays out on a variety of socio-structural elements of identity and opinion formation (e.g. class, language, religion) (Miley & Garvía, 2019, p. 1). The contemporary upsurge of the conflict has gained momentum in 2012 and has seen considerable mobilization since then, which has resulted in two unconstitutional referendums (November 2014 and October 2017) of Catalan authorities, which have been answered with repression by Spanish authorities (Miley & Garvía, 2019, p. 3).

Figure 22. Catalonia conflict: example communities

Community RT865: Spanish citizens' discussion of election and Catalonia (6,162 Nodes, 11,310 Edges)

Topic 9: Spanish parliamentary elections and catalonia conflict (29 %)
Topic 8: Demand for changes in economic, trade, climate policy (7 %)

Actor group:	Political leaning
87 % Citizens	40 % Ethnic minorities
5 % Political actors	2 % Left
4 % Civil society	1 % Nationalist
2 % Media	53 % undefined

M428: Civil societies' discussion of Spanish election and Catalonia (818 Nodes, 2,116 Edges)
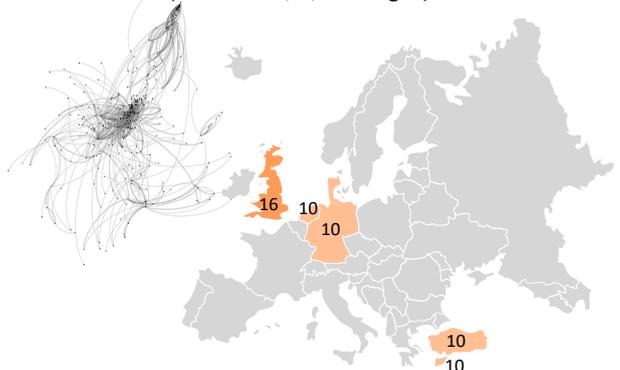
Topic 9: Spanish parliamentary elections and catalonia conflict (26 %)
Topic 5: Voter mobilization and Sunday question (10 %)

Actor group:	Political leaning
49 % Citizens	53 % Green
34 % Political actors	4 % Left
7 % Civil society	4 % Special Issue
5 % Media	3 % Non-partisan

Note. Top topics are the two topics with the highest expected probabilities from STM accumulated on the community level. Actor characteristics (group, pol. leaning, country) are based on the manual coding of user profiles. Percentages refer to coded actors per community only. (Up to) the five highest values above one percent are reported per variable. RT refers to the retweet network, M refers to the mention network. Values indicate communities as assigned by the multilevel algorithm.

Figure 22 shows two examples of communities in which the Catalonian conflict becomes salient in the 2019 EP elections. Community RT865 from the retweet network exemplifies an almost exclusively national debate of the Catalonian conflict among Spanish citizens. The political leaning of the actors in the community is mostly either undefined (53 %) or from the group of ethnic minority and regional actors (40 %). Following Klingemann and Budge's (2013, p. 64) definition, actors that belong to the family of ethnic minority and regional actors emphasize issues of decentralization (including amongst other things support for federalism or devolution, more regional autonomy for policy or economy, support for keeping up local and regional customs and symbols, and favorable mentions of special consideration for local areas) and social group politics. In line with the party family classification of the MARPOR-project (Klingemann et al., 2006, pp. 45–50; Volkens et al., 2019b), the political leaning of actors in favor of Catalonian independence is classified in this category, explaining the high percentage of this political leaning in community RT865. The most influential nodes with regard to indegree centrality in this community are mostly elite actors from politics and the media. For example, *Junts per Catalunya* (@JuntsXCat), a separatist Catalonian party, and *Joventut Nacionalista de Catalunya* (@JNCatalunya), a feminist, pro-European, separatist Catalonian youth party receive much attention in terms of retweets. Outdegrees and therefore communication activity in this community is driven by private citizens (see Table 35 in Appendix F), which can be explained by (communication and news reporting about) the Spanish parliamentary election results.

On the right, Figure 22 shows community M428 from the mention network as an example of a transnational discussion of the Spanish parliamentary elections and Catalonia conflict. The discussion in this community is dominated by civil society (38 %) and citizens (42 %) from a variety of countries including the UK, Germany, and Turkey. Furthermore, actors' political leaning aligns with the left side of the political spectrum (left, Green, social democratic). A closer look at the most important nodes in this community reveals that civil society actors play a crucial role, both with regard to attention achieved (i.e. indegree) as well as communication activity (i.e. outdegree). One example for this is *Human Rights Watch* (@hrw), which ranks among the top ten accounts for both centrality measures. Furthermore, and contrary to community RT865, it is striking that – apart from Humans Rights Watch – it is mostly accounts of individual activists and private citizens that rank highest in this community. Thus, this community exemplifies the importance of social media platforms for the connective action and transnational organization of social movements and NGOs (Bennett & Segerberg, 2012; Della Porta, 2013).

The discussion of the 2019 *Spanish parliamentary elections and the Catalonia conflict* (Topic 9) is the most important topic in both example communities. However, *demands for changes in economic and trade policies* (Topic 8) also play an important role. This can be explained by the fact that the conflict around Catalonian secession is closely linked to the question of economic stability and autonomy of the wealthy Catalan region, which has even increased since the financial crisis (Miley & Garvía, 2019, p. 3). According to Antonio Castells (2014, p. 279), Catalonia leads the Spanish economy with regard to the gross domestic product (GDP) per capita, which is 20 percent higher in Catalonia than is the Spanish average, as well as in the tourism sector. Based on original survey data, Miley and Garvía (2019, p. 7) show that more than 40 percent of citizens support Catalonian independence. Next to economic reasons to support secession, the authors show that identity-based reasons play a major in the support for Catalonian independence (Miley & Garvía, 2019, pp. 9–10).

The conflict about Catalonian secession is discussed by Lispet and Rokkan (1990) as a national manifestation of the center-periphery cleavage. It became salient in the discussion about the 2019 EP elections due to its proximity to the Spanish national elections in April 2019. This indicates mutual effects between European and national campaigns and issue agendas. Research on EP elections has repeatedly stressed the second-order nature of European elections in the shadows of national elections (Reif & Schmitt, 1980; Schmitt, 2005). However, the salience of the Spanish parliamentary elections and the Catalonian cleavage in the #EP2019 suggests that issues of societal relevance are discussed from national as well as European perspectives. This supports previous research on the importance of crises and conflict as drivers of Europeanization (Heft, 2017; Hutter & Kriesi, 2022; Voltolini, Natorski, & Hay, 2021) and shows that national conflicts can act as drivers of Europeanization – at least when national events are discussed in connection with European events such as the EP elections. Second, national elections may increase the salience of European elections on the side of citizens – at least when national and European elections occur in close proximity to each other. Finally, the clear-cut emergence of the Catalonian conflict in the community structure shows that communicative interactions on Twitter and the resulting community structures can not only depict emerging conflict lines but also long-lasting cleavages. This emphasizes the usefulness of community detection and the analysis of actor-issue constellations for the investigation of cleavages as well as the significance of direct communication on social media platforms based on the strategic decisions of different actors that results in specific network structures.

With regard to the Europeanization of the 2019 EP election debate on Twitter, the Catalonian cleavage draws attention to actors from various EU countries. For example, community M428

in the mention network depicted in Figure 22 shows a transnational discussion of the 2019 Spanish parliamentary elections, including actors from Germany, the Netherlands, UK, and other countries. Civil society actors (38 %) are highly overrepresented in this community compared to their overall presence in the #EP2019 debate. Furthermore, in terms of political leaning, actors in this community mostly come from the left of the political spectrum. Spanish actors are not present in this community, indicating that the Catalonian conflict triggered cross-national debates and attention.

Summary

Summing up, a variety of (emerging) conflict lines become salient in the community structure of the #EP2019 debate on Twitter. First, a European integration conflict emerges as a divide between left-to-center oriented, transnational communities in which European policies are discussed and potential voters are mobilized on the pro-European integration side and right-wing national communities without many transnational connections on the Eurosceptic side. This corresponds to contemporary discussions about increasing politicization of European integration as a result of growing Eurosceptic support and sentiments in the EU (e.g. Hutter & Kriesi, 2019; Treib, 2014, 2021). The specific actor-issue constellations with left-oriented and strongly Europeanized communities on the pro-European integration side and nationally confined right-wing communities in many countries on the anti-European integration side reflect the specific communication strategies of the two sides.

The Brexit referendum has sparked the emergence of a national manifestation of the European integration conflict in the UK. The Brexit conflict has mobilized many people on both sides of the debate, which results in a variety of *Remain* and *Leave* communities across all interaction networks. The UK's referendum to exit the EU has sparked a polarized debate ever since it was first demanded and Europeanization research usually finds more skeptical positions towards and evaluations of the EU in the UK (e.g. Adam & Maier, 2011). However, it is unclear how the cleavage is going to play out in the future, now that the UK has left the EU and the Leave supporters have lost their ground for mobilization.

Second, demands for climate policies and environmental protection emerge as distinct communities in the debate. Specifically, environmental policies are discussed in left-oriented and transnationally connected communities, which fits Hanusch and Meisch's (2022) description of well-educated, progressive, left-to-liberal climate emergency-supporters that trust science and scientific solutions for climate protection. Since the importance of environmental protection is likely to increase even further in the near future, the conflict is

likely to become more politicized and mobilized by those in favor of climate protection as well as by its opponents. Thus, even though the community structure of the 2019 EP election debate on Twitter presents indicators for the debate about environmental protection as a contemporary conflict line on the European level, it is still unclear how exactly the debate and its mobilization will turn out.

Third, the conflict around Catalonian secession as a national manifestation of the center-periphery cleavage described by Lipset and Rokkan (1990) becomes salient in the #EP2019 Twitter debate. The salience of a national cleavage in the context of the 2019 EP elections shows that issues and conflicts on the national level can affect EP elections as suggested by research on the second-order nature of European elections (Hix & Marsh, 2011; Reif & Schmitt, 1980; Schmitt, 2005). Furthermore, it shows that national cleavages can foster Europeanization in the form of transnational.

The analysis shows that for some conflicts (i.e. Catalonian secession and environmental protection) only one side becomes salient in the Twitter debate about the 2019 EP elections. This indicates that actors deliberately choose different communication channels for specific mobilization and communication purposes and these strategic choices result in community structures that can reflect (emerging) cleavages in online communication. This points towards the importance of actor-centered approaches to Europeanization and the formation and mobilization of conflict lines on social media platforms (Enyedi, 2005). The analysis shows that community detection algorithms are useful to find established as well as potentially emerging conflict lines in online communication settings when combined with an analysis of actor-issue constellations. This offers new possibilities for the analysis of cleavages and conflict lines in political and communication research.

8 Discussion and Conclusion

This dissertation discusses the advances of networked public spheres and social media platforms and investigates their impact on Europeanization of communicative interactions, their potential for increasing the democratic legitimacy, and the emergence of new European level conflict lines. Social media platforms such as Twitter allow direct communication between different actor groups, provide feedback options, and enable the inclusion of non-elite voices in public debates. This may lead to transnational communication flows between different actor groups and provide the preconditions for an increase in the democratic legitimacy of the EU. However, it may also lead to the emergence of new European level conflict lines when

politicization increases and discussions about issues and policies remain confined to subgroups of like-minded actors (collective as well as individual). Starting from the assumption that networked public spheres constitute an interconnection of various issue publics on the web that are subject to constant change based on actors' communicative action, Europeanization, democratic legitimacy through communicative interactions between politicians and citizens, as well as the emergence of conflict lines in online communication can all be analyzed using network analytical approaches.

Summarizing the theoretical considerations

Europeanization of networked public spheres. The Europeanization of networked public spheres is conceptualized as a multi-dimensional process (Wessler et al., 2008, p. 25), in which actors and common issues become salient across various EU member states (Eder & Kantner, 2000) and transnational communicative interactions (Koopmans et al., 2010; Koopmans & Erbe, 2004) occur. This process is driven by politicization and crises, as recent examples such as the Euro crises or Covid19 demonstrate. Important events such as summits or EP elections may also increase Europeanization (Heft, 2017; Saxer, 2006; Tobler, 2010). Since the communicative interactions on social media platforms create digital links through various options to address users and share contents, Europeanization can be measured as the number of links between actors from different EU member states (i.e. horizontal Europeanization), national and European actors (i.e. vertical Europeanization), and supranational European actors (i.e. supranational Europeanization) as well as by investigating the salience of similar issues for users from various EU member states (i.e. convergence of issue agendas).

Responsiveness and accountability through communicative interactions. Social media platforms provide the opportunity for direct communication between citizens and political actors, which may increase the democratic legitimacy of the EU on the input and output level (Bühlmann & Kriesi, 2013; Schmidt, 2013). On the input level, citizens can address national and European politicians directly and put issues of personal and societal importance on the agenda, which provides an important precondition for the responsiveness of national and European politicians to the demands of their electorates (Bühlmann & Kriesi, 2013; Meijers et al., 2019; Rasmussen, 2017). Social media platforms offer the opportunity for communicative interactions between citizens or civil society actors and European politicians. This creates communicative preconditions for the responsiveness of European politicians to the input of citizens and civil society actors. Furthermore, national politicians can act as intermediaries between citizens and European politicians and are thus also considered important targets of

citizens' input (Della Porta & Caiani, 2009, p. 52). On the output level, social media platforms have the potential to increase accountability, because they provide the opportunity for citizens to observe politicians' actions and hold them accountable publicly as well as for politicians to directly communicate with citizens. Politicians' output and politician-citizen interactions on Twitter and other platforms are thus important preconditions for democratic legitimacy on the output level (Bovens, 2007; Bühlmann & Kriesi, 2013; Rasmussen, 2017). Further problems with the democratic legitimacy of the EU remain (e.g. related to the lack of electoral accountability of EU institutions), which cannot be enhanced simply through communicative interactions on social media platforms.

European level cleavages in networked public spheres. Scholars have discussed the emergence of new conflict lines evolving around the question of further European integration or national sovereignty (Hooghe & Marks, 2018; Kriesi et al., 2006; Kriesi et al., 2008; Treib, 2021) resulting from increasing politicization of the EU and a growing "concerning dissensus" (Hooghe & Marks, 2009, p. 5). Social media platforms offer the opportunity to engage in communicative interactions with like-minded individuals, which may increase the possibility for contemporary conflict lines to turn into full-fledged cleavages. Based on the assumptions, that (1) communicative interactions on social media platforms are the result of actors' strategic decisions and (2) that conflict lines are strategically mobilized by political parties and challengers (Braun & Grande, 2021; Enyedi, 2005; Evans, 2010; Stier et al., 2018), it is argued that emerging as well as existing conflict lines can become salient in the actor-issue constellation in online debates. Conflict lines that are mobilized in the context of the #EP2019 can therefore be observed in the communicative interactions and resulting community structures on Twitter based on the actor-issue constellation in the cohesive subgroups of the debate and the politicization of issues. This provides insights into which conflict lines are mobilized in which subgroups of society and thus not only indicates important issues and policy positions for different actor groups, but also offers insights about who engages in active mobilization of these issues and policy positions.

Summarizing the empirical results

To analyze the Europeanization (RQ 1), potential for democratic legitimacy (RQ 2), and emerging conflict lines (RQ 3) in networked public spheres, a combination of network analysis, structural topic modelling, and a manual coding of user profiles is used. The Twitter communication about the 2019 EP elections is chosen as a case study for several reasons. First, Twitter is an important venue for political communication (Bossetta, 2018, p. 472; Jungherr,

2016, p. 72). Second, its open nature of communication in terms of network structures as well as contents encourages communicative interactions between users and thus increases the possibility to find a sufficient amount of Europeanization for subsequent inferential analysis of tie-formation. Third, the possibility to query the API for hashtags used in tweets provided an opportunity for data sampling without prior specification of certain accounts or countries and thus, in theory, allows to analyze truly transnational debates.

The results for the three research questions can be summarized into five key findings, which will be presented and discussed in the following.

(1) Social media platforms provide important communication channels for transnational communication as indicated by significant levels of Europeanization in the #EP2019 debate on Twitter.

First, based on the descriptive results for RQ 1, considerable levels of Europeanization can be observed in the Twitter debate about the 2019 EP elections in terms of vertical and horizontal communicative interactions as well as salience of European issues. For example, 31 percent of all edges in the #EP2019 debate have a European scope (vertical, horizontal, or supranational), while 45 percent have a national scope. The results also indicate the level of Europeanized communicative interaction initiated differs between actor groups as well as communicative interactions. This indicates that different actors do indeed use different communicative interactions on Twitter strategically.

Civil society actors have been identified as substantial initiators of Europeanized communication with generally the highest proportions of communicative interactions addressing the European level. Their degree of Europeanized communicative interactions ranges from 47 percent (retweet network) to 60 percent (quote network). At the same time, they show lower tendencies for actor group-related homophily than elite actors from media and politics. Politicians have also been shown to communicate with a European scope frequently. Their degree of Europeanized communication varies between 35 percent (retweet network) and 49 percent (quote network). They show significant tendencies for homophilic communication, which indicates that they do not interact with non-elite actors often. Media as well as citizens show lower degrees of Europeanization in their initiated communicative interactions. Media actors are more important as authorities in the debate, meaning that their contents are quoted or retweeted frequently by others, but they hardly initiate Europeanized ties themselves often. These patterns generally hold for all interaction types, with the reply network being overall less Europeanized due to its strong language dependency.

170

Also, in terms of Europeanization through issue salience, the results of the structural topic modelling show that European issues achieved considerable salience in the #EP2019 debate: 13 out of 25 topics that emerged from the STM address European issues and taken together account for 58 percent estimated topic proportions. Policies related to monetary politics as well as EU-level competencies such as environmental protection achieved considerable salience. EP election campaigning and results account for the high proportion of Europeanized topics. These results indicate slightly higher levels of Europeanization than have been found for offline news reporting in previous studies. Wessler et al. (2008, p. 46) find that about 20 percent of news reporting in five European countries showed a European geographical focus between 1982 and 2003. The visibility and inclusion of citizens in the debate has clearly increased through Twitter's potential for direct communication: while previous research has found that only 5 to 20 percent of actors that become salient in European news reporting are citizens (Walter, 2017a, p. 127), citizens participated extensively in the #EP2019 and make up the largest actor group.

> *(2) Even though elite actors from media and politics still occupy the most important positions (i.e. authorities and brokers) in networked public spheres, civil society and ordinary citizens gain salience in the debate as intermediaries and as providers of political input, respectively.*

Politicians and media actors mostly occupy the central positions in all four interaction networks and thus act as authorities in the #EP2019 debate. Elite actors from media and politics show linking strategies that focus particularly on other media and political actors in all four networks. This indicates persisting power relations in online communication settings and on social media platforms (M. Castells, 2011, p. 773; Freedman, 2015). However, citizens have been shown to be important hubs (i.e. as providers of input and attention to the political level), but they only receive limited attention themselves. Civil society actors emerged as important actors in the debate about the 2019 EP elections, especially regarding topics related to European policies such as environmental protection and social policies.

Even though the proportion of Europeanized communication is higher on Twitter than was reported for traditional news reporting (Adam, 2007a; Koopmans & Erbe, 2004; Walter, 2017a; Wessler et al., 2008), language- and country-backgrounds have been found to be the most important predictors for tie-formation on Twitter. This shows that national ties are still more likely to occur than transnational ties, even in the context of important European events such as EP elections. The ERGM results also suggest that homophily-effects related to actor group and political leaning have an impact on tie-formation, which indicates that they may override

country- and language-effects when cross-group or cross-ideological communication is of strategic importance for certain actors. While language effects might decrease in the future due to increasing language skills (Eurostat, 2023) and real-time digital translation options, country effects are presumed to prevail – at least as long as European elections are still confined to the individual member states.

Furthermore, the actual outplay of Europeanization depends on the digital architectures of the specific platform and their affordances with regard to actors' strategic goals. Communicative interactions on Twitter are the result of strategic decisions to communicate about specific issues and to address certain actors (Enyedi, 2005; Stier et al., 2018). Thus, Europeanization of networked public spheres is no longer the result of journalistic gatekeeping and selection criteria, but the result of deliberate decisions to emphasize or de-emphasize certain issues in online debates (Braun & Grande, 2021, p. 1137; Hutter & Grande, 2014, p. 1016).

(3) Politician-citizen interaction on Twitter is limited, even in times of EP elections and voter mobilization.

Although citizens do provide input to the political level and can thus be considered a form of social power (Habermas, 2006, p. 418), European politicians are generally not likely to reciprocate these communicative interactions or initiate communication towards citizens. For example, only 7 percent of incoming mentions from citizens or civil society actors are reciprocated by European politicians. Taking output from politicians to citizens or civil society actors into consideration as well, the picture changes only slightly: while citizens receive even less ties initiated by European politicians compared to reciprocated ties (ranging between 3 % and 5 % across networks), civil society actors are addressed somewhat more frequently (ranging between 6 % and 12 % of ties). While this is in line with previous research on the "broadcasting" instead of interactive nature of politicians' Twitter use and their confinement to the "Brussels bubble" (Haman et al., 2023, p. 416), it neglects Twitters potential to improve democratic legitimacy of the EU through direct communication between politicians and citizens. European politicians do not (yet) seize the opportunity to improve output legitimacy through reciprocated and direct communicative interactions with citizens. Recent research suggests that this might be because politicians adjust their issue agendas according to citizens' input instead of directly responding to the input via communicative interactions such as replies (Schöll, Gallego, & Le Mens, 2023). While this may provide a form of indirect responsiveness, citizens need to perceive subsequent communication in order to recognize the shift in communicated issues. Reciprocating direct communication through mutual communicative ties, however, provides a

more direct form of feedback and may therefore provide more favourable preconditions for democratic legitimacy to increase.

In networked public spheres, citizens and civil society actors get the opportunity to directly address politicians from the national and the European level, but especially ordinary citizens rarely receive feedback from politicians or are addressed by politicians. Thus, for Europeanization as well as the output-side of the EU's democratic legitimacy to increase, more communicative interaction with and acknowledgement of citizens' political input is necessary.

(4) The national level can act as an intermediary for responsiveness and accountability of the European level.

The national level has been found to function as an intermediary level for the European level, since citizens address national politicians more frequently, even in clearly Europeanized instances such as the EP elections. While this might be related to the technocratic and distant nature of the EU (Hurrelmann & Wagner, 2020; Özdemir & Rauh, 2022), it might also be an artefact of the still nationally bounded EP elections despite the introduction of European Spitzenkandidaten (Gattermann & de Vreese, 2017; Hobolt, 2014).

Citizens address politicians from their own country about twice as often as politicians from the European level. These ties are more frequently reciprocated. Even though direct communicative interactions from politicians to citizens are rather infrequent, the national level may act as an intermediary for communication between citizens and politicians. In line with previous research, results indicate that national actors are addressed more frequently by citizens, which might be because national politicians are "giving the EU a face and […] because citizens have little direct experience with the EU" (Adam & Maier, 2011, pp. 432–433). National level politicians can act as intermediaries for the for the European level when citizens address their EU-related concerns to national level politics.

Democratic legitimacy may also be established when citizens and politicians talk about the same issues in their public communication and citizens therefore perceive that politicians attribute importance to same issues as themselves. Politicians can perceive public opinion about an issue (on Twitter or other online and offline platforms) and address it in their tweets without directly communicating with other actors. The similarity of citizens' and politicians' issue agendas of citizens and politicians communicated on Twitter can serve as an indicator of this indirect form of responsiveness and accountability. The results for the similarity of topic agendas provide a mixed picture: while citizens and politicians show quite different topical foci in their Twitter communication about the 2019 EP elections. These topic agendas of civil

society actors correlate quite strongly with those of political actors, indicating that organized civil society actors succeed in putting important issues on the public agenda and that these issues are also publicly discussed by political actors.

The importance of media actors as intermediaries for input and output legitimacy has been emphasized repeatedly for traditional offline communication settings: media condense public opinion and thus provide the political level with information on the input side of democratic legitimacy (responsiveness function, Koopmans & Erbe, 2004, p. 98). Media also inform citizens about democratic decision-making processes and thus observe the political level and their outputs (accountability function, Koopmans & Erbe, 2004, p. 98). If a topic is (mostly) ignored by media actors and positions of elite actors are not presented, society lacks the opportunity for informed control and electoral decisions; if, conversely, demands and positions of society are neglected and not sufficiently presented in the media, politicians cannot be responsive to those actors (Adam, 2007b, p. 355). Media actors' importance as authorities in the retweet and the quote network shows that they still fulfill this function as information providers on social media platforms.

> (5) *Eurosceptic voices and sentiments drive the politicization of the EU, which increases Europeanization on the one hand, but leads to the emergence of a European integration cleavage on the other hand.*

Finally, Eurosceptic issues and actors did achieve significant salience in the #EP2019 debate. On the one hand, this results from the importance of the Brexit negotiations in the 2019 EP elections. On the other hand, Eurosceptic voices and political apathy became salient in a variety of issues and across several countries in the debate, showing that this problem is not exclusive to the UK. An example for strong Eurosceptic discourse in the context of the 2019 EP elections comes from the Netherlands, where calls for a *Nexit* (i.e. a Dutch referendum about leaving the EU as in the case of Brexit) became salient. Additionally, the combination of community detection and analysis of actor-issue-constellation in the resulting clusters shows some right-wing clusters with strong national foci as well as issue salience emerged in the debate. For example, exclusively right-wing communities become salient for Finland, France, Germany, Ireland, Italy, the Netherlands, Sweden, and the UK.

The prevalence of these many right-wing clusters across various EU member states indicates growing dissensus with the EU. The emergence of a European integration cleavage which posits a pro-EU side against an anti-EU or a Eurosceptic side has been discussed by many scholars and under a variety of names (e.g. Kriesi et al., 2006, p. 922; Treib, 2021, pp. 182–183). The

data for the 2019 EP election debate on Twitter clearly reveals a European integration cleavage emerging as densely connected subgroups of communication between pro-EU voices from the left of the political spectrum and various EU member states on the one hand and nationally confined clusters of right-wing actors without many transnational connections on the other hand. Additionally, a variety of Eurosceptic topics became salient in the debate, including demands for a Dutch Nexit (Topic 24), Eurosceptic sentiments in Ireland (Topic 6) and general political apathy (Topic 21). This indicates the relevance of Eurosceptic voices on the European level.

Furthermore, the salience of environmental protection as a topic discussed by green and left-wing actors from various EU countries on the one hand, but completely ignored (on Twitter) by right-wing and nationalist voices may indicate an emerging environmental conflict line. A similar conflict line is also proposed by Hanusch and Meisch (2022, pp. 889–890), who differentiate between *populist retrotopian* perspectives, which are closely linked to right-wing populist narratives mobilized by older, white, male, working-class individuals with lower education who support right-wing populist parties and movements and are resistant to change on the and hand, and *climate emergency* perspectives on the other hand, which are supported by well-educated, higher income, urban, politically heterogenous groups and individuals who embrace social change and scientific solutions (Hanusch & Meisch, 2022, p. 893).

The absence of an anti-environmental protection mobilization in the context of the 2019 EP elections could either indicate a deliberate de-emphasizing strategy of the right-wing anti-environmental protection side during the EP election campaign or that those against environmental protection did not use the #EP2019 debate on Twitter to mobilize for their positions. Looking at evidence from individual EU member states and national elections, research suggests that an anti-environmental protection mobilization by radical right parties did take place in, for example, Germany (Forchtner & Özvatan, 2022), Sweden (Hultman, Björk, & Viinikka, 2019), or Poland (Marcinkiewicz & Tosun, 2015; Żuk & Szulecki, 2020). Additionally, even though green parties and movements have mobilized on this issue since the 1970s (Kitschelt, 1989, p. 1), votes for Green parties in national elections stagnate in many member states (Schminke, 2022), while EP election results indicate electoral success for Green parties on the European level (Han & Finke, 2022; Pearson & Rüdig, 2020). Taken together, the analysis of #EP2019 communication networks provides evidence for two (emerging) conflict lines on the European level: a European integration conflict and an environmental protection conflict.

Theoretical and empirical implications

These empirical results foster several theoretical and practical implications with regard to (1) Europeanization of (networked) public spheres, (2) democratic legitimacy of the EU, and (3) European conflict lines, which will be discussed in the following.

Europeanization. Social media platforms have fundamentally changed the nature of public communication by allowing direct communication from and to virtually everyone with access to the Internet (Benkler, 2006; Chadwick, 2013). This especially provides citizens and political challengers (e.g. social movements) without many resources with the possibility to put issues of societal importance on the agenda and publicly address political actors to hold them accountable for their political decisions. Second, it makes communication across borders easy and fast, which results in increasing Europeanization. The concept of vertical and horizontal Europeanization by Koopmans and colleagues (Koopmans & Erbe, 2004; Koopmans & Statham, 2010b) provides a network approach for the analysis of the scope of communicative interactions on social media platforms. Different interaction types on social media platforms create actual digital links, which can be observed and analyzed for their scope easily.

In order to account for the direct communication by individual users on social media platforms and how their strategic communication may lead to varying degrees of Europeanization in different contexts, it is necessary to apply an actor-centered approach and to include actor characteristics in the analysis. The roles of different actors in the communication about the 2019 EP elections can be described with network analytical concepts. *Hubs* are those actors with high communication activity, which can be identified via outdegree centrality. Hubs have the potential to put European issues on the agenda and established many communicative interactions to other actors in a debate. Hub positions are often occupied by citizens and other non-elite actors in the 2019 EP election debate, indicating that not only elite actors occupy important positions in communication networks. *Authorities* are actors who receive much attention by others in a debate in terms of incoming ties, which can be measured as indegree centrality. *Brokers* are those users who connect structural holes in a network and are thus important for information diffusion across densely connected subgroups (Burt, 2004; Kleinberg & Lawrence, 2001). These actors are important in terms of Europeanization because they have the potential to foster information exchange between different countries or actors with varying political leaning. Results show that authority and broker roles are mostly occupied by political and media actors.

Since these network positions are the result of strategic direct communication (i.e. actual deliberate choices of actors whom to address in their communication), it is crucial to incorporate actors' characteristics in the analysis to understand communication strategies and how they result in specific network. Neuberger (2022, p. 77) argues in a similar direction when he proposes to combine social network analysis and public sphere theories with the concept of modes of interaction (i.e. diffusion, mobilization, conflict, cooperation, competition, and scandal) in order to better identify and describe the (strategic decisions for) communicative interactions between various actors in networked public spheres. This proposal is compatible with the argument brought forward in this dissertation, namely that the digital architectures (Bossetta, 2018) of social media platforms allow direct strategic communication between actors with diverging communicative aims and interests, which results in specific networks of communication.

Democratic legitimacy. Direct communication between European political actors and citizens of EU member states provides one possibility to improve the democratic legitimacy of the EU. While communication alone is not sufficient to make up for missing legitimacy mechanisms related to EU institutions and their elections, it offers the possibility to circumvent strongly nationally oriented mass media and news reporting (Schmidt, 2013, p. 13) by allowing direct communication between citizens (i.e. input) and European politicians (i.e. output). Whether this possibility for direct communication is exploited by citizens on the one hand and by political actors on the other hand can be analyzed using network analytical concepts. Reciprocated ties imply a mutual recognition of actors as equal participants in a debate and may therefore indicate favourable preconditions for improving the communication related aspects of democratic legitimacy (Shumate & Dewitt, 2008). However, communication is only one aspect related to democratic legitimacy and implementing reciprocated communication between citizens and politicians can only provide the precondition for input and output legitimacy. In addition, deficits related to a still nationally anchored electoral system in the EP elections as well as output in terms of decision-making need to be taken into consideration as well.

The introduction of the Spitzenkandidaten process was meant to increase voter turnout and make the position of Commission president more electorally accountable by – indirectly – attaching it to the outcome of the EP elections. However, this endeavor was not successful – not least because in 2019, neither of the appointed Spitzenkandidaten was elected President of the European Commission in the end. Gattermann (2020, p. 102) argues that a potential solution to the Spitzenkandidaten-dilemma could be to appoint Spitzenkandidaten who have already

served in the European Commission since these candidates could then be held accountable electorally for their previous political decisions through the voting behaviours of citizens. This may increase the importance of EP elections and in turn Europeanization dynamics as well as the democratic legitimacy of the EU.

Conflict lines. Results from Chapter 7 indicate that conflict lines do become salient in the community structures of online communication settings, when taking the actor-issue-constellations in the communities into consideration. Therefore, the combination of community detection, topic modelling and classification of actor attributes (especially political leaning) has proven useful to reveal underlying conflict structures in society, which become salient in communicative interactions based on actors' strategic communication (Enyedi, 2005). This provides a new approach to the study of politicization and (emerging) conflict lines for communication and political scientists. Combining politicization research and strategic communication with network theoretical concepts offers new insights into communication flows and content diffusion online as well as about campaign communication and selective exposure. Early identification of new conflict lines based on the mobilization strategies of different actors furthermore provides the opportunity for longitudinal analyses of how conflicts play out over time and under which conditions conflicts may turn into fully-fledged cleavages.

The emergence of the Brexit Party as a result of a European integration conflict on the one hand and new challengers (e.g. Friday for Future, Extinction Rebellion) as well as increasing electoral support for Green parties in many EU countries on the other hand point towards continued impacts of these new conflict lines on the European level. In order to identify in how far these conflict lines, turn into fully-fledged cleavages, further data about actual voting behavior need to be taken into consideration as well. A retrospective look at the election results of the 2019 EP elections indicates that the emerging communities and conflict lines do correlate with actual voting results in the EP elections (i.e. electoral success of the Brexit Party in the UK, increased electoral success for green parties across various EU countries; Dennison, 2020; Pearson & Rüdig, 2020). It remains to be seen how these conflict lines will turn out in the long run.

Practical implications

Finally, the question arises: what are the practical implications of the results of this dissertation for political actors trying to improve the democratic legitimacy of and satisfaction with the EU, but also for civil society actors, and citizens communicating online about issues of societal importance and trying to make their voices heard on the European level? And which strategies

may be implemented to deal with Eurosceptic and radical right voices that become salient on social media platforms?

With regard to communicative interactions as a precondition to increase the democratic legitimacy of the EU, the results indicate potential for improvement. While citizens do provide input through directly addressing political actors on the European and the national level, output by politicians that addresses citizens or civil society actors as well as reciprocating the incoming communicative ties from these actors are limited. This is especially true for the European level. One problem here is the missing condensation of communicative input from citizens. While social media platforms allow anyone to voice their concerns and address others in a debate, journalists do no longer control and channel information flows in networked public spheres (Bruns, 2005, 2009a). This makes mutual observations between the societal and the political system more difficult (McNair, 2000; Schmidt, 2013).

Therefore, European institutions and MEPs need social media savvy social media management teams who create contents that fit the digital architectures and affordances of specific platforms. If interesting, these contents will receive attention and interaction and thus be pushed by algorithms and, in turn, receive more attention. This kind of incidental exposure to news on social media platforms may increase political knowledge (Johannes Kaiser, Keller, & Kleinen-von Königslöw, 2021; Oeldorf-Hirsch, 2018). Additionally, to increase legitimacy not only through political output but also by reciprocating communication, social media management teams should implement feedback options if and when citizens do address European level institutions and politicians directly.

These communication strategies should focus on various platforms simultaneously in order to reach different user groups and inform users with different usage patterns about same information about important issues and events. Research on the usage of different social media platforms and uses gratifications of theses usages shows that Instagram and TikTok are more commonly used by younger generations than Facebook and Twitter (GWI, 2022). Furthermore, Twitter has been shown to be used for building weak ties and easy access to information (Phua, Jin, & Kim, 2017) while TikTok, for example, is associated mostly with gratifications related to entertainment and social interaction (Meng & Leung, 2021; Omar & Dequan, 2020; Vaterlaus & Winter, 2021).

An important example in this regard is the *This time I'm voting*-campaign of the European Parliament, which was introduced in the beginning of this dissertation. The campaign provides an example for a large-scale transnational campaign to inform and mobilize voters in the context

of the 2019 EP elections. It spanned all – at that time – 28 EU member states and a very diverse set of social media platforms. One crucial aspect of the campaign was that information was provided in all 24 languages of the EU and that national institutions were included in the campaign. There are examples of public service providers who have successfully expanded their communication to various social media platforms in order to target new audiences. One example is the German public service concept *funk*, which targets younger audiences between the ages of 14 and 29 by using actual social media influencers and young(er) hosts (Funk, 2023; Stark & Steiner, 2018) who know how to create contents that are informative as well as interesting for younger audiences and make use of the digital architectures and specific affordances of YouTube, Instagram, TikTok, and other platforms (Maurer, Spittka, & Benert, 2018, p. 34; Stollfuß, 2021).

The results also indicate that Eurosceptic and radical right voices did become salient as distinct issues in the debate as well as distinctive cohesive subgroups, in which radical right actors, usually mostly from a single country, engage in communication with likeminded others. Research shows that these cohesive subgroups with limited ideological diversity may lead to the emergence of echo chambers (Heft et al., 2017; Jonas Kaiser & Puschmann, 2017) and benefit the spread of disinformation (Diaz Ruiz & Nilsson, 2023; Törnberg, 2018). With regard to Eurosceptic voices and disinformation, one crucial step will be to foster the implementation of even better detection and deletion of hate speech and uncivil contents to hinder its circulation (Jardine, 2019; Mirrlees, 2021; Rauchfleisch & Kaiser, 2021). However, research on de-platforming strategies of radical right voices and users shows that such an endeavor shows limited success at best since radical right user groups have simply adopted different platforms such as Telegram, Gab, 4Chan, or 8Chan (e.g. Ali et al., 2021; Colley & Moore, 2022; Innes & Innes, 2021; Rogers, 2020; Schulze et al., 2022; Urman & Katz, 2022). Thus, increasing media literacy among the users of social media platforms is necessary. As Pfetsch has pointed out,

> political and societal actors, as well as the media, must take action and start education initiatives to strengthen digital media literacy. The public needs to know how the contents of digital information ecologies and hybrid media emerge, and users need knowledge and tools to distinguish between quality journalism and disinformation from unreliable sources. (Pfetsch, 2020, p. 108)

Empirical and methodological contributions

This dissertation contributes to the field of political communication research on various levels. First, the theoretical contribution offers a detailed discussion of how Europeanization of networked public spheres and the democratic legitimacy of the EU can be conceived in the age

of online communication and social media platforms and which roles social media platforms may play with regard to democratic legitimacy of the EU and the formation of (new) conflict lines. By systematically combining the state of research on Europeanization, legitimacy, and cleavages with existing knowledge on networked public spheres and social media platforms, it is shown that contemporary analyses of Europeanization need to put the actors involved in communication processes in the center of attention. By focusing more strongly on actor characteristics including specific goals as well as resources, Europeanization processes can be explained in more detail. The analysis shows that a combined analysis of actor characteristics, issues addressed, and network structures and positions may even detect political cleavages in online debates.

Second, the study provides a large-scale analysis of who is involved in the communication about the 2019 EP elections on Twitter, which actors and issues become salient in the debate, and who engages in communicative interactions with whom. This provides a comprehensive picture of actors, their communicative interactions, and issues discussed in the context of an important European event and how actor strategies and characteristics as well as communication infrastructures may result in Europeanized communication flows on social media platforms. By using a manual coding of a large proportion of user profiles to include actor characteristics into the analysis, this study is able to operationalize Europeanization as actual communicative interactions between users from different European countries as well as from the European and national levels (i.e. vertical and horizontal Europeanization). Previous research has often only approximated country background of users based on the language of tweets (e.g. Hänska & Bauchowitz, 2019), which is likely to overestimate actual Europeanized communication because English as a lingua franca is frequently used by users in various countries and some languages are used in more than one country (e.g. German). Additionally, most previous studies have either focused on interactions between users or on the issues communicated in European debates (Hänska & Bauchowitz, 2019; Ruiz-Soler, 2018). The combined analysis of actors and issues in this study offers the possibility to analyze actor-issue constellations and thus provides more nuanced results about differences between different actor groups and the Europeanization of their issue agendas. As such, this dissertation offers new insights into the nature of Europeanization on social media platforms and how it relates to strategic decisions of individual and collective actors to emphasize or de-emphasize certain issues and address others. In a similar vein, the dissertation provides a case study for how comparative communication research can be conducted in the digital age, in which national borders are no longer the primary boundaries for analyses. By using a transnationally shared

hashtag as the starting point to analyze a transnational debate, no selection of countries, issues, or actors for analysis had to be made prior to sampling.

Finally, the empirical analysis shows the advantages of combining computational methods and large data sets with more detailed manual content analyses, in-depth and qualitative approaches in order to fully understand complex phenomena. The combination of computational methods from the fields of natural language processing and network analysis on the one hand and a manual content analysis of selected user profiles has proven useful to provide an elaborate picture of complex theoretical concepts. Finally, and importantly, the dissertation provides new insights into the Europeanization of networked public spheres, the potential for the enhancement of democratic legitimacy of the EU by social media platforms, as well as the potential of social media communication to provide indicators for (emerging) cleavage structures.

From Twitter to network public spheres: how would results differ for other platforms?

Since Twitter is a platform with a specific, overly politically interested user group as well as a specific focus on political communication, results are likely to differ for other platforms. Thus, a discussion of how Europeanization, democratic legitimacy and conflict lines might play out on other platforms is relevant. Generally, the digital architectures of various platforms (Bossetta, 2018) as well as the affordances they create for individual users (Kreiss et al., 2018) have to be taken into consideration and will change the specific outplay of communicative interactions and transnationalization found on the platforms. For example, a platform's network structure (e.g. reciprocated or unreciprocated follow-relationships), its functionality (e.g. supported types of media) and its algorithmic filtering (e.g. reach of posts) have been found to affect which platforms are used for specific purposes (Bossetta, 2018, pp. 475–477).

Thus, it is expected that levels of Europeanization and the potential for democratic legitimacy through direct communication will differ on, for example, Facebook, Instagram, or TikTok due to their different digital architectures. Europeanization on these platforms is expected to be lower than on Twitter, at least if it was measured in exactly the same way. On Facebook, only public pages are open by default and allow for unidirectional follower-relationships while following private individuals requires reciprocated followership on both sides. On the other hand, texts can be up to 63,206 characters long on Facebook, allowing for more thorough discussions of important (political) issues (Bossetta, 2018, p. 482). This might lead to less reciprocity on Facebook and thus lower levels of Europeanization through communicative interactions between actors. At the same time Europeanization through the discussion of

important European issues and policies might be higher on Facebook since it allows users to write elaborate texts. Instagram is more strongly driven by visual (posts) and brief audio-visual contents (stories and reels), which have resulted in more entertainment-related uses of the platform and in order to achieve significant attention on Instagram, contents need to focus on visual aspects more strongly. This might make it difficult to discuss and elaborate on complex political topics (Kim & Kim, 2019; Pelletier, Krallman, Adams, & Hancock, 2020), which might make it less attractive for political actors to discuss certain (political) topics. In terms of network structures, apart from follower-structures contents mostly travel through hashtag use while users are only shown contents of pages and hashtags they actively follow on their starting pages. This might limit the reach of contents and lead to different network configurations compared to Twitter. Europeanization on Instagram is only likely to occur, if users already follow politically oriented pages that provide Europeanized contents while 'incidental' Europeanization through communicative interaction is more unlikely. Additionally, European politicians' and parties' use of Instagram as a tool for political communication is still limited (e.g. Larsson, 2021).

Furthermore, new platforms will continue to expand and provide users with more options and new digital architectures for communication. For example, TikTok use is on the rise in many European countries and increased from 52 million European users in 2019 to nearly 228 million European users in 2022 (Dixon, 2022). TikTok strongly focusses on brief audiovisual contents and is largely driven by trends and viral sounds acting as memes that connect different users (Primig, Szabó, & Lacasa, 2023, p. 8). Its algorithm is designed to strongly focus on users' interest and recommends contents that fit these interests on a user's 'for you page'. However, TikTok's algorithm does not necessarily favor creators with large fan bases, but encourages small accounts to create and share contents as well, which may reach large audiences depending on user interaction with these contents (Zhang & Liu, 2021). This open nature provides a great opportunity for transnationalization in general and therefore also for Europeanization because users do not have to follow each other in order to see each other's contents. On the other hand, the algorithm strongly reproduces user preferences, which makes it more unlikely to see contents that contradict users' own preferences and beliefs (Grandinetti & Bruinsma, 2022). While this might lead to limited news exposure in general, it might also drive polarization and thus the emergence of conflict lines in networked public spheres.

Limitations and outlook

As any research, this study has some limitations. First, only one platform was analyzed as a case study to describe Europeanization of networked public spheres. While different platforms exhibit different digital architectures (Bossetta, 2018), which lead to different affordances and in turn different patterns for communicative interactions between actors, Twitter was deliberately chosen as a "best-case scenario" for Europeanization and citizen-politician interaction to occur. Twitter is especially important for political communication (Jungherr, 2016) and the actor constellation on Twitter is rather elite-centered (Dagoula, 2019). Thus, it is likely that the level of Europeanization will be lower on other platforms such as Facebook or TikTok. Similarly, it must be considered that Twitter's digital architectures create specific affordances for Twitter and research has already pointed out that different platforms are used for different purposes. However, since the various communicative interactions are analyzed separately, the general tendencies for sharing contents (i.e. retweets) or replying to posts can be transferred to other platforms with similar functions.

ERGMs could not be calculated for all four interaction networks due to computational limitations so that inferential analysis can only be provided for the quote and the reply network. Additionally, due to the large number of unique users (i.e. nodes) in the debates, only a sample of accounts could be coded for actor characteristics, which provide the basis for the ERGMs. Uncoded or otherwise missing user information had to be excluded from the inferential analysis, which is likely to result in a slight underestimation of the effects reported in Chapter 5. In order to see whether the tendencies from the descriptive analysis of the mention and the retweet network hold under inferential scrutiny, further research should thus try to calculate ERGMs for similar debates that result in slightly smaller communication networks and make ERG modelling possible for all nodes. In order to do so, a similar time period needs to be taken into consideration, since the comparatively high levels of Europeanization obviously at least partly result from the period of analysis, which looks at the 2019 EP elections and therefore analyzes a time of heightened attention towards the EU and European issues. EP elections are a time of heightened attention to EU policies and actors, and it is expected that politicians are more likely to communicate with MEPs on Twitter during the EP campaign period for support and mobilization purposes and therefore create more Europeanized communicative interactions than in routine times of politics. Thus, it is difficult to generalize the results to non-election periods as well as to other – less politically-oriented – social media platforms.

In addition to Structural Topic Models for the identification of topics addressed on Twitter, further research should integrate the analysis of sentiments or frames – either through automated or manual approaches – to identify criticism and support lines (Adam, 2007b) and to even further differentiate between different modes of interactions between actors in a debate (Neuberger, 2022). This will provide more insights into the emergence of conflict lines through communication on social media platforms and the roles agency and communication strategies play in it.

Finally, it has been pointed out that democratic legitimacy requires more than communication. For example, the institutional and electoral aspects of accountability and responsiveness on the input and output levels are left out in this discussion and the throughput level of democratic legitimacy is not taken into consideration at all (see Schmidt, 2013 for a detailed discussion of these aspects). However, the empirical analysis provides interesting grounds for the argument that communication related aspects are one important indicator among many for the analysis of the democratic legitimacy of the EU and should therefore not be ignored.

References

Ackland, R., & O'Neil, M. (2011). Online collective identity: The case of the environmental movement. *Social Networks*, *33*(3), 177–190. https://doi.org/10.1016/j.socnet.2011.03.001

Adam, S. (2007a). Domestic Adaptations of Europe: A Comparative Study of the Debates on EU Enlargement and a Common Constitution in the German and French Quality Press. *International Journal of Public Opinion Research*, *19*(4), 409–433. https://doi.org/10.1093/ijpor/edm024

Adam, S. (2007b). *Symbolische Netzwerke in Europa: Der Einfluss der nationalen Ebene auf Europäische Öffentlichkeit. Deutschland und Frankreich im Vergleich. [Symbolic networks in Europe: The role of the national level for a European public sphere. A comparison of Germany and France.]* Köln: Herbert von Halem.

Adam, S. (2008). Do Mass Media Portray Europe as a Community? *Javnost - the Public*, *15*(1), 91–112. https://doi.org/10.1080/13183222.2008.11008966

Adam, S., & Maier, M. (2011). National parties as politicizers of EU integration? Party campaign communication in the run-up to the 2009 European Parliament election. *European Union Politics*, *12*(3), 431–453. https://doi.org/10.1177/1465116511410234

Adam, S., Maier, M., Vreese, C. H. de, Schuck, A. R. T., Stetka, V., Jalali, C., . . . Baumli, M. (2013). Campaigning Against Europe? The Role of Euroskeptic Fringe and Mainstream Parties in the 2009 European Parliament Election. *Journal of Political Marketing*, *12*(1), 77–99. https://doi.org/10.1080/15377857.2013.752245

Ademmer, E., Leupold, A., & Stöhr, T. (2019). Much ado about nothing? The (non-) politicisation of the European Union in social media debates on migration. *European Union Politics*, *20*(2), 305–327. https://doi.org/10.1177/1465116518802058

Albalawi, R., Yeap, T. H., & Benyoucef, M. (2020). Using Topic Modeling Methods for Short-Text Data: A Comparative Analysis. *Frontiers in Artificial Intelligence*, *3*(42), 1–14. https://doi.org/10.3389/frai.2020.00042

Ali, S., Saeed, M. H., Aldreabi, E., Blackburn, J., Cristofaro, E. de, Zannettou, S., & Stringhini, G. (2021). Understanding the Effect of Deplatforming on Social Networks. In *13th ACM Web Science Conference* (pp. 187–195). https://doi.org/10.1145/3447535.3462637

Altheide, D. L. (2004). Media Logic and Political Communication. *Political Communication*, *21*(3), 293–296. https://doi.org/10.1080/10584600490481307

Altheide, D. L., & Snow, R. P. (1979). *Media Logic*. SAGE.

Andersen, R., & Evans, G. (2005). Identifying Europe? The role and dynamics of a European Cleavage. *Politique Européenne*, *16*, 55–81. Retrieved from https://www.jstor.org/stable/45018449

Aquino, J. (2021). descr: Descriptive Statistics (Version 1.1.5) [Computer software]. Retrieved from https://CRAN.R-project.org/package=descr

Ausserhofer, J., & Maireder, A. (2013). National Politics on Twitter. *Information, Communication & Society*, *16*(3), 291–314. https://doi.org/10.1080/1369118X.2012.756050

Barabási, A.-L., & Albert, R. (1999). Emergence of Scaling in Random Networks. *Science*, *286*(5439), 509–512. https://doi.org/10.1126/science.286.5439.509

Barberá, P., Jost, J. T., Nagler, J., Tucker, J. A., & Bonneau, R. (2015). Tweeting From Left to Right: Is Online Political Communication More Than an Echo Chamber? *Psychological Science*, *26*(10), 1531–1542. https://doi.org/10.1177/0956797615594620

Barberá, P., Vaccari, C., & Valeriani, A. (2017). Social Media, Personalisation of News Reporting, and Media Systems' Polarisation in Europe. In M. Barisione & A. Michailidou (Eds.), *Palgrave studies in European political sociology. Social media and European politics: Rethinking power and legitimacy in the digital era* (Vol. 23, pp. 25–52). London: Palgrave Macmillan UK. https://doi.org/10.1057/978-1-137-59890-5_2

Barberio, V., Kuric, I., Mollona, E., & Pareschi, L. (2020). The use of social media in EU policy communication and implications for the emergence of a European public sphere. *Investigaciones Regionales - Journal of Regional Research*, *46*(1), 111–129.

Barisione, M., & Michailidou, A. (2017). Do We Need to Rethink EU Politics in the Social Media Era? An Introduction to the Volume. In M. Barisione & A. Michailidou (Eds.), *Palgrave studies in European political sociology. Social media and European politics: Rethinking power and legitimacy in the digital era* (Vol. 15, pp. 1–23). London: Palgrave Macmillan UK. https://doi.org/10.1057/978-1-137-59890-5_1

Bartolini, S., & Mair, P. (1990). *Identity, competition, and electoral availability: The stabilisation of European electorates 1885-1985*. Cambridge: Cambridge University Press.

Batorski, D., & Grzywińska, I. (2018). Three dimensions of the public sphere on Facebook. *Information, Communication & Society*, *21*(3), 356–374. https://doi.org/10.1080/1369118X.2017.1281329

Bee, C. (2014). Transnationalisation, Public Communication and Active Citizenship. The Emergence of a Fragmented and Fluid European Public Sphere. *Sociology Compass*, *8*(8), 1018–1032. https://doi.org/10.1111/soc4.12192

Ben-David, A., & Matamoros-Fernández, A. (2016). Hate Speech and Covert Discrimination on Social Media: Monitoring the Facebook Pages of Extreme-Right Political Parties in Spain. *International Journal of Communication*, *10*, 1167–1193. Retrieved from https://ijoc.org/index.php/ijoc/article/view/3697/1585

Bene, M., Ceron, A., Fenoll, V., Haßler, J., Kruschinski, S., Larsson, A. O., . . . Wurst, A.-K. (2022). Keep Them Engaged! Investigating the Effects of Self-centered Social Media Communication Style on User Engagement in 12 European Countries. *Political Communication*, *39*(4), 429–453. https://doi.org/10.1080/10584609.2022.2042435

Bene, M., Magin, M., Jackson, D., Lilleker, D., Balaban, D., Baranowski, P., . . . Russmann, U. (2022). The Polyphonic Sounds of Europe: Users' Engagement With Parties' European-Focused Facebook Posts. *Politics and Governance*, *10*(1), 108–120. https://doi.org/10.17645/pag.v10i1.4700

Benert, V. (2019, September 12). *The Use of External Sources (URLs) on Twitter: Communication Strategies by the Right-Wing Party Alternative für Deutschland (AfD) in the 2018 German State Elections*. Interim Conference of the Political Communnication Research Section of the European Communication Research and Education Association (ECREA), Poznań, Poland.

Benert, V. (2021, September 6). *The Europeanization of networked public spheres: towards an actor-centered approach: The example of the #EP2019 debate on Twitter*. European Communication Research and Education Association (ECREA). 8th Conference, Virtual Conference.

Benert, V., & Pfetsch, B. (2022). Europäische Öffentlichkeit unter dem Einfluss von Digitalisierung und Politisierung. [The impact of digitalization and politization on European public spheres]. In I. Borucki, K. Kleinen-von Königslöw, S. Marschall, & T. Zerback (Eds.), *Handbuch Politische Kommunikation [Political Communication Handbook]* (pp. 363–379). Wiesbaden: Springer Fachmedien Wiesbaden. https://doi.org/10.1007/978-3-658-26242-6_27-1

Benkler, Y. (2006). *The wealth of networks: How social production transforms markets and freedom*. New Haven: Yale University Press.

Benkler, Y., Roberts, H., Faris, R., Solow-Niederman, A., & Etling, B. (2015). Social Mobilization and the Networked Public Sphere: Mapping the SOPA-PIPA Debate. *Political Communication*, *32*(4), 594–624. https://doi.org/10.1080/10584609.2014.986349

Bennett, W. L., & Pfetsch, B. (2018). Rethinking Political Communication in a Time of Disrupted Public Spheres. *Journal of Communication*, *68*(2), 243–253. https://doi.org/10.1093/joc/jqx017

Bennett, W. L., & Segerberg, A. (2012). The Logic of Connective Action: Digital media and the personalization of contentious politics. *Information, Communication & Society*, *15*(5), 739–768. https://doi.org/10.1080/1369118X.2012.670661

Benoit, K., & Matsuo, A. (2020). spacyr: Wrapper to the 'spaCy' 'NLP' Library (Version 1.2.1) [Computer software]. Retrieved from http://spacy.io

Benoit, K., Watanabe, K., Wang, H., Nulty, P., Obeng, A., Müller, S., & Matsuo, A. (2018). quanteda: An R package for the quantitative analysis of textual data. *Journal of Open Source Software*, *30*(3). https://doi.org/10.21105/joss.00774

Best, R. E. (2011). The declining electoral relevance of traditional cleavage groups. *European Political Science Review*, *3*(2), 279–300. https://doi.org/10.1017/S1755773910000366

Bischof, D., & Senninger, R. (2018). Simple politics for the people? Complexity in campaign messages and political knowledge. *European Journal of Political Research*, *57*(2), 473–495. https://doi.org/10.1111/1475-6765.12235

Bishof, J. M., & Airoldi, E. M. (2012). Summarizing topical content with word frequency and exclusivity. *ICML'12: Proceedings of the 29th International Coference on International Conference on Machine Learning*, 9–16.

Blondel, V. D., Guillaume, J.-L., Lambiotte, R., & Lefebvre, E. (2008). Fast unfolding of communities in large networks. *Journal of Statistical Mechanics: Theory and Experiment*, *2008*(10), P10008. https://doi.org/10.1088/1742-5468/2008/10/P10008

Blumler, J. G. (2016). The Fourth Age of Political Communication. *Politiques De Communication*, *6*, 19–30. https://doi.org/10.3917/pdc.006.0019

Bodrunova, S., Litvinenko, A., & Blekanov, I. (2018). Please Follow Us. *Journalism Practice*, *12*(2), 177–203. https://doi.org/10.1080/17512786.2017.1394208

Bohman, J. (1998). The globalization of the public sphere: Cosmopolitan publicity and the problem of cultural pluralism. *Philosophy and Social Criticism*, *24*(2-3), 199–216.

Bohman, J. (2004). Expanding Dialogue: The Internet, the Public Sphere and Prospects for Transnational Democracy. *The Sociological Review*, *52*(1_suppl), 131–155. https://doi.org/10.1111/j.1467-954X.2004.00477.x

Bojanowski, M. (2016). intergraph: Coercion Routines for Network Data Objects (Version 2.0.2) [Computer software]. Retrieved from https://CRAN.R-project.org/package=intergraph

Borgatti, S. P., Everett, M. G., & Johnson, J. C. (2018). *Analyzing social networks* (2 ed.). Los Angeles: SAGE.

Bornschier, S. (2009). *Cleavage Politics in Old and New Democracies* (Living Reviews in Democracy). Retrieved from Center for Comparative and International Studies, ETH Zurich and University of Zurich website: https://ethz.ch/content/dam/ethz/special-interest/gess/cis/cis-dam/CIS_DAM_2015/WorkingPapers/Living_Reviews_Democracy/Bornschier.pdf

Bossetta, M. (2018). The Digital Architectures of Social Media: Comparing Political Campaigning on Facebook, Twitter, Instagram, and Snapchat in the 2016 U.S. Election. *Journalism & Mass Communication Quarterly*, *95*(2), 471–496. https://doi.org/10.1177/1077699018763307

Bossetta, M., Dutceac Segesten, A., & Trenz, H.-J. (2017). Engaging with European Politics Through Twitter and Facebook: Participation Beyond the National? In M. Barisione & A. Michailidou (Eds.), *Palgrave studies in European political sociology. Social media and European politics: Rethinking power and legitimacy in the digital era* (Vol. 26, pp. 53–76). London: Palgrave Macmillan UK. https://doi.org/10.1057/978-1-137-59890-5_3

Bourdieu, P., & Wacquant, L. J. D. (1992). *An Invitation to Reflexive Sociology*. Chicago: Chicago University Press.

Bovens, M. (2007). Analysing and Assessing Accountability: A Conceptual Framework. *European Law Journal*, *13*(4), 447–468. https://doi.org/10.1111/j.1468-0386.2007.00378.x

Bradshaw, A. S. (2022). #doctorsspeakup: Exploration of Hashtag Hijacking by Anti-Vaccine Advocates and the Influence of Scientific Counterpublics on Twitter. *Health Communication*, 1–11. https://doi.org/10.1080/10410236.2022.2058159

Braun, D., & Grande, E. (2021). Politicizing Europe in Elections to the European Parliament (1994–2019): The Crucial Role of Mainstream Parties. *Journal of Common Market Studies*, *59*(5), 1124–1141. https://doi.org/10.1111/jcms.13168

Braun, D., Hutter, S., & Kerscher, A. (2016). What type of Europe? The salience of polity and policy issues in European Parliament elections. *European Union Politics*, *17*(4), 570–592. https://doi.org/10.1177/1465116516660387

Braun, D., Popa, S. A., & Schmitt, H. (2019). Responding to the crisis: Eurosceptic parties of the left and right and their changing position towards the European Union. *European Journal of Political Research*, *58*(3), 797–819. https://doi.org/10.1111/1475-6765.12321

Brüggemann, M. (2005). How the Eu Constructs the European public Sphere Seven Strategies of Information Policy. *Javnost - the Public*, *12*(2), 57–73. https://doi.org/10.1080/13183222.2005.11008888

Brüggemann, M., & Schulz-Forberg, H. (2008). Towards a Pan-European Public Sphere? A Typology of Transnational Media in Europe. In H. Wessler, B. Peters, M. Brüggemann, K. Kleinen-von Königslöw, & S. Sifft (Eds.), *Transformations of the state. Transnationalization of Public Spheres* (pp. 78–94). Basingstoke, New York: Palgrave Macmillan.

Brüggemann, M., & Schulz-Forberg, H. (2009). Becoming Pan-European? Transnational Media and the European Public Sphere. *International Communication Gazette*, *71*(8), 693–712. https://doi.org/10.1177/1748048509345064

Bruns, A. (2005). *Gatewatching: Collaborative online news production*. *Digital formations: Vol. 26*. New York: Lang.

Bruns, A. (2009a). Vom Gatekeeping zum Gatewatching [From gate keeping to gate watching]. In C. Neuberger, C. Nuernbergk, & M. Rischke (Eds.), *Journalismus im Internet [Journalism and the Internet]* (pp. 107–128). Wiesbaden: VS Verlag für Sozialwissenschaften. https://doi.org/10.1007/978-3-531-91562-3_3

Bruns, A. (2009b, March 26). *Vom Prosumer zum Produser: Ein neues Verständnis nutzergesteuerter Inhaltserschaffung. [From prosumer to produser: A new understanding of user generated content production.]* Prosumer Revisited: Eine Tagung zur Aktualität der Debatte, Frankfurt am Main. Retrieved from https://produsage.org/node/55

Bruns, A. (2019). *Are filter bubbles real? Digital futures series*. Cambridge: Polity Press.

Bruns, A., Enli, G., Skogerbø, E., Larsson, A. O., & Christensen, C. (Eds.) (2016). *The Routledge Companion to Social Media and Politics*. New York, NY: Routledge. https://doi.org/10.4324/9781315716299

Bruns, A., & Highfield, T. (2015). Is Habermas on Twitter? Social Media and the Public Sphere. In A. Bruns, G. Enli, & E. Skogerbø (Eds.), *The Routledge companion to social media and politics* (pp. 56–73). New York, NY: Routledge.

Bühlmann, M., & Kriesi, H. (2013). Models for Democracy. In H. Kriesi, S. Lavenex, F. Esser, J. Matthes, M. Bühlmann, & D. Bochsler (Eds.), *Democracy in the Age of Globalization and Mediatization* (pp. 44–68). London: Palgrave Macmillan UK. https://doi.org/10.1057/9781137299871_3

Burt, R. S. (1999). The Social Capital of Opinion Leaders. *The ANNALS of the American Academy of Political and Social Science*, *566*(1), 37–54. https://doi.org/10.1177/000271629956600104

Burt, R. S. (2004). Structural Holes and Good Ideas. *American Journal of Sociology*, *110*(2), 349–399. https://doi.org/10.1086/421787

Butts, C. (2015). network: Classes for Relational Data (Version 1.13.0.1) [Computer software]. Retrieved from https://CRAN.R-project.org/package=network

Caiani, M., & Kröll, P. (2015). The transnationalization of the extreme right and the use of the Internet. *International Journal of Comparative and Applied Criminal Justice*, *39*(4), 331–351. https://doi.org/10.1080/01924036.2014.973050

Cammaerts, B. (2015). Social media and activism. In R. Mansell & H. Peng (Eds.), *The Wiley Blackwell-ICA International Encyclopedias of Communication. The international encyclopedia of digital communication and society* (pp. 1027–1034). Chichester: Wiley Blackwell.

Castells, A. (2014). Catalonia and Spain at the crossroads: financial and economic aspects. *Oxford Review of Economic Policy*, *30*(2), 277–296. https://doi.org/10.1093/oxrep/gru022

Castells, M. (2008). The New Public Sphere: Global Civil Society, Communication Networks, and Global Governance. *The ANNALS of the American Academy of Political and Social Science*, *616*(1), 78–93. https://doi.org/10.1177/0002716207311877

Castells, M. (2009). *The Rise of the Network Society*. Oxford, UK: Wiley-Blackwell. https://doi.org/10.1002/9781444319514

Castells, M. (2011). A Network Theory of Power. *International Journal of Communication*, *5*, 773–787.

Castells, M. (2019). Communication Power: Mass Communication, Mass Self-Communication and Power Relationships in the Network Society. In J. Curran & D. Hesmondhalgh (Eds.), *Media and society* (6th ed., pp. 83–97). London, England: Bloomsbury Publishing.

Castro, P., & Kammerer, M. (2021). The Institutionalization of a Cleavage: How Differential Treatment Affects State Behavior in the Climate Negotiations. *International Studies Quarterly*, *65*(3), 683–698. https://doi.org/10.1093/isq/sqab045

Chadwick, A. (2013). *The Hybrid Media System*. Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199759477.001.0001

Chadwick, A., Dennis, J., & Smith, A. P. (2016). Politics in the Age of Hybrid Media. In A. Bruns, G. Enli, E. Skogerbø, A. O. Larsson, & C. Christensen (Eds.), *The Routledge Companion to Social Media and Politics* (pp. 7–22). New York, NY: Routledge. https://doi.org/10.4324/9781315716299-2

Chang, J., Boyd-Graber, J., Gerrish, S., Wang, C., & Blei, D. M. (2009). Reading Tea Leaves: How Humand Interpret Topic Models. *Neural Information Processing Systems*, *22*, 288-196. Retrieved from http://users.umiacs.umd.edu/~jbg/docs/nips2009-rtl.pdf

Chinn, S., Hart, P. S., & Soroka, S. (2020). Politicization and Polarization in Climate Change News Content, 1985-2017. *Science Communication*, *42*(1), 112–129. https://doi.org/10.1177/1075547019900290

Clauset, A., Shalizi, C. R., & Newman, M. E. J. [M. E. J.] (2009). Power-Law Distributions in Empirical Data. *SIAM Review*, *51*(4), 661–703. https://doi.org/10.1137/070710111

Colley, T., & Moore, M. (2022). The challenges of studying 4chan and the Alt-Right: 'Come on in the water's fine'. *New Media & Society*, *24*(1), 5–30. https://doi.org/10.1177/1461444820948803

Conover, M. D., Ratkiewicz, J., Francisco, M., Goncalves, B., Flammini, A., & Menczer, F. (2011). Political Polarization on Twitter. In Association for the Advancement of Artificial Intelligance (Chair), *Proceedings of the Fifth International AAAI Conference on Weblogs and Social Media.* Symposium conducted at the meeting of Association for the Advancement of Artificial Intelligence.

Crepaz, K. (2022). Overcoming borders: the Europeanization of civil society activism in the 'refugee crisis'. *Journal of Ethnic and Migration Studies*, *48*(6), 1448–1461. https://doi.org/10.1080/1369183X.2020.1851471

Csardi, G., & Nepusz, T. (2006). The igraph software package for complex network research. *InterJournal*, *Complex Systems*. Retrieved from https://igraph.org

Dagoula, C. (2019). Mapping Political Discussions on Twitter: Where the Elites Remain Elites. *Media and Communication*, *7*(1), 225–234. https://doi.org/10.17645/mac.v7i1.1764

Daniel, W. T., & Obholzer, L. (2020). Reaching out to the voter? Campaigning on Twitter during the 2019 European elections. *Research & Politics*, *7*(2), 1-8. https://doi.org/10.1177/2053168020917256

Daraganova, G., & Robins, G. (2013). Autologistic Actor Attribute Models. In D. Lusher, J. Koskinen, & G. Robins (Eds.), *Structural analysis in the social sciences: Vol. 35. Exponential Random Graph Models for Social Networks: Theory, Methods, and Applications* (pp. 102–114). Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511894701

De Moor, J., de Vydt, M., Uba, K., & Wahlström, M. (2021). New kids on the block: taking stock of the recent cycle of climate activism. *Social Movement Studies*, *20*(5), 619–625. https://doi.org/10.1080/14742837.2020.1836617

De Vreese, C. H. (2003). *Framing Europe: television news and European integration*. Aksant.

De Vreese, C. H., & Boomgaarden, H. (2003). Valenced news frames and public support for the EU. *Communications*, *28*(4). https://doi.org/10.1515/comm.2003.024

De Vreese, C. H., Boomgaarden, H. G., & Semetko, H. A. (2011). (In)direct Framing Effects: The Effects of News Media Framing on Public Support for Turkish Membership in the European Union. *Communication Research*, *38*(2), 179–205. https://doi.org/10.1177/0093650210384934

De Wilde, P., Leupold, A., & Schmidtke, H. (2016). Introduction: the differentiated politicisation of European governance. *West European Politics*, *39*(1), 3–22. https://doi.org/10.1080/01402382.2015.1081505

De Wilde, P., Michailidou, A., & Trenz, H.-J. (2014). Converging on euroscepticism: Online polity contestation during European Parliament elections. *European Journal of Political Research*, *53*(4), 766–783. https://doi.org/10.1111/1475-6765.12050

De Zúñiga, H. G., Diehl, T., & Ardèvol-Abreu, A. (2018). When Citizens and Journalists Interact on Twitter. *Journalism Studies*, *19*(2), 227–246. https://doi.org/10.1080/1461670X.2016.1178593

Del Gobbo, E., Fontanella, S., Sarra, A., & Fontanella, L. (2021). Emerging Topics in Brexit Debate on Twitter Around the Deadlines. *Social Indicators Research*, *156*(2-3), 669–688. https://doi.org/10.1007/s11205-020-02442-4

Della Porta, D. (2013). Europeanization and social movements. In D. A. Snow, D. Della Porta, B. Klandermans, & D. McAdam (Eds.), *The Wiley-Blackwell Encyclopedia of Social and Political Movements* (pp. 1–5). Blackwell Publishing Ltd.

Della Porta, D., & Caiani, M. (2009). *Social Movements and Europeanization*. Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199557783.001.0001

Della Porta, D., & Diani, M. (2006). *Social movements: An introduction* (2nd ed.). Malden: Blackwell Publishing.

Della Porta, D., & Portos, M. (2021). Rich kids of Europe? Social basis and strategic choices in the climate activism of Fridays for Future. *Italian Political Science Review/Rivista Italiana Di Scienza Politica*, 1–26. https://doi.org/10.1017/ipo.2021.54

Della Porta, D., & Tarrow, S. G. (2005). *Transnational Protest and Global Activism. People, Passions, and Power*. Rowman & Littlefield.

Dempsey Willis, R. A. (2020). Habermasian utopia or Sunstein's echo chamber? The 'dark side' of hashtag hijacking and feminist activism. *Legal Studies*, *40*(3), 507–526. https://doi.org/10.1017/lst.2020.16

Dennison, J. (2020). How Niche Parties React to Losing Their Niche: The Cases of the Brexit Party, the Green Party and Change UK. *Parliamentary Affairs*, *73*, 125–141. https://doi.org/10.1093/pa/gsaa026

Diaz Ruiz, C., & Nilsson, T. (2023). Disinformation and Echo Chambers: How Disinformation Circulates on Social Media Through Identity-Driven Controversies. *Journal of Public Policy & Marketing*, *42*(1), 18–35. https://doi.org/10.1177/07439156221103852

Dixon, S. (2022). Statista Digital Market Survey: Number of TikTok users in Europe from 2017 to 2027. Retrieved from https://www.statista.com/forecasts/1334355/tiktok-users-europe

Dolezal, M. (2010). Exploring the Stabilization of a Political Force: The Social and Attitudinal Basis of Green Parties in the Age of Globalization. *West European Politics*, *33*(3), 534–552. https://doi.org/10.1080/01402381003654569

Dutceac Segesten, A., & Bossetta, M. (2019). Can Euroscepticism Contribute to a European Public Sphere? The Europeanization of Media Discourses on Euroscepticism across Six Countries. *Journal of Common Market Studies*, *57*(5), 1051–1070. https://doi.org/10.1111/jcms.12871

Eberwein, T., Porlezza, C., & Splendore, S. (2015). Media as Political Actors. In G. Mazzoleni (Ed.), *The International Encyclopedia of Political Communication* (pp. 1–9). Wiley. https://doi.org/10.1002/9781118541555.wbiepc173

Eder, K., & Kantner, C. (2000). Transnationale Resonanzstrukturen in Europa. Eine Kritik der Rede vom Öffentlichkeitsdefizit. [Transnational structures of resonance in Europe.

Criticizing the notion of a public sphere deficit.] *Kölner Zeitschrift Für Soziologie Und Sozialpsychologie*, *40*, 306–331.

Edmondson, M. (2022). *googleLanguageR: Call Google's 'Natural Language' API, 'Cloud Translation' API, 'Cloud Speech' API and 'Cloud Text-to-Speech' API*. R. Retrieved from https://github.com/ropensci/googleLanguageR

Emmer, M. (2019). Online-Kommunikation politischer Akteure. [Online communication of political actors.] In W. Schweiger & K. Beck (Eds.), *Handbuch Online-Kommunikation [Handbook of online communication.]* (pp. 369–392). Wiesbaden: Springer Fachmedien Wiesbaden. https://doi.org/10.1007/978-3-658-18016-4_14

Engelmann, I., Kloss, A., Neuberger, C., & Brockmann, T. (2019). Visibility through information sharing: The role of tweet authors and communication styles in retweeting political information on Twitter. *International Journal of Communication*, *13*, 3569–3588.

Enli, G., & Simonsen, C.-A. (2018). 'Social media logic' meets professional norms: Twitter hashtags usage by journalists and politicians. *Information, Communication & Society*, *21*(8), 1081–1096. https://doi.org/10.1080/1369118X.2017.1301515

Entman, R. M. (1993). Framing: Toward Clarification of a Fractured Paradigm. *Journal of Communication*, *43*(4), 51–58. https://doi.org/10.1111/j.1460-2466.1993.tb01304.x

Enyedi, Z. (2005). The role of agency in cleavage formation. *European Journal of Political Research*, *44*(5), 697–720. https://doi.org/10.1111/j.1475-6765.2005.00244.x

Ernst, N., Blassnig, S., Engesser, S., Büchel, F., & Esser, F. (2019). Populists Prefer Social Media Over Talk Shows: An Analysis of Populist Messages and Stylistic Elements Across Six Countries. *Social Media + Society*, *5*(1), 1-14. https://doi.org/10.1177/2056305118823358

Ertman, T. (2010). Western European Party Systems and the Religious Cleavage. In K. van Kersbergen & P. Manow (Eds.), *Religion, Class Coalitions, and Welfare States* (pp. 39–55). Cambridge University Press. https://doi.org/10.1017/CBO9780511626784.003

Esser, F., & Neuberger, C. (2019). Realizing the democratic functions of journalism in the digital age: New alliances and a return to old values. *Journalism: Theory, Practice & Criticism*, *20*(1), 194–197. https://doi.org/10.1177/1464884918807067

Esser, F., & Strömbäck, J. (Eds.) (2014). *Mediatization of Politics. Understanding the Transformation of Western Democracies*. Houndmills, New York: Palgrave Macmillan.

European Commission, & European Parliament (2019). *Eurobarometer 91.5: ZA7576 Datenfile Version 1.0.0*. Retrieved from https://doi.org/10.4232/1.13393

European Parliament (2019a). Ergebnisse der Europawahl 2019 [Results of the European Parliament elections 2019]. Retrieved from https://www.europarl.europa.eu/election-results-2019/de/wahlbeteiligung/

European Parliament (2019b). Final turnout data for 2019 European elections announced. Retrieved from https://www.europarl.europa.eu/news/de/press-room/20191029IPR65301/final-turnout-data-for-2019-european-elections-announced

European Parliament (2019c). Multimedia Center: Official launch of the campaign 'this time I'm voting' (Auditorium parco della musica, Rome). Retrieved from https://multimedia.europarl.europa.eu/en/photo/official-launch-of-campaign-this-time-i-m-voting-auditorium-parco-della-musica-rome_20190201_EP-078531B_ROME_AFP_006

European Union (2019). Why vote in the European election in May 2019? Retrieved from https://thistimeimvoting.eu

Eurostat (2023). *Number of foreign languages known (self-reported) by sex*. Online data code: EDAT_AES_L21. Retrieved from

https://ec.europa.eu/eurostat/databrowser/view/edat_aes_l21/default/table?lang=en

Evans, G. (2010). Models, Measures and Mechanisms: An Agenda for Progress in Cleavage Research. *West European Politics*, *33*(3), 634–647. https://doi.org/10.1080/01402381003654627

Faas, T., & Klingelhöfer, T. (2022). German politics at the traffic light: new beginnings in the election of 2021. *West European Politics*, *45*(7), 1506–1521. https://doi.org/10.1080/01402382.2022.2045783

Fazekas, Z., Popa, S. A., Schmitt, H., Barberá, P., & Theocharis, Y. (2021). Elite-public interaction on twitter: EU issue expansion in the campaign. *European Journal of Political Research*, *60*(2), 376–396. https://doi.org/10.1111/1475-6765.12402

Feinerer, I., Hornik, K., & Meyer, D. (2008). Text Mining Infrastructure in R. *Journal of Statistical Software*, *25*(5), 1–54. Retrieved from https://www.jstatsoft.org/v25/i05/

Fenoll, V., Haßler, J., Magin, M., & Russmann, U. (2021). Campaigning for Strasbourg on Facebook: Introduction to a 12-Country Comparison on Parties' Facebook Campaigns in the 2019 European Parliament Election. In J. Haßler, M. Magin, U. Russmann, & V. Fenoll (Eds.), *Political Campaigning and Communication. Campaigning on Facebook in the 2019 European Parliament Election* (pp. 3–21). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-73851-8_1

Fileborn, B., & Loney-Howes, R. (Eds.) (2019). *#MeToo and the Politics of Social Change*. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-15213-0

Flew, T., & Iosifidis, P. (2020). Populism, globalisation and social media. *International Communication Gazette*, *82*(1), 7–25. https://doi.org/10.1177/1748048519880721

Forchtner, B., & Özvatan, Ö. (2022). (De)legitimising Europe in times of crisis. *Journal of Language and Politics*, *21*(2), 208–232. https://doi.org/10.1075/jlp.21064.for

Ford, R., & Jennings, W. (2020). The Changing Cleavage Politics of Western Europe. *Annual Review of Political Science*, *23*(1), 295–314. https://doi.org/10.1146/annurev-polisci-052217-104957

Fraser, N. (1990). Rethinking the Public Sphere: A Contribution to the Critique of Actually Existing Democracy, *25-26*, 56–80.

Fraser, N. (2007). Transnational Public Sphere: Transnationalizing the Public Sphere. *Theory, Culture & Society*, *24*(4), 7–30. https://doi.org/10.1177/0263276407080090

Freedman, D. (2015). Paradigms of Media Power. *Communication, Culture & Critique*, *8*(2), 273–289. https://doi.org/10.1111/cccr.12081

Freeman, L. C. (1977). A Set of Measures of Centrality Based on Betweenness. *Sociometry*, *40*(1), 35–41. Retrieved from https://www.jstor.org/stable/3033543

Friemel, T. N. (2008). Anatomie von Kommunikationsrollen: Methoden zur Identifizierung von Akteursrollen in gerichteten Netzwerken. [The anatomy of communicative roles: Methods for identifying actors' roles in directed networks.] *Kölner Zeitschrift Für Soziologie Und Sozialpsychologie*, *60*(3), 473–499. https://doi.org/10.1007/s11577-008-0024-7

Fuhse, J. (2016). *Soziale Netzwerke: Konzepte und Forschungsmethoden. [Social networks: Concepts and research methods.] UTB. Sozialwissenschaften*. Konstanz, München: UVK.

Funk (2023). *Hey, wir sind funk… [Hey, we are funk…]* Retrieved from https://www.funk.net/funk

Galtung, J., & Ruge, M. H. (1965). The Structure of Foreign News. *Journal of Peace Research*, *2*(1), 64–90. https://doi.org/10.1177/002234336500200104

Gamson, W. A., & Wolfsfeld, G. (1993). Movements and Media as Interacting Systems. *The ANNALS of the American Academy of Political and Social Science*, *528*(1), 114–125. https://doi.org/10.1177/0002716293528001009

Garlaschelli, D., & Loffredo, M. I. (2004). Patterns of link reciprocity in directed networks. *Physical Review Letters*, *93*(26), 1–4. https://doi.org/10.1103/PhysRevLett.93.268701

Gattermann, K. (2015). Europäische Spitzenkandidaten und deren (Un-)Sichtbarkeit in der nationalen Zeitungsberichterstattung. [European lead candidates and their (in)visibility in national news reporting.] In M. Kaeding & N. Switek (Eds.), *Die Europawahl 2014* (pp. 211–222). Wiesbaden: Springer Fachmedien Wiesbaden. https://doi.org/10.1007/978-3-658-05738-1_18

Gattermann, K. (2020). Media Personalization during European Elections: the 2019 Election Campaigns in Context. *JCMS: Journal of Common Market Studies*, *58*(S1), 91–104. https://doi.org/10.1111/jcms.13084

Gattermann, K., & de Vreese, C. H. (2017). The role of candidate evaluations in the 2014 European Parliament elections: Towards the personalization of voting behaviour? *European Union Politics*, *18*(3), 447–468. https://doi.org/10.1177/1465116517704519

Gattermann, K., & Marquart, F. (2020). Do Spitzenkandidaten really make a difference? An experiment on the effectiveness of personalized European Parliament election campaigns. *European Union Politics*, *21*(4), 612–633. https://doi.org/10.1177/1465116520938148

George, J. J., & Leidner, D. E. (2019). From clicktivism to hacktivism: Understanding digital activism. *Information and Organization*, *29*(3), 100249. https://doi.org/10.1016/j.infoandorg.2019.04.001

Gerhards, J. (1993). Westeuropäische Integration und die Schwierigkeiten der Entstehung einer europäischen Öffentlichkeit. [West-European integration and the challanges of an emerging European public sphere.] *Zeitschrift Für Soziologie*, *22*(2), 96–110. https://doi.org/10.1515/zfsoz-1993-0202

Gerhards, J. (2001). Missing a European public sphere. In M. Kohli & M. Novak (Eds.), *Will Europe Work?* (pp. 145–158). Routledge. https://doi.org/10.4324/9780203167359-17

Gerhards, J. (2002). Das Öffentlichkeitsdefizit der EU im Horizont normativer Öffentlichkeitstheorien. [The public sphere deficit of the EU in the context of normative public sphere theories.] In H. Kaelble, M. Kirsch, & A. Schmidt-Gernig (Eds.), *Transnationale Öffentlichkeiten und Identitäten im 20. Jahrhundert [Transnational public spheres and identities in the 20th century.]* (pp. 135–158). Campus.

Gerhards, J. (2015). Verständigung trotz sprachlicher Vielfalt. Plädoyer für eine stärkere Förderung des Englischen in Europa. [Understanding depsite a variety of languages. A plea for more support of English as lingua franca.] In G. Stock, C. Markschies, & S. Hauer (Eds.), *Zukunftsort: Europa [Europe as place of the future]* (pp. 159–170). De Gruyter.

Gerhards, J., & Hans, S. (2014). Explaining Citizens' Participation in a Transnational European Public Sphere. *Comparative Sociology*, *13*(6), 667–691. https://doi.org/10.1163/15691330-12341329

Gerhards, J., Hans, S., & Carlson, S. (2014). Die Renditen von transnationalem Humankapital: Das Beispiel „Partizipation an einer transnationalen europäischen Öffentlichkeit". [The returns of transnational human capital: The example of 'Participation in a transnational European public sphere'.] In J. Gerhards, S. Hans, & S. Carlson (Eds.), *Globalisierung, Bildung und grenzüberschreitende Mobilität [Globalization, education and transborder mobility]* (pp. 259–293). Wiesbaden: Springer Fachmedien Wiesbaden. https://doi.org/10.1007/978-3-658-02439-0_12

Gerhards, J., & Neidhardt, F. (1991). Strukturen und Funktionen moderner Öffentlichkeit: Fragestellungen und Ansätze. [Structures and functions of modern public spheres: Questions and approaches.] In S. Müller-Doohm & K. Neumann-Braun (Eds.), *Öffentlichkeit – Kultur – Massenkommunikation. Beiträge zur Medien- und Kommunikationssoziologie [Public Sphere - Culture - Mass Communication. Contributions to Media and Communication Sociology]* (pp. 31–89). Oldenburg: Universität Oldenburg.

Gethin, A., Martínez-Toledano, C., & Piketty, T. (2021). *Political Cleavages and Social Inequalities*. Harvard University Press. https://doi.org/10.4159/9780674269910

Gethin, A., Martínez-Toledano, C., & Piketty, T. (2022). Brahmin Left Versus Merchant Right: Changing Political Cleavages in 21 Western Democracies, 1948–2020. *The Quarterly Journal of Economics*, *137*(1), 1–48. https://doi.org/10.1093/qje/qjab036

González-Bailón, S., Wang, N., & Borge-Holthoefer, J. (2014). The emergence of roles in large-scale networks of communication. *EPJ Data Science*, *3*(1). https://doi.org/10.1140/epjds/s13688-014-0032-y

Grandinetti, J., & Bruinsma, J. (2022). The Affective Algorithms of Conspiracy TikTok. *Journal of Broadcasting & Electronic Media*, 1–20. https://doi.org/10.1080/08838151.2022.2140806

Granovetter, M. S. (1973). The Strength of Weak Ties. *American Journal of Sociology*, *78*(6), 1360–1380. Retrieved from https://www.jstor.org/stable/2776392

Grill, C., & Boomgaarden, H. (2017). A network perspective on mediated Europeanized public spheres: Assessing the degree of Europeanized media coverage in light of the 2014 European Parliament election. *European Journal of Communication*, *32*(6), 568–582. https://doi.org/10.1177/0267323117725971

Grolemund, G., & Wickham, H. (2011). Dates and Times Made Easy with {lubridate}. *Journal of Statistical Software*, *40*(3), 1–25. Retrieved from https://www.jstatsoft.org/v40/i03/

Gunningham, N. (2019). Averting Climate Catastrophe: Environmental Activism, Extinction Rebellion and coalitions of Influence. *King's Law Journal*, *30*(2), 194–202. https://doi.org/10.1080/09615768.2019.1645424

GWI (2022). *GWI's flagship report on the latest trends in social media*. Retrieved from https://www.gwi.com/reports/

Habermas, J. (1996). *Between Facts and Norms: Contributions to a Discourse Theory of Law and Democracy*. Cambridge: Polity Press.

Habermas, J. (1998). *Inclusion of the Other: Studies in Political Theory*. Polity Press.

Habermas, J. (2006). Political Communication in Media Society: Does Democracy Still Enjoy an Epistemic Dimension? The Impact of Normative Theory on Empirical Research. *Communication Theory*, *16*(4), 411–426. https://doi.org/10.1111/j.1468-2885.2006.00280.x

Hallin, D. C., & Mancini, P. (2004). *Comparing Media Systems*. Cambridge: Cambridge University Press.

Haman, M., Školník, M., & Čopík, J. (2023). Members of the European Parliament on Social Media: Why Do They Use Facebook and Twitter? *Political Studies Review*, 412–421. https://doi.org/10.1177/14789299221082444

Han, J., & Finke, D. (2022). Voting Green in European Parliament elections: issue voting in an electoral context. *Journal of European Public Policy*, 1–22. https://doi.org/10.1080/13501763.2022.2116082

Handcock, M., Hunter, D., Butts, C., Goodreau, S., Krivitsky, P., & Morris, M. (2021). ergm: Fit, Simulate and Diagnose Exponential-Family Models for Networks (Version 4.1.2) [Computer software]. Retrieved from https://CRAN.R-project.org/package=ergm

Hänska, M., & Bauchowitz, S. (2019). Can social media facilitate a European public sphere? Transnational communication and the Europeanization of Twitter during the Eurozone crisis. *Social Media + Society*, *5*(3), 205630511985468. https://doi.org/10.1177/2056305119854686

Hanusch, F., & Meisch, S. (2022). The temporal cleavage: the case of populist retrotopia vs. climate emergency. *Environmental Politics*, *31*(5), 883–903. https://doi.org/10.1080/09644016.2022.2044691

Harcup, T., & O'Neill, D. (2017). What is News? *Journalism Studies*, *18*(12), 1470–1488. https://doi.org/10.1080/1461670X.2016.1150193

Hasebrink, U., & Popp, J. (2006). Media repertoires as a result of selective media use. A conceptual approach to the analysis of patterns of exposure. *Communications*, *31*(3), 369–387. https://doi.org/10.1515/COMMUN.2006.023

Häussler, T. (2019). Civil society, the media and the Internet: changing roles and challenging authorities in digital political communication ecologies. *Information, Communication & Society*, *8*(2), 1–18. https://doi.org/10.1080/1369118X.2019.1697338

Häussler, T., Adam, S., Schmid-Petri, H., & Reber, U. (2017). How Political Conflict Shapes Online Spaces: A Comparison of Climate Change Hyperlink Networks in the United States and Germany. *International Journal of Communication*, *11*, 3096–3117.

Heft, A. (2017). National Orientations or a Common European Debate? The Representation of the Beginnings of the Greek and Euro Crisis in German and Spanish Quality Press. *Javnost - the Public*, *24*(1), 49–70. https://doi.org/10.1080/13183222.2017.1280252

Heft, A., Mayerhöffer, E., Reinhardt, S., & Knüpfer, C. (2020). Beyond Breitbart: Comparing Right-Wing Digital News Infrastructures in Six Western Democracies. *Policy & Internet*, *12*(1), 20–45. https://doi.org/10.1002/poi3.219

Heft, A., Pfetsch, B., Voskresenskii, V., & Benert, V. (2022). Transnational issue agendas of the radical right? Parties' Facebook campaign communication in six countries during the 2019 European Parliament election. *European Journal of Communication*, *38*(1), 22-42. https://doi.org/10.1177/02673231221100146

Heft, A., Reinhardt, S., & Pfetsch, B. (2022). Mobilization and support structures in radical right party networks. Digital political communication ecologies in the 2019 European parliament elections. *Information, Communication & Society*, 1–21. https://doi.org/10.1080/1369118X.2022.2129269

Heft, A., Wittwer, S., & Pfetsch, B. (2017). Divided They Tweet? A Comparative Analysis of Twitter Networks of Pro- and Anti-EU Parties. In M. Caiani & S. Guerra (Eds.), *Palgrave studies in European political sociology. Euroscepticism, Democracy and the Media: Communicating Europe, Contesting Europe* (Vol. 16, pp. 195–218). London: Palgrave Macmillan UK. https://doi.org/10.1057/978-1-137-59643-7_9

Heidenreich, T., Eisele, O., Watanabe, K., & Boomgaarden, H. G. (2022). Exploring Engagement With EU News on Facebook: The Influence of Content Characteristics. *Politics and Governance*, *10*(1), 121–132. https://doi.org/10.17645/pag.v10i1.4775

Himelboim, I., McCreery, S., & Smith, M. (2013). Birds of a Feather Tweet Together: Integrating Network and Content Analyses to Examine Cross-Ideology Exposure on Twitter.

Journal of Computer-Mediated Communication, *18*(2), 40–60. https://doi.org/10.1111/jcc4.12001

Himelboim, I., Smith, M., & Shneiderman, B. (2013). Tweeting Apart: Applying Network Analysis to Detect Selective Exposure Clusters in Twitter. *Communication Methods and Measures*, *7*(3-4), 195–223. https://doi.org/10.1080/19312458.2013.813922

Hix, S., & Marsh, M. (2011). Second-order effects plus pan-European political swings: An analysis of European Parliament elections across time. *Electoral Studies*, *30*(1), 4–15. https://doi.org/10.1016/j.electstud.2010.09.017

Hobolt, S. B. (2014). A vote for the President? The role of Spitzenkandidaten in the 2014 European Parliament elections. *Journal of European Public Policy*, *21*(10), 1528–1540. https://doi.org/10.1080/13501763.2014.941148

Hobolt, S. B., & de Vries, C. E. (2015). Issue Entrepreneurship and Multiparty Competition. *Comparative Political Studies*, *48*(9), 1159–1185. https://doi.org/10.1177/0010414015575030

Hobolt, S. B., Leeper, T. J., & Tilley, J. (2021). Divided by the Vote: Affective Polarization in the Wake of the Brexit Referendum. *British Journal of Political Science*, *51*(4), 1476–1493. https://doi.org/10.1017/S0007123420000125

Hobolt, S. B., & Rodon, T. (2020). Domestic contestation of the European Union. *Journal of European Public Policy*, *27*(2), 161–167. https://doi.org/10.1080/13501763.2019.1701066

Hoffmann, M., & Heft, A. (2020). "Here, There and Everywhere": Classifying Location Information in Social Media Data - Possibilities and Limitations. *Communication Methods and Measures*, *19*(9), 184–203. https://doi.org/10.1080/19312458.2019.1708282

Hoffmann, R., Muttarak, R., Peisker, J., & Stanig, P. (2022). Climate change experiences raise environmental concerns and promote Green voting. *Nature Climate Change*, *12*(2), 148–155. https://doi.org/10.1038/s41558-021-01263-8

Holland, P. W., & Leinhardt, S. (1971). Transitivity in Structural Models of Small Groups. *Comparative Group Studies*, *2*(2), 107–124. https://doi.org/10.1177/104649647100200201

Hooghe, L., & Marks, G. (2009). A Postfunctionalist Theory of European Integration: From Permissive Consensus to Constraining Dissensus. *British Journal of Political Science*, *39*(1), 1–23. https://doi.org/10.1017/S0007123408000409

Hooghe, L., & Marks, G. (2018). Cleavage theory meets Europe's crises: Lipset, Rokkan, and the transnational cleavage. *Journal of European Public Policy*, *25*(1), 109–135. https://doi.org/10.1080/13501763.2017.1310279

Hultman, M., Björk, A., & Viinikka, T. (2019). The Far Right and Climate Change Denial. In B. Forchtner (Ed.), *The Far Right and the Environment* (pp. 121–135). Routledge. https://doi.org/10.4324/9781351104043-8

Hunter, D. R., & Handcock, M. S. (2006). Inference in Curved Exponential Family Models for Networks. *Journal of Computational and Graphical Statistics*, *15*(3), 565–583. https://doi.org/10.1198/106186006X133069

Hunter, D. R., Handcock, M. S., Butts, C. T., Goodreau, S. M., & Morris, M. (2008). Ergm: A Package to Fit, Simulate and Diagnose Exponential-Family Models for Networks. *Journal of Statistical Software*, *24*(3). https://doi.org/10.18637/jss.v024.i03

Hurrelmann, A., & Wagner, A. (2020). Did the Eurozone crisis undermine the European Union's legitimacy? An analysis of newspaper reporting, 2009–2014. *Comparative European Politics*, *18*, 707–728. https://doi.org/10.1057/s41295-020-00205-6

Huth, T. (2019). Fridays for Future – Entstehung einer supranationalen europäischen Öffentlichkeit? *Journal Für Korporative Kommunikation*. (2), 2–11.

Hutter, S., & Borbáth, E. (2019). Challenges from left and right: the long-term dynamics of protest and electoral politics in Western Europe. *European Societies*, *21*(4), 487–512. https://doi.org/10.1080/14616696.2018.1494299

Hutter, S., & Grande, E. (2014). Politicizing Europe in the National Electoral Arena: A Comparative Analysis of Five West European Countries, 1970-2010. *Journal of Common Market Studies*, *52*(5), 1002–1018. https://doi.org/10.1111/jcms.12133

Hutter, S., & Kriesi, H. (2019). Politicizing Europe in times of crisis. *Journal of European Public Policy*, *26*(7), 996–1017. https://doi.org/10.1080/13501763.2019.1619801

Hutter, S., & Kriesi, H. (2022). Politicising immigration in times of crisis. *Journal of Ethnic and Migration Studies*, *48*(2), 341–365. https://doi.org/10.1080/1369183X.2020.1853902

Innes, H., & Innes, M. (2021). De-platforming disinformation: conspiracy theories and their control. *Information, Communication & Society*, 1–19. https://doi.org/10.1080/1369118X.2021.1994631

Jacobs, K., & Spierings, N. (2019). A populist paradise? Examining populists' Twitter adoption and use. *Information, Communication & Society*, *22*(12), 1681–1696. https://doi.org/10.1080/1369118X.2018.1449883

Janetzko, D. (2017). The Role of APIs in Data Sampling from Social Media. In L. Sloan & A. Quan-Haase (Eds.), *The SAGE Handbook of Social Media Research Methods* (pp. 146–160). London: SAGE.

Jardine, E. (2019). Online content moderation and the Dark Web: Policy responses to radicalizing hate speech and malicious content on the Darknet. *First Monday.* Advance online publication. https://doi.org/10.5210/fm.v24i12.10266

Johansson, B., Novelli, E., & Wring, D. (2022). Introduction: A Campaign (More or Less) About the European Union. In E. Novelli, B. Johansson, & D. Wring (Eds.), *The 2019 European Electoral Campaign* (pp. 1–20). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-98993-4_1

Jungherr, A. (2016). Twitter use in election campaigns: A systematic literature review. *Journal of Information Technology & Politics*, *13*(1), 72–91. https://doi.org/10.1080/19331681.2015.1132401

Jürgens, P., & Jungherr, A. (2011). Wahlkampf vom Sofa aus: Twitter im Bundestagswahlkampf 2009. In E. J. Schweitzer & S. Albrecht (Eds.), *Das Internet im Wahlkampf* (pp. 201–225). Wiesbaden: VS Verlag für Sozialwissenschaften. https://doi.org/10.1007/978-3-531-92853-1_8

Kaiser, J., Keller, T. R., & Kleinen-von Königslöw, K. (2021). Incidental News Exposure on Facebook as a Social Experience: The Influence of Recommender and Media Cues on News Selection. *Communication Research*, *48*(1), 77–99. https://doi.org/10.1177/0093650218803529

Kaiser, J., & Puschmann, C. (2017). Alliance of antagonism: Counterpublics and polarization in online climate change communication. *Communication and the Public*, *2*(4), 371–387. https://doi.org/10.1177/2057047317732350

Kalsnes, B. (2016). The Social Media Paradox Explained: Comparing Political Parties' Facebook Strategy Versus Practice. *Social Media + Society*, *2*(2), 1-11. https://doi.org/10.1177/2056305116644616

Kapidzic, S., Neuberger, C., Stieglitz, S., & Mirbabaie, M. (2019). Interaction and Influence on Twitter. *Digital Journalism*, *7*(2), 251–272. https://doi.org/10.1080/21670811.2018.1522962

Kassambara, A. (2023). ggpubr: 'ggplot2' Based Publication Ready Plots (Version 0.6.0) [Computer software]. Retrieved from https://CRAN.R-project.org/package=ggpubr

Kearney, M. (2019). rtweet: Collecting and analyzing Twitter data. *Journal of Open Source Software*, *4*(42), 1829. https://doi.org/10.21105/joss.01829

Keman, H. (2017). Responsible Responsiveness of Parties in and out of Government. In P. Harfst, I. Kubbe, & T. Poguntke (Eds.), *Parties, Governments and Elites* (pp. 25–52).

Wiesbaden: Springer Fachmedien Wiesbaden. https://doi.org/10.1007/978-3-658-17446-0_3

Kim, B., & Kim, Y. (2019). Facebook versus Instagram: How perceived gratifications and technological attributes are related to the change in social media usage. *The Social Science Journal*, *56*(2), 156–167. https://doi.org/10.1016/j.soscij.2018.10.002

Kitschelt, H. (1986). Political Opportunity Structures and Political Protest: Anti-Nuclear Movements in Four Democracies. *British Journal of Political Science*, *16*(1), 57–85. https://doi.org/10.1017/S000712340000380X

Kitschelt, H. (1989). *The Logics of Party Formation*. Cornell University Press. https://doi.org/10.7591/9781501745959

Kleinberg, J., & Lawrence, S. (2001). Network analysis. The structure of the Web. *Science (New York, N.Y.)*, *294*(5548), 1849–1850. https://doi.org/10.1126/science.1067014

Kleinen-von Königslöw, K. (2010). *Die Arenen-Integration nationaler Öffentlichkeiten: Der Fall der wiedervereinten deutschen Öffentlichkeit*. Zugl.: Bremen, Jacobs Univ., Diss., 2008 (1. Aufl.). Wiesbaden: VS Verl. für Sozialwissenschaften. Retrieved from http://dx.doi.org/10.1007/978-3-531-92321-5 https://doi.org/10.1007/978-3-531-92321-5

Klingemann, H.-D., & Budge, I. (2013). Using the Manifesto Estimates to Refine Party Family Placements. In A. Volkens, J. Bara, I. Budge, M. D. McDonald, & H.-D. Klingemann (Eds.), *Mapping policy preferences from texts III: Statistical solutions for manifesto analysts* (pp. 49–68). Oxford: Oxford University Press.

Klingemann, H.-D., Volkens, A., Bara, J., Budge, I., & McDonald, M. (2006). *Mapping Policy Preferences II: Estimates for parties, electors, and governments in Eastern Europe, European Union and OECD 1990-2003*. Oxford: Oxford University Press.

Klingemann, H.-D., & Voltmer, K. (1998). Politische Kommunikation als Wahlkampfkommunikation. In O. Jarren, U. Sarcinelli, & U. Saxer (Eds.), *Politische Kommunikation in der demokratischen Gesellschaft* (pp. 396–405). Wiesbaden: VS Verlag für Sozialwissenschaften.

Klinger, U., & Svensson, J. (2015). The emergence of network media logic in political communication: A theoretical approach. *New Media & Society*, *17*(8), 1241–1257. https://doi.org/10.1177/1461444814522952

Knüpfer, C., Hoffmann, M., & Voskresenskii, V. (2022). Hijacking MeToo : transnational dynamics and networked frame contestation on the far right in the case of the '120 decibels'

campaign. *Information, Communication & Society*, *25*(7), 1010–1028. https://doi.org/10.1080/1369118X.2020.1822904

Koopmans, R. (2007). Who inhabits the European public sphere? Winners and losers, supporters and opponents in Europeanised political debates. *European Journal of Political Research*, *46*(2), 183–210. https://doi.org/10.1111/j.1475-6765.2006.00691.x

Koopmans, R., & Erbe, J. (2004). Towards a European public sphere? *Innovation: The European Journal of Social Science Research*, *17*(2), 97–118. https://doi.org/10.1080/1351161042000238643

Koopmans, R., Erbe, J., & Meyer, M. F. (2010). The Europeanization of Public Spheres: Comparisons across Issues, Time, and Countries. In R. Koopmans & P. Statham (Eds.), *Communication, society and politics: 2010: 1. The Making of a European Public Sphere: Media Discourse and Political Contention* (pp. 63–96). Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511761010

Koopmans, R., & Statham, P. (Eds.) (2010a). *Communication, society and politics: 2010: 1. The Making of a European Public Sphere: Media Discourse and Political Contention*. Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511761010

Koopmans, R., & Statham, P. (2010b). Theoretical Framework, Research Design, and Methods. In R. Koopmans & P. Statham (Eds.), *Communication, society and politics: 2010: 1. The Making of a European Public Sphere: Media Discourse and Political Contention* (pp. 34–59). Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511761010

Koopmans, R., & Zimmermann, A. (2010). Transnational Political Communication on the Internet: Search Engine Results and Hyperlink Networks. In R. Koopmans & P. Statham (Eds.), *Communication, society and politics: 2010: 1. The Making of a European Public Sphere: Media Discourse and Political Contention* (pp. 171–194). Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511761010

Koskinen, J., & Snijders, T. (2013). Simulation, Estimation, and Goodness of Fit. In D. Lusher, J. Koskinen, & G. Robins (Eds.), *Structural analysis in the social sciences: Vol. 35. Exponential Random Graph Models for Social Networks: Theory, Methods, and Applications* (pp. 141–166). Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511894701

Kreiss, D., Lawrence, R. G., & McGregor, S. C. (2018). In Their Own Words: Political Practitioner Accounts of Candidates, Audiences, Affordances, Genres, and Timing in

Strategic Social Media Use. *Political Communication*, *35*(1), 8–31. https://doi.org/10.1080/10584609.2017.1334727

Kriesi, H. (1998). The transformation of cleavage politics The 1997 Stein Rokkan lecture. *European Journal of Political Research*, *33*(2), 165–185. https://doi.org/10.1023/A:1006861430369

Kriesi, H. (2013). Introduction - The New Challenges to Democracy. In H. Kriesi, S. Lavenex, F. Esser, J. Matthes, M. Bühlmann, & D. Bochsler (Eds.), *Democracy in the Age of Globalization and Mediatization* (pp. 1–16). London: Palgrave Macmillan UK. https://doi.org/10.1057/9781137299871_1

Kriesi, H. (2014). The Populist Challenge. *West European Politics*, *37*(2), 361–378. https://doi.org/10.1080/01402382.2014.887879

Kriesi, H. (2016). The Politicization of European Integration. *JCMS: Journal of Common Market Studies*, *54*, 32–47. https://doi.org/10.1111/jcms.12406

Kriesi, H. (2020). Is There a Crisis of Democracy in Europe? *Politische Vierteljahresschrift*, *61*(2), 237–260. https://doi.org/10.1007/s11615-020-00231-9

Kriesi, H., Grande, E., Bornschier, S., Lachat, R., Dolezal, M., & Frey, T. (2006). Globalization and the transformation of the national political space: Six European countries compared. *European Journal of Political Research*, *45*(6), 921–956. https://doi.org/10.1111/j.1475-6765.2006.00644.x

Kriesi, H., Grande, E., Dolezal, M., Helbling, M., Höglinger, D., Hutter, S., & Wüest, B. (2012). *Political conflict in Western Europe*. Cambridge, New York, Melbourne: Cambridge University Press.

Kriesi, H., Grande, E., Lachat, R., Dolezal, M., Bornschier, S., & Frey, T. (2008). *West European Politics in the Age of Globalization*. Cambridge University Press. https://doi.org/10.1017/CBO9780511790720

Kriesi, H., Tresch, A., & Jochum, M. (2007). Going Public in the European Union. *Comparative Political Studies*, *40*(1), 48–73. https://doi.org/10.1177/0010414005285753

Krippendorff, K. (2004). Reliability in Content Analysis. *Human Communication Research*, *30*(3), 411–433. https://doi.org/10.1111/j.1468-2958.2004.tb00738.x

Krivitsky, P. N., Hunter, D. R., Morris, M. [Martina], & Klumb, C. (2022). *ergm 4: New features*. Retrieved from http://arxiv.org/pdf/2106.04997v2

Lang, S. (2012). *NGOs, Civil Society, and the Public Sphere*. Cambridge University Press.

Larsson, A. O. (2013). Bringing it all back home? Social media practices by Swedish municipalities. *European Journal of Communication*, *28*(6), 681–695. https://doi.org/10.1177/0267323113502277

Larsson, A. O. (2021). The rise of Instagram as a tool for political communication: A longitudinal study of European political parties and their followers. *New Media & Society.* Advance online publication. https://doi.org/10.1177/14614448211034158

Lewis, D. (2010). Nongovernmental Organizations, Definition and History. In H. K. Anheier & S. Toepler (Eds.), *International Encyclopedia of Civil Society* (pp. 1056–1062). New York, NY: Springer US. https://doi.org/10.1007/978-0-387-93996-4_3

Lewis, D., Yang, Y., Rose, T., & Li, F. (2004). RCV1: A New Benchmark Collection for Text Categorization Research. *Journal of Machine Learning Research*, *5*, 361–397.

Lilleker, D. G., Koc-Michalska, K., Schweitzer, E. J. [Eva J.], Jacunski, M., Jackson, N., & Vedel, T. (2011). Informing, engaging, mobilizing or interacting: Searching for a European model of web campaigning. *European Journal of Communication*, *26*(3), 195–213. https://doi.org/10.1177/0267323111416182

Lindner, R., & Riehm, U. (2011). Broadening Participation Through E-Petitions? An Empirical Study of Petitions to the German Parliament. *Policy & Internet*, *3*(1), 63–85. https://doi.org/10.2202/1944-2866.1083

Lipset, S. M., & Rokkan, S. (1990). Cleavage Structures, Party Systems, and Voter Alignments. In P. Mair (Ed.), *The West European Party System* (pp. 91–138). Oxford: Oxford University Press.

Lusher, D., Koskinen, J., & Robins, G. (Eds.) (2013). *Structural analysis in the social sciences: Vol. 35. Exponential Random Graph Models for Social Networks: Theory, Methods, and Applications*. Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511894701

Lusher, D., & Robins, G. (2013a). Example Exponential Random Graph Model Analysis. In D. Lusher, J. Koskinen, & G. Robins (Eds.), *Structural analysis in the social sciences: Vol. 35. Exponential Random Graph Models for Social Networks: Theory, Methods, and Applications* (pp. 37–46). Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511894701

Lusher, D., & Robins, G. (2013b). Formation of Social Network Structure. In D. Lusher, J. Koskinen, & G. Robins (Eds.), *Structural analysis in the social sciences: Vol. 35. Exponential Random Graph Models for Social Networks: Theory, Methods, and*

Applications (pp. 16–28). Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511894701

Lusher, D., & Robins, G. (2013c). Personal Attitudes, Perceived Attitudes, and Social Structures: A Social Selection Model. In D. Lusher, J. Koskinen, & G. Robins (Eds.), *Structural analysis in the social sciences: Vol. 35. Exponential Random Graph Models for Social Networks: Theory, Methods, and Applications* (pp. 189–201). Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511894701

Magin, M., Podschuweit, N., Haßler, J., & Russmann, U. (2017). Campaigning in the fourth age of political communication. A multi-method study on the use of Facebook by German and Austrian parties in the 2013 national election campaigns. *Information, Communication & Society*, *20*(11), 1698–1719. https://doi.org/10.1080/1369118X.2016.1254269

Mahrt, M. (2019). *Beyond Filter Bubbles and Echo Chambers: The Integrative Potential of the Internet*. Berlin. https://doi.org/10.17174/dcr.v5.0

Mahrt, M., & Scharkow, M. (2013). The Value of Big Data in Digital Media Research. *Journal of Broadcasting & Electronic Media*, *57*(1), 20–33. https://doi.org/10.1080/08838151.2012.761700

Maier, D., Baden, C., Stoltenberg, D., Vries-Kedem, M. de, & Waldherr, A. (2022). Machine Translation Vs. Multilingual Dictionaries Assessing Two Strategies for the Topic Modeling of Multilingual Text Collections. *Communication Methods and Measures*, *16*(1), 19–38. https://doi.org/10.1080/19312458.2021.1955845

Maier, D., Waldherr, A., Miltner, P., Wiedemann, G., Niekler, A., Keinert, A., . . . Adam, S. (2018). Applying LDA Topic Modeling in Communication Research: Toward a Valid and Reliable Methodology. *Communication Methods and Measures*, *12*(2-3), 93–118. https://doi.org/10.1080/19312458.2018.1430754

Maier, M., Bacherle, P., Adam, S., & Leidecker-Sandmann, M. (2019). The interplay between parties and media in putting EU issues on the agenda: A temporal pattern analysis of the 2014 European Parliamentary election campaigns in Austria, Germany and the United Kingdom. *Party Politics*, *25*(2), 167–178. https://doi.org/10.1177/1354068817700532

Maireder, A., & Schlögl, S. (2014). 24 hours of an #outcry: The networked publics of a socio-political debate. *European Journal of Communication*, *29*(6), 687–702. https://doi.org/10.1177/0267323114545710

Manning, C. D., Raghavan, P., & Schütze, H. (2008). *An introduction to information retrieval*. Cambridge, England: Cambridge University Press.

Marcinkiewicz, K., & Tosun, J. (2015). Contesting climate change: mapping the political debate in Poland. *East European Politics*, *31*(2), 187–207. https://doi.org/10.1080/21599165.2015.1022648

Maurer, T., Spittka, E., & Benert, V. (2018). Onlineangebote deutscher Fernsehveranstalter für die Zielgruppe der Millenials. [Online supply of German television broadcasters for the millennial target audience.] In die medienanstalten (Ed.), *Content-Bericht 2017. Forschung, Fakten, Trends [Content report 2017: Research, facts, trends.]* (pp. 25–35). Berlin: Vistas.

Mayr, P., & Weller, K. (2017). Think Before You Collect: Setting Up a Data Collection Approach for Social Media Studies. In L. Sloan & A. Quan-Haase (Eds.), *The SAGE Handbook of Social Media Research Methods* (pp. 107–124). London: SAGE.

Mazzoleni, G. (2008). Media Logic. In W. Donsbach (Ed.), *The International Encyclopedia of Communication*. Chichester, UK: John Wiley & Sons. https://doi.org/10.1002/9781405186407.wbiecm040

McCay-Peet, L., & Quan-Haase, A. (2017). What is Social Media and What Questions Can Social Media Research Help Us Answer? In L. Sloan & A. Quan-Haase (Eds.), *The SAGE Handbook of Social Media Research Methods* (pp. 13–26). London: SAGE.

McCombs, M. E., & Shaw, D. L. (1972). The Agenda-Setting Function of Mass Media. *The Public Opinion Quarterly*, *36*(2), 176–187. Retrieved from https://www.jstor.org/stable/2747787

McNair, B. (2000). *Journalism and democracy: An evaluation of the political public sphere*. London, New York: Routledge.

McPherson, M., Smith-Lovin, L., & Cook, J. M. (2001). Birds of a Feather: Homophily in Social Networks. *Annual Review of Sociology*, *27*(1), 415–444. https://doi.org/10.1146/annurev.soc.27.1.415

Meijers, M. J., Schneider, C. J., & Zhelyazkova, A. (2019). Dimensions of input responsiveness in the EU: actors, publics, venues. *Journal of European Public Policy*, *26*(11), 1724–1736. https://doi.org/10.1080/13501763.2019.1668045

Meng, K. S., & Leung, L. (2021). Factors influencing TikTok engagement behaviors in China: An examination of gratifications sought, narcissism, and the Big Five personality traits. *Telecommunications Policy*, *45*(7), 102172. https://doi.org/10.1016/j.telpol.2021.102172

Metaxas, P. T., Mustafaraj, E., Wong, K., Zeng, L., O'Keefe, M., & Finn, S. (2014). *Do Retweets indicate Interest, Trust, Agreement? (Extended Abstract)*. arXiv. https://doi.org/10.48550/arXiv.1411.3555

Meyer, D. S. (2004). Protest and Political Opportunities. *Annual Review of Sociology*, *30*(1), 125–145. https://doi.org/10.1146/annurev.soc.30.012703.110545

Michailidou, A. (2015). The role of the public in shaping EU contestation: Euroscepticism and online news media. *International Political Science Review*, *36*(3), 324–336. https://doi.org/10.1177/0192512115577230

Michailidou, A., & Trenz, H.-J. (2021). Rethinking journalism standards in the era of post-truth politics: from truth keepers to truth mediators. *Media, Culture & Society*, *43*(7), 1340–1349. https://doi.org/10.1177/01634437211040669

Michailidou, A., Trenz, H.-J., & Wilde, P. de (2014). *The Internet and European Integration: Pro- and Anti- EU Debates in Online News Media*. Opladen: Barbara Budrich Publishers.

Miklin, E. (2014). From 'Sleeping Giant' to Left-Right Politicization? National Party Competition on the EU and the Euro Crisis. *Journal of Common Market Studies*, *52*(6), 1199–1206. https://doi.org/10.1111/jcms.12188

Miley, T., & Garvía, R. (2019). Conflict in Catalonia: A Sociological Approximation. *Genealogy*, *3*(4), 56. https://doi.org/10.3390/genealogy3040056

Mimno, D., Wallach, H. M., Talley, E., Leenders, M., & McCallum, A. (2011). Optimizing Semantic Coherence in Topic Models. *Proceedings of the 2011 Conference on Empirical Methods in Natural Language Processing*, 262–272. Retrieved from http://dirichlet.net/pdf/mimno11optimizing.pdf

Minkenberg, M. (2009). Religion and Euroscepticism: Cleavages, Religious Parties and Churches in EU Member States. *West European Politics*, *32*(6), 1190–1211. https://doi.org/10.1080/01402380903230660

Mirrlees, T. (2021). GAFAM and Hate Content Moderation: Deplatforming and Deleting the Alt-right. In M. Deflem & D. M. D. Silva (Eds.), *Sociology of Crime, Law and Deviance. Media and Law: Between Free Speech and Censorship* (pp. 81–97). Emerald Publishing Limited. https://doi.org/10.1108/S1521-613620210000026006

Molyneux, L. (2015). What journalists retweet: Opinion, humor, and brand development on Twitter. *Journalism: Theory, Practice & Criticism*, *16*(7), 920–935. https://doi.org/10.1177/1464884914550135

Monge, P. R., & Contractor, N. (2003). *Theories of Communication Networks*. Oxford University Press.

Morstatter, F., Pfeffer, J., Liu, H., & Carley, K. (2013). Is the Sample Good Enough? Comparing Data from Twitter's Streaming API with Twitter's Firehose. *Proceedings of the*

International AAAI Conference on Web and Social Media, *7*(1), 400–408. https://doi.org/10.1609/icwsm.v7i1.14401

Müller, M. (2022). Spreading the word? European Union agencies and social media attention. *Government Information Quarterly*, *39*(2), 1–13. https://doi.org/10.1016/j.giq.2022.101682

Müller, P., & Slominski, P. (2022). Shrinking the space for civil society: (De)Politicizing the obstruction of humanitarian NGOs in EU border management. *Journal of Ethnic and Migration Studies*, *48*(19), 4774–4792. https://doi.org/10.1080/1369183X.2022.2099363

Napierala, N. (2019). "This Time I'm Voting"?! – Why the European Parliament's campaign to increase voter turnout could have converse effects. Retrieved from https://www.dahrendorf-forum.eu/this-time-im-voting-why-the-european-parliaments-campaign-to-increase-voter-turnout-could-have-converse-effects/

Neidhardt, F. (1994). *Öffentlichkeit, öffentliche Meinung, soziale Bewegungen. [Public sphere, public opinion, social movements.]* Opladen: Westdeutscher Verlag.

Neuberger, C. (2018). Journalismus in der Netzwerköffentlichkeit. [Journalism in networked public spheres.] In C. Nuernbergk & C. Neuberger (Eds.), *Journalismus im Internet [Journalism on the Internet]* (pp. 11–80). Wiesbaden: Springer Fachmedien Wiesbaden. https://doi.org/10.1007/978-3-531-93284-2_2

Neuberger, C. (2022). How to Capture the Relations and Dynamics within the Networked Public Sphere? In B. Krämer & P. Müller (Eds.), *Questions of Communicative Change and Continuity* (pp. 67–95). Nomos Verlagsgesellschaft mbH & Co. KG. https://doi.org/10.5771/9783748928232-67

Newman, M. E. J., & Girvan, M. (2004). Finding and evaluating community structure in networks. *Physical Review. E, Statistical, Nonlinear, and Soft Matter Physics*, *69*(2), 1–15. https://doi.org/10.1103/PhysRevE.69.026113

Norris, P. (2014). Watchdog Journalism. In M. Bovens, R. E. Goodin, & T. Schillemans (Eds.), *The Oxford Handbook of Public Accountability*. Oxford University Press. https://doi.org/10.1093/oxfordhb/9780199641253.013.0015

Obholzer, L., & Daniel, W. T. (2016). An online electoral connection? How electoral systems condition representatives' social media use. *European Union Politics*, *17*(3), 387–407. https://doi.org/10.1177/1465116516630149

Oehmer, F. (2022). Nicht-staatliche Akteure. [Non-governmental actors.] In I. Borucki, K. Kleinen-von Königslöw, S. Marschall, & T. Zerback (Eds.), *Handbuch Politische*

Kommunikation [Handbook of Political Communication] (pp. 173–186). Wiesbaden: Springer Fachmedien Wiesbaden. https://doi.org/10.1007/978-3-658-26242-6_12-1

Oeldorf-Hirsch, A. (2018). The Role of Engagement in Learning From Active and Incidental News Exposure on Social Media. *Mass Communication and Society*, *21*(2), 225–247. https://doi.org/10.1080/15205436.2017.1384022

Omar, B., & Dequan, W. (2020). Watch, Share or Create: The Influence of Personality Traits and User Motivation on TikTok Mobile Video Usage. *International Journal of Interactive Mobile Technologies (IJIM)*, *14*(04), 121. https://doi.org/10.3991/ijim.v14i04.12429

Ørsten, M., & Vigsø, O. (2022). Green as Greta? Environmental Issues in the 2019 European Election Campaigns. In E. Novelli, B. Johansson, & D. Wring (Eds.), *The 2019 European Electoral Campaign* (pp. 143–158). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-98993-4_8

Özdemir, S., & Rauh, C. (2022). A Bird's Eye View: Supranational EU Actors on Twitter. *Politics and Governance*, *10*(1), 133–145. https://doi.org/10.17645/pag.v10i1.4686

Papacharissi, Z. (2002). The virtual sphere. *New Media & Society*, *4*(1), 9–27. https://doi.org/10.1177/14614440222226244

Pariser, E. (2011). *The filter bubble: What the Internet is hiding from you*. London: Viking.

Parmelee, J. H. (2014). The agenda-building function of political tweets. *New Media & Society*, *16*(3), 434–450. https://doi.org/10.1177/1461444813487955

Pearson, M., & Rüdig, W. (2020). The Greens in the 2019 European elections. *Environmental Politics*, *29*(2), 336–343. https://doi.org/10.1080/09644016.2019.1709252

Pelletier, M. J., Krallman, A., Adams, F. G., & Hancock, T. (2020). One size doesn't fit all: a uses and gratifications analysis of social media platforms. *Journal of Research in Interactive Marketing*, *14*(2), 269–284. https://doi.org/10.1108/JRIM-10-2019-0159

Pfetsch, B. (2008). Agents of Transnational Debate Across Europe. *Javnost - the Public*, *15*(4), 21–40. https://doi.org/10.1080/13183222.2008.11008980

Pfetsch, B. (2020). Democracy and Digital Dissonance: The Co-Occurrence of the Transformation of Political Culture and Communication Infrastructure. *Central European Journal of Communication*, *13*(1), 96–110. https://doi.org/10.19195/1899-5101.13.1(25).7

Pfetsch, B., Adam, S., & Eschner, B. (2008). The contribution of the press to Europeanization of public debates. *Journalism: Theory, Practice & Criticism*, *9*(4), 465–492. https://doi.org/10.1177/1464884908091295

Pfetsch, B., Benert, V., & Heft, A. (2021, March 26). *Right-wing mobilization on the ground? National multipliers and transnational mediators of right-wing orientations during the 2019 EP elections on Twitter*. Interim Conference of the Political Communnication Research Section of the European Communication Research and Education Association (ECREA), Virtual Conference.

Pfetsch, B., Benert, V., & Heft, A. (2023). Same, same but different? Explaining issue agendas of right-wing parties' Facebook campaigns to the 2019 EP election. *Party Politics.* Advance online publication. https://doi.org/10.1177/13540688231184624

Pfetsch, B., Löblich, M., & Eilders, C. (2018). Dissonante Öffentlichkeiten als Perspektive kommunikationswissenschaftlicher Theoriebildung. [Dissonant public spheres as a perspective in the development of communication theory.] *Publizistik*, *63*(4), 477–495. https://doi.org/10.1007/s11616-018-0441-1

Pfetsch, B., Maurer, P., Mayerhöffer, E., Moring, T., & Schwab Cammarano, S. (2014). Contexts of the Media–Politics Relationship: Contexts of the Media–Politics Relationship: Country Selection and Grouping. In B. Pfetsch (Ed.), *Political Communication Cultures in Western Europe: Attitudes of Political Actors and Journalists in Nine Countries* (1st ed., pp. 31–56). London: Palgrave Macmillan.

Phua, J., Jin, S. V., & Kim, J. (2017). Uses and gratifications of social networking sites for bridging and bonding social capital: A comparison of Facebook, Twitter, Instagram, and Snapchat. *Computers in Human Behavior*, *72*, 115–122. https://doi.org/10.1016/j.chb.2017.02.041

Plummer, M., Best, N., Cowles, K., Vines, K., Sarkar, D., Bates, D., . . . Magnusson, A. (2006). CODA: Convergence Diagnosis and Output Analysis for MCMC. *R News*, *6*(1), 7–11. Retrieved from https://journal.r-project.org/archive/

Poier, K., Saywald-Wedl, S., & Unger, H. (2017). *Die Themen der „Populisten". [Topics of „popslists"].* Baden-Baden: Nomos.

Pond, P., & Lewis, J. (2019). Riots and Twitter: connective politics, social media and framing discourses in the digital public sphere. *Information, Communication & Society*, *22*(2), 213–231. https://doi.org/10.1080/1369118X.2017.1366539

Powell, G. B. (2004). The Quality of Democracy: The Chain of Responsiveness. *Journal of Democracy*, *15*(4), 91–105.

Primig, F., Szabó, H. D., & Lacasa, P. (2023). Remixing war: An analysis of the reimagination of the Russian–Ukraine war on TikTok. *Frontiers in Political Science*, *5*. https://doi.org/10.3389/fpos.2023.1085149

Puschmann, C. (2019). Beyond the Bubble: Assessing the Diversity of Political Search Results. *Digital Journalism*, *7*(6), 824–843. https://doi.org/10.1080/21670811.2018.1539626

Ramiro Troitiño, D., Kerikmäe, T., & Chochia, A. (2018). *Brexit*. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-319-73414-9

Rasmussen, T. (2017). Mediated Frustration and Self-Legitimation. In M. Barisione & A. Michailidou (Eds.), *Palgrave studies in European political sociology. Social media and European politics: Rethinking power and legitimacy in the digital era* (Vol. 20, pp. 219–240). London: Palgrave Macmillan UK. https://doi.org/10.1057/978-1-137-59890-5_10

Rauchfleisch, A., & Kaiser, J. (2021). Deplatforming the Far-right: An Analysis of YouTube and BitChute. *SSRN Electronic Journal.* Advance online publication. https://doi.org/10.2139/ssrn.3867818

Reber, U. (2019). Overcoming Language Barriers: Assessing the Potential of Machine Translation and Topic Modeling for the Comparative Analysis of Multilingual Text Corpora. *Communication Methods and Measures*, *13*(2), 102–125. https://doi.org/10.1080/19312458.2018.1555798

Reif, K., & Schmitt, H. (1980). Nine second order national elections - A conceptual framework for the analysis of European election results. *European Journal of Political Research*, *8*(1), 3–44. https://doi.org/10.1111/j.1475-6765.1980.tb00737.x

Risse, T. (2010). *A community of Europeans? Transnational identities and public spheres*. Ithaca: Cornell University Press.

Risse, T. (Ed.) (2015). *Contemporary European politics. European Public Spheres: Politics Is Back*. Cambridge, New York: Cambridge University Press.

Roberts, M. E., Stewart, B. M., & Tingley, D. (2019). stm : An R Package for Structural Topic Models. *Journal of Statistical Software*, *91*(2), 1–40. https://doi.org/10.18637/jss.v091.i02

Roberts, M. E., Stewart, B. M., Tingley, D., Lucas, C., Leder-Luis, J., Gadarian, S. K., . . . Rand, D. G. (2014). Structural Topic Models for Open-Ended Survey Responses. *American Journal of Political Science*, *58*(4), 1064–1082. https://doi.org/10.1111/ajps.12103

Robins, G., & Daraganova, G. (2013). Social Selection, Dyadic Covariates, and Geospatial Effects. In D. Lusher, J. Koskinen, & G. Robins (Eds.), *Structural analysis in the social sciences: Vol. 35. Exponential Random Graph Models for Social Networks: Theory,*

Methods, and Applications (pp. 91–101). Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511894701

Robins, G., & Lusher, D. (2013). What Are Exponential Random Graph Models? In D. Lusher, J. Koskinen, & G. Robins (Eds.), *Structural analysis in the social sciences: Vol. 35. Exponential Random Graph Models for Social Networks: Theory, Methods, and Applications* (pp. 9–15). Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511894701

Robins, G., Pattison, P., & Woolcock, J. (2004). Missing data in networks: exponential random graph (p∗) models for networks with non-respondents. *Social Networks*, *26*(3), 257–283. https://doi.org/10.1016/j.socnet.2004.05.001

Rogers, R. (2020). Deplatforming: Following extreme Internet celebrities to Telegram and alternative social media. *European Journal of Communication*, *35*(3), 213–229. https://doi.org/10.1177/0267323120922066

Roose, J., Sommer, M., Scholl, F., Kousis, M., Kanellopoulos, K., & Loukakis, A. (2017). Debating Responsibility on the Eurozone Crisis in Traditional Media Newspaper Reporting in Greece and Germany Under a Social Media Lens. In M. Barisione & A. Michailidou (Eds.), *Palgrave studies in European political sociology. Social media and European politics: Rethinking power and legitimacy in the digital era* (Vol. 31, pp. 267–290). London: Palgrave Macmillan UK. https://doi.org/10.1057/978-1-137-59890-5_12

Rucht, D. (1994). *Modernisierung und neue soziale Bewegungen: Deutschland, Frankreich und USA im Vergleich. Theorie und Gesellschaft: Vol. 32. [Modernization and new social movements: Germany, France, and the USA in comparison. Theory and Society: Vol. 32].* Frankfurt am Main: Campus.

Ruiz-Soler, J. (2018). The Last Will Be the First. A Study of European Issue Publics on Twitter. *PArtecipazione E COnflitto*, *11*(2), 423–447. https://doi.org/10.1285/i20356609v11i2p423

Ruiz-Soler, J., Curini, L., & Ceron, A. (2019). Commenting on Political Topics Through Twitter: Is European Politics European? *Social Media + Society*, *5*(4), 205630511989088. https://doi.org/10.1177/2056305119890882

Santoro, L. R. (2022). Do Political Beliefs Drive Environment Selection? *American Politics Research*, 108-124. https://doi.org/10.1177/1532673X221112394

Saxer, U. (2006). Europäischer Gesellschafts-, Medien- und Öffentlichkeitswandel — eine kommunikationssoziologische Perspektive. [European societal, media, and public transformation — a communication sociological perspective.] In W. R. Langenbucher & M.

Latzer (Eds.), *Europäische Öffentlichkeit und medialer Wandel [European public sphere and media change]* (pp. 62–92). Wiesbaden: VS Verlag für Sozialwissenschaften. https://doi.org/10.1007/978-3-531-90272-2_3

Scharpf, F. W. (1999). *Governing in Europe: Effective and democratic?* Oxford University Press. https://doi.org/10.1093/acprof:oso/9780198295457.001.0001

Schenk, M. (2007). *Medienwirkungsforschung. [Media effects research.]* Tübingen: Mohr Siebeck.

Schimmelfennig, F. (2020). Politicisation management in the European Union. *Journal of European Public Policy*, *27*(3), 342–361. https://doi.org/10.1080/13501763.2020.1712458

Schmidt, V. A. (2013). Democracy and Legitimacy in the European Union Revisited: Input, Output and 'Throughput'. *Political Studies*, *61*(1), 2–22. https://doi.org/10.1111/j.1467-9248.2012.00962.x

Schminke, T. G. (2022). Pyrrhic victories? The Green electoral year 2022. Retrieved from https://eu.boell.org/en/greens-elections-2022

Schmitt, H. (2005). The European Parliament Elections of June 2004: Still Second-Order? *West European Politics*, *28*(3), 650–679. https://doi.org/10.1080/01402380500085962

Schmitt, H., Hobolt, S., & Popa, S. A. (2015). Does personalization increase turnout? Spitzenkandidaten in the 2014 European Parliament elections. *European Union Politics*, *16*(3), 347–368. https://doi.org/10.1177/1465116515584626

Schöll, N., Gallego, A., & Le Mens, G. (2023). How Politicians Learn from Citizens' Feedback: The Case of Gender on Twitter. *American Journal of Political Science.* Advance online publication. https://doi.org/10.1111/ajps.12772

Schuck, A. R., & de Vreese, C. H. (2006). Between Risk and Opportunity. *European Journal of Communication*, *21*(1), 5–32. https://doi.org/10.1177/0267323106060987

Schulze, H., Hohner, J., Greipl, S., Girgnhuber, M., Desta, I., & Rieger, D. (2022). Far-right conspiracy groups on fringe platforms: a longitudinal analysis of radicalization dynamics on Telegram. *Convergence: The International Journal of Research into New Media Technologies*, 135485652211049. https://doi.org/10.1177/13548565221104977

Schwemmer, C. (2021). stminsights: A 'Shiny' Application for Inspecting Structural Topic Models (Version 0.4.1) [Computer software]. Retrieved from https://CRAN.R-project.org/package=stminsights

Sheafer, T., Shenhav, S. R., & Balmas, M. (2014). 11. Political actors as communicators. In C. Reinemann (Ed.), *Political Communication* (pp. 211–230). De Gruyter. https://doi.org/10.1515/9783110238174.211

Shumate, M., & Dewitt, L. (2008). The North/South Divide in NGO Hyperlink Networks. *Journal of Computer-Mediated Communication*, *13*(2), 405–428. https://doi.org/10.1111/j.1083-6101.2008.00402.x

Sitter, N. (2002). Cleavages, party strategy and party system change in Europe, east and west. *Perspectives on European Politics and Society*, *3*(3), 425–451. https://doi.org/10.1080/15705850208438844

Sjoberg, D. (2021). Make sankey, alluvial and sankey bump plots in ggplot [Computer software]. Retrieved from https://github.com/davidsjoberg/ggsankey

Slaven, M., & Heydon, J. (2020). Crisis, deliberation, and Extinction Rebellion. *Critical Studies on Security*, *8*(1), 59–62. https://doi.org/10.1080/21624887.2020.1735831

Stark, B., & Steiner, M. (2018). Public Network Value for the Next Generation am Beispiel von funk. In N. Gonser (Ed.), *Forschung und Praxis an der FHWien der WKW. Der öffentliche (Mehr-)Wert von Medien* (pp. 77–92). Wiesbaden: Springer Fachmedien Wiesbaden. https://doi.org/10.1007/978-3-658-20498-3_6

Statham, P. (2010). Introduction: Europe's Search for a Public. In R. Koopmans & P. Statham (Eds.), *Communication, society and politics: 2010: 1. The Making of a European Public Sphere: Media Discourse and Political Contention* (pp. 1–10). Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511761010

Steenbergen, M. R., & Scott, D. J. (2009). Contesting Europe? The salience of European integration as a party issue. In G. Marks & M. R. Steenbergen (Eds.), *European Integration and Political Conflict* (pp. 165–192). Cambridge University Press. https://doi.org/10.1017/CBO9780511492013.010

Stier, S., Bleier, A., Lietz, H., & Strohmaier, M. (2018). Election Campaigning on Social Media: Politicians, Audiences, and the Mediation of Political Communication on Facebook and Twitter. *Political Communication*, *35*(1), 50–74. https://doi.org/10.1080/10584609.2017.1334728

Stier, S., Froio, C., & Schünemann, W. J. (2021). Going transnational? Candidates' transnational linkages on Twitter during the 2019 European Parliament elections. *West European Politics*, *44*(7), 1455–1481. https://doi.org/10.1080/01402382.2020.1812267

Stivala, A., Robins, G., & Lomi, A. (2020). Exponential random graph model parameter estimation for very large directed networks. *PloS One*, *15*(1). https://doi.org/10.1371/journal.pone.0227804

Stollfuß, S. (2021). The platformisation of public service broadcasting in Germany: The network 'funk' and the case of Druck/Skam Germany. *Critical Studies in Television: The International Journal of Television Studies*, *16*(2), 126–144. https://doi.org/10.1177/1749602021996536

Stoltenberg, D., Maier, D., & Waldherr, A. (2019). Community detection in civil society online networks: Theoretical guide and empirical assessment. *Social Networks*, *59*, 120–133. https://doi.org/10.1016/j.socnet.2019.07.001

Sunstein, C. R. (2001). *Echo chambers: Bush v. Gore, Impeachment, and Beyond*. Princeton, N.J.: Princeton University Press.

Sunstein, C. R. (2006). *Infotopia: How many minds produce knowledge*. New York: Oxford University Press.

Sunstein, C. R. (2017). *#republic: Divided Democracy in the Age of Social Media*. Princeton University Press.

Tandoc, E. C., Cabañes, J. V. A., & Cayabyab, Y. M. (2019). Bridging the Gap. *Journalism Studies*, *20*(6), 857–871. https://doi.org/10.1080/1461670X.2018.1463168

Tarrow, S. G. (1994). *Power in movement: Social movements, collective action and politics*. *Cambridge Studies in Comparative Politics*. Cambridge: Cambridge University Press.

Tilly, C. (2004). *Social Movements, 1768–2004*. Routledge.

Tobler, S. (2010). *Transnationalisierung nationaler Öffentlichkeit: Konfliktinduzierte Kommunikationsverdichtungen und kollektive Identitätsbildung in Europa. [Transnationalization of national public sphere: Conflict-induced communication densifications and collective identity formation in Europe.]* Wiesbaden: VS Verlag für Sozialwissenschaften.

Törnberg, P. (2018). Echo chambers and viral misinformation: Modeling fake news as complex contagion. *PloS One*, *13*(9), e0203958. https://doi.org/10.1371/journal.pone.0203958

Tournier-Sol, K. (2021). From UKIP to the Brexit party: the politicization of European integration and disruptive impact on national and European arenas. *Journal of Contemporary European Studies*, *29*(3), 380–390. https://doi.org/10.1080/14782804.2020.1785849

Treib, O. (2014). The voter says no, but nobody listens: causes and consequences of the Eurosceptic vote in the 2014 European elections. *Journal of European Public Policy*, *21*(10), 1541–1554. https://doi.org/10.1080/13501763.2014.941534

Treib, O. (2021). Euroscepticism is here to stay: what cleavage theory can teach us about the 2019 European Parliament elections. *Journal of European Public Policy*, *28*(2), 174–189. https://doi.org/10.1080/13501763.2020.1737881

Trenz, H.-J. (2015). Europeanising the Public Sphere – Meaning, Mechanisms, Effects. In U. Liebert & J. Wolff (Eds.), *Interdisziplinäre Europastudien* (pp. 233–251). Wiesbaden: Springer Fachmedien Wiesbaden. https://doi.org/10.1007/978-3-658-03620-1_11

Twitter (2022a). *About Twitter Polls*. Retrieved from https://help.twitter.com/en/using-twitter/twitter-polls

Twitter (2022b). *Academic research access*. Retrieved from https://developer.twitter.com/en/products/twitter-api/academic-research

Urman, A., & Katz, S. (2022). What they do in the shadows: examining the far-right networks on Telegram. *Information, Communication & Society*, *25*(7), 904–923. https://doi.org/10.1080/1369118X.2020.1803946

Van Dijck, J., & Poell, T. (2013). *Understanding Social Media Logic.* https://doi.org/10.12924/mac2013.01010002

Vaterlaus, J. M., & Winter, M. (2021). TikTok: an exploratory study of young adults' uses and gratifications. *The Social Science Journal*, 1–20. https://doi.org/10.1080/03623319.2021.1969882

Veltri, G. A., Redd, R., Mannarini, T., & Salvatore, S. (2019). The identity of Brexit: A cultural psychology analysis. *Journal of Community & Applied Social Psychology*, *29*(1), 18–31. https://doi.org/10.1002/casp.2378

Vergeer, M. (2015). Twitter and Political Campaigning. *Sociology Compass*, *9*(9), 745–760. https://doi.org/10.1111/soc4.12294

Vergeer, M., Hermans, L., & Cunha, C. (2013). Web campaigning in the 2009 European Parliament elections: A cross-national comparative analysis. *New Media & Society*, *15*(1), 128–148. https://doi.org/10.1177/1461444812457337

Vicari, S. (2014). Networks of Contention: The Shape of Online Transnationalism in Early Twenty-First Century Social Movement Coalitions. *Social Movement Studies*, *13*(1), 92–109. https://doi.org/10.1080/14742837.2013.832621

Volkens, A., Bara, J., Budge, I., McDonald, M. D., & Klingemann, H.-D. (Eds.) (2013). *Mapping policy preferences from texts III: Statistical solutions for manifesto analysts.* Oxford: Oxford University Press.

Volkens, A., Krause, W., Lehmann, P., Matthieß, T., Merz, N., Regel, S., & Weßels, B. (2019a). *Manifesto Project Dataset.* Manifesto Project. https://doi.org/10.25522/manifesto.mpds.2019b

Volkens, A., Krause, W., Lehmann, P., Matthieß, T., Merz, N., Regel, S., & Weßels, B. (2019b). *The Manifesto Project Dataset - Codebook. Manifesto Project (MRG/CMP/MARPOR). Version 2019b.* Berlin. Retrieved from https://manifesto-project.wzb.eu/down/data/2019b/codebooks/codebook_MPDataset_MPDS2019b.pdf

Voltolini, B., Natorski, M., & Hay, C. (Eds.) (2021). *Journal of European integration special issues. Crisis and politicisation: The framing and re-framing of Europe's permanent crisis.* London: Routledge.

Waldherr, A., Miltner, P., Pfetsch, B., Schmid-Petri, H., Häussler, T., Adam, S., . . . Bennett, W. L. (2013). *Codebook for the analysis of frames in online documents and newspaper articles. COAB-Project: The impact of challengers' online communication on media agendabuilding – a comparison across countries and issues.* Berlin. Retrieved from Institute for Media and Communication Studies, Freie Universität Berlin website: https://www.polsoz.fu-berlin.de/kommwiss/arbeitsstellen/kommunikationstheorie/forschung/coab/COAB_Codebook_Food-Safety_2013-12-04.pdf

Wallach, H. M., Murray, I., Salakhutdinov, R., & Mimno, D. (2009). Evaluation Methods for Topic Models. *Proceedings of the 26th International Conference on Machine Learning*, *26*, 1–8. Retrieved from https://www.cs.cmu.edu/~rsalakhu/papers/etm.pdf

Walter, S. (2017a). *EU Citizens in the European Public Sphere.* Wiesbaden: Springer.

Walter, S. (2017b). Explaining the visibility of EU citizens: a multi-level analysis of European Union news. *European Political Science Review*, *9*(2), 233–253. https://doi.org/10.1017/S1755773915000363

Walter, S. (2017c). Three Models of the European Public Sphere. *Journalism Studies*, *18*(6), 749–770. https://doi.org/10.1080/1461670X.2015.1087815

Wasserman, S., & Faust, K. (1994). *Social network analysis: Methods and application.* Cambridge: Cambridge University Press.

Wessler, H., Peters, B., Brüggemann, M., Kleinen-von Königslöw, K., & Sifft, S. (Eds.) (2008). *Transformations of the state. Transnationalization of Public Spheres*. Basingstoke, New York: Palgrave Macmillan.

Wessler, H., Rinke, E. M., & Löb, C. (2016). Should We Be Charlie ? A Deliberative Take on Religion and Secularism in Mediated Public Spheres. *Journal of Communication*, *66*(2), 314–327. https://doi.org/10.1111/jcom.12213

Wickham, H. (2016). ggplot2: Elegant Graphics for Data Analysis [Computer software]. Springer: Springer. Retrieved from https://ggplot2.tidyverse.org

Wickham, H. (2022). stringr: Simple, Consistent Wrappers for Common String Operations (Version 1.5.0). Retrieved from https://CRAN.R-project.org/package=stringr

Wickham, H., François, R., Henry, L., Müller, K., & Vaughan, D. (2023). dplyr: A Grammar of Data Manipulation (Version 1.1.0) [Computer software]. Retrieved from https://CRAN.R-project.org/package=dplyr

Wickham, H., Vaughan, D., & Girlich, M. (2023). tidyr: Tidy Messy Data (Version 1.3.0) [Computer software]. Retrieved from https://CRAN.R-project.org/package=tidyr

Wright, S. (2016). 'Success' and online political participation: The case of Downing Street E-petitions. *Information, Communication & Society*, *19*(6), 843–857. https://doi.org/10.1080/1369118X.2015.1080285

Xiong, Y., Cho, M., & Boatwright, B. (2019). Hashtag activism and message frames among social movement organizations: Semantic network analysis and thematic analysis of Twitter during the #MeToo movement. *Public Relations Review*, *45*(1), 10–23. https://doi.org/10.1016/j.pubrev.2018.10.014

Zhang, M., & Liu, Y. (2021). A commentary of TikTok recommendation algorithms in MIT Technology Review 2021. *Fundamental Research*, *1*(6), 846–847. https://doi.org/10.1016/j.fmre.2021.11.015

Żuk, P., & Szulecki, K. (2020). Unpacking the right-populist threat to climate action: Poland's pro-governmental media on energy transition and climate change. *Energy Research & Social Science*, *66*, 101485. https://doi.org/10.1016/j.erss.2020.101485

Zulianello, M. (2020). Varieties of Populist Parties and Party Systems in Europe: From State-of-the-Art to the Application of a Novel Classification Scheme to 66 Parties in 33 Countries. *Government and Opposition*, *55*(2), 327–347. https://doi.org/10.1017/gov.2019.21

Zürn, M. (2000). Democratic Governance Beyond the Nation-State. *European Journal of International Relations*, *6*(2), 183–221. https://doi.org/10.1177/1354066100006002002

Appendix A: Coding instructions for the manual analysis of user profiles

Research design and general coding instructions

Aim of the study

This codebook is used to code *actors* and their attributes on Twitter who communicate in the context of the 2019 European elections. The aim is to combine the data from this manual content analysis of actors with automated content analyses of Tweets in order to investigate the role of individual and collective actors in the Twitter debate about the 2019 European elections and assess their contribution to the Europeanisation of networked public spheres. This focus on the communication by actors is rooted in the assumption that legacy media lose their exclusive role as gatekeepers on social media platforms compared to offline communication and that other actors therefore become more important in online debates. For example, citizens can now address political actors directly and political actors do not have to rely on mass media coverage in order to get attention from citizens. Thus, individual actors can now directly engage in discussions of European concern and therefore determine which European actors and issues become visible in public debates. A second underlying assumption is that different kinds of actors communicate with different resources, strategies, and goals in mind. Therefore, different actors will differ with regard to their contribution to Europeanisation. More concretely, actors will differ in their strategic decisions to direct attention towards European actors and issues based on their affiliation, scope, residence, and political leanings.

Europeanisation will be measured as a multi-dimensional construct. A crucial precondition for the Europeanisation of networked public spheres are the visibility of European actors and the salience of European issues. However, visibility/salience alone is not enough to establish true exchange and interaction on the European level. Therefore, the second criterium is the establishment of communicative interactions between actors from the European and the national level (vertical Europeanisation) as well as between actors from different EU member states (horizontal Europeanisation). These will be analyzed using network analysis based on @-mentions, quotes, retweets, and replies on Twitter. This codebook is used to code context information (e.g. actor group, scope) about actors taking part in debates on Twitter in order to explain different groups' impact on Europeanization.

The basis of the analysis is all Twitter communication about the 2019 EP election, that uses the official election hashtag (#EP2019). Even though this approach might exclude tweets that used similar hashtags in different languages or spellings, or referred to the election without setting a hashtag, the analysis comprises all tweets that belong to the issue-public that evolved around the #EP2019. A great advantage of this approach is that no country-selection had to be made prior to sampling so that the data set potentially includes communication from all (at the time) 28 EU member states. The sampling period started on April 1, 2019 and ended on May 31, 2019. In order to make the amount of data manageable for manual coding, this codebook is used only on a subset of the data. The unit of analysis are accounts of Twitter users. These can refer to individual actors (e.g. politicians, citizens, individual journalists, etc.) or collective actors (e.g. parties, institutions, movements, companies, etc.).

Coding procedure

Please read the following instructions carefully and follow the procedure during all coding steps. If questions arise or if you encounter instances that cannot be coded following these instructions, please contact me (v.benert@fu-berlin.de).

1) The dataset includes pre-recorded variables automatically derived from the *rtweet*-package for each user who posted tweets to the hashtag #EP2019. These include information that users voluntarily disclose on their user profiles (e.g. profile description, location, link to personal website). Whenever these variables include enough information to unambiguously code any variables needed, only the information given in these pre-recorded variables will be used. The

reason is that, for example, profile descriptions sampled from *rtweet* during the EP election equal the actual description of the actor during the 2019 EP election campaign. Coding user profiles from Twitter directly (by pasting the username into the Twitter browser) would code the information disclosed by the user at the time of coding. Since users can change their profile information as they like, this information would not necessarily have to equal the information at the time of data sampling.

2) Only if no information is given in the pre-recorded variables (which is the case for actors that are only passively part of the data set because they were retweeted, mentioned, quoted or replied to by other users but did not send any tweet with #EP2019 during the sampling period themselves) or if the information is ambiguous or insufficient to decide on a code, the username or user ID (screenname or profile ID) of the actor will be posted to the Twitter website and information will be coded from there. This might also be the case if users disclosed nonexistent locations (e.g. "on the moon", "somewhere over the rainbow") at the time of data sampling.

3) If the profile is unavailable on Twitter (e.g. because the user has been blocked or the profile deleted), only the information prerecorded in the dataset (and if necessary Google) will be used to code all variables possible. If also no information is given in the prerecorded variables (e.g. because the user did not disclose any information), all variables are left uncoded and the problem is explained in V8 (e.g. "account unavailable").

4) If the profile includes a link to a website, this link is pre-recorded in the variable *V3 Website of actor*. The main page of this website as well as categories such as *About us* or the *legal information* may be used to evaluate and decide on codes.

5) Google may be used to verify any uncertainties in coding (e.g. when the coder is unsure about the country a city that is mentioned in the profile information belongs to or when it is unclear whether an actor belongs to a certain actor group). However, whenever possible, official websites of the actors are to be preferred over Wikipedia or any other website.

6) If information on the profile or website is in a language the coder is not fluent in, Google translate or Deep L may be used to translate the information.

7) Some variables include instructions on how to move on with the coding (e.g. →*go to V5* or →*specify in V8*). In case of "go to"-Instructions, all other variables in the codebook between the coded variable and the one mentioned in the instruction do not receive specific codes, because they are not applicable to the actor being coded (e.g. when an actor is coded as citizen in V4, no further specification is needed and V4.1/V4.3 are skipped, coding moves on with V5). When no "go to"-instruction is given, coding moves on with the next variable in the codebook, no variables are skipped. "Specify in V8"-instructions are given whenever any other/unclear-category (99/999) is coded. This means that the code should be specified in V8 once coding of the actor is finished. "Specify in V8"-instructions do not implicate that the other variables can be skipped, instead coding moves on with the next variable in the codebook.

Part II: Extended code explanations

V1 Screen name
This variable denotes the Twitter screen name (denoted by the @-sign) of the account as derived from the R-package *rtweet*. The screen name can be used to find users on Twitter by pasting it in the twitter homepage [*https://twitter.com/NAME* – without @-sign] or in the browser window.
(Variable included in dataset)

V1.1 Profile ID
This variable denotes the unique Twitter user ID of the account as derived from the R-package *rtweet*. This is a unique identifier for each Twitter user and can be used to match actors and their contents.
(Variable included in dataset)

V1.2 Name
This variable denotes the name of the user as provided in her Twitter profile and sampled automatically with the R-package *rtweet*. Note: This is not the same as the screen name, which is denoted by the @-sign. Typically, the name of the user refers to her real name or the name of the company or party (in case of collective actors). However, not all users choose to give their real name, especially private actors and citizens. In case of political and media actors, the Twitter name of the actor might include references to political position and/or residency.
(Variable included in dataset)

V2.1 Coder
This variable denotes the Coder of the cases. [Note: anonymized for publication]
1 …
2 …
3 …
4 …
5 …

V2.2 Date of coding
This variable denotes the date of coding by the coders. Attention: The variable in the data set is formatted as a date-variable. Please make sure to add the date in the right format, otherwise excel will turn numbers into any date.
dd.mm.yyyy

V3 Website of Actor
This variable includes links to a website of a user if she has provided such a link in her Twitter profile. Links are automatically sampled from Twitter with R-package rtweet. The information on the website (main page, about us, legal information) may be used to evaluate information about actor group, residency, and scope if the information given in the pre-recorded variables and on the actor's Twitter profile are not sufficient to decide on a code. In order to access the information, the complete link given is copied into any Internet browser (not Google!), even if the link does not lead to the main page of the website.
(Variable included in dataset)

V3.1 Profile description of account

This variable includes the profile description of the actor's Twitter account. In the description, users usually provide information about themselves. This variable may be used to code any information about the actor she might have decided to provide in this field (e.g. actor group, country of residence, or political affiliation). Since users can decide for themselves which information to provide in their profile description, the information given might not be sufficient to code all variables for all actors. In this case, other cues on the actors' Twitter profile as well as information given on the website of the actor – if available – need to be taken into account.

(Variable included in dataset)

V3.2 Account language

This variable is included in the data set and sampled automatically from Twitter through the rtweet-package. The language of the account might not equal the language of individual tweets of an actor (e.g. when German politicians interact in English). This variable might however be useful as *additional* information in order to decide on the country of residency of the actor. Note: The account language should *never* be used as the *only* clue to code an actor's country of residency!

(Variable included in dataset)

V3.3 Account location

This variable to the location the actor has added to her Twitter profile. The variable is automatically sampled from Twitter with the R-package *rtweet*. *Note:* Twitter users can choose to add their location as an open string, therefore the information given in this variable might refer to different levels (e.g. country vs. city) or to non-existent places (e.g. Hogwarts). In those cases where the information refers to real locations on earth, the information in this variable is taken as the strongest indicator to code an actor's location.

(Variable included in dataset)

V4 Actor group

This variable denotes which group of actors the account belongs to. This preselection into actor groups will be specified in the subsequent variables. Categories are based on the codebook by Heft et al. (2022) (see also COAB Food Safety-codebook by Waldherr et al., 2013)). *Note:* Coding is based on the information present on the actor's profile page on Twitter (see information given in variables V1 to V3.3). If a link to a website is present in V3, information on the website may be used in addition to the profile description and (screen) name of the actor. Only if the information in the Twitter profile and on the website is ambiguous, Google may be used to determine the final coding. If an actor can be associated to several categories because she has several positions, and more than one position is mentioned, choose the position mentioned first. All values include individual as well as collective actors; accounts can, for example, either belong to an individual politician or represent a complete party. In order to be coded as something else than a private actor, we need hints for a function/official position (meaning that the person was elected into an official position or was appointed an official position or a function by someone else, e.g. for political actors) or activism (civil society actors).

10   Political actors   → **go to V4.1/V4.5**

This category includes all individual and collective actors with political functions. It is not sufficient to be member of a party; actors need to have a function within the party/government/political institution in order to be coded as political actors. Including: individual politicians as well as parties and political fractions, political actors from all levels, government and opposition, candidates in the EP election and members of the previous parliament, (youth) organizations of parties, etc. Examples: @AfDimBundestag, @realDonaldTrump, @eukommission

20   Economic actors   → **go to V5**

Including: firms, companies, start-ups, unions, etc.

30   **Civil society**   →   **go to V4.3**

Civil society refers to individual as well as collective activists, organizations and movements without party affiliation and profit-orientations who want to affect public debates and public opinion (societal power). Foundations are generally coded as civil society actors, regardless of the founding institution; e.g. also foundations of political parties or economic businesses are coded as civil society actors. Including: Scientists and scientific experts as well as religious organizations. Individual actors who refer to themselves as "activists" in combination with a movement, NGO etc. are also coded as civil society.

40   **Media actors**   →   **go to V4.4**

We can identify an official account: journalists, media, news agencies, other media actors such as bloggers, film makers, Youtubers, publishing companies. If individual persons blog in an expert role (e.g. about science) they are coded as scientific expert, but media accounts with a focus on science are coded as media. Including: accounts of individual journalists (if this is obvious from the information given in the Twitter profile), official accounts of legacy and online media, influencers, and bloggers, podcasters etc.

50   **Cultural actors**   →   **go to V5**

Including: popular actors from sports, musicians, authors, artists, etc. (i.e. so-called stars). Note: not social media stars and influencers. Note: In order to be coded as cultural actor instead of citizen, the person needs a certain degree of popularity. Indicators include: Presence in legacy media (TV, magazines, etc.), more than 1000 followers on social media, has released a CD, played in a movie, etc. Examples: Bands, Models, soccer players as well as their clubs, movie actors.

60   **Citizens**   →   **go to V5**

Including: private actors and accounts of individuals that do not belong to any code from 10 to 50.

99   **Other/unclear**   →   **go to V5 and specify in V8**

This code is only used when the actor cannot be coded into any other category. This category is also coded if the actor cannot be decided based on the information provided in the data set already and if the Twitter account is no longer active/available. If you feel like the account might belong to a social bot, please code 99 and specify in V8.

999   **Account not available**   →   **go to V8/coding ends**

This code is used only for actors for which no information is included in the pre-recorded variables AND whose Twitter account is no longer available on Twitter itself. In other words, this code is used whenever an actor cannot be coded because no information (at all) is available about the account of the actor.

V4.1 Actor group: Political actors

This variable specifies accounts belonging to the group of political actors. This variable is coded only if V4=10. Categories are based on the codebook by Heft et al. (2022). All codes include accounts of individual as well as collective actors.

101   **Government/executive**

Governments and government representatives (spokespersons, ministers, royalty etc.) irrespective of territorial scope. The European Commission, European Council and Council of Ministers, the UN General Secretary and Security Council are coded as governments. Other examples: mayors, 'Landesregierungen', ministry of education, Berlin senate, Department of Health, Attorney General, Commissioner.

102   **Legislative and political parties**

Legislatives, parliaments (all chambers), and political parties including individual members thereof, and including parliamentary fractions of political parties. Note: Intergovernmental organizations which draw up international treaties based on unanimous consent of the signatories are coded among executive/government. The European Parliament and the General Assembly of the UN are, however, coded as legislatives, because they have (limited, but still) the power to make binding decisions based on majority decisions. Examples: @AfDFraktionAGH, @AfDimBundestag, @BaumMdL, @Schneider_AfD, House of Representatives, Congress, Senate, Bundestag, Bundesrat, House of Lords, European Parliament, local councils, parliamentary fraction of the SPD, Labor MPs, Rapporteur(s)/Berichterstatter.

103   **(State) executive agencies**

Examples: Bundesumweltamt, Landesämter für Umwelt, WHO, IPCC, WMO, European Food Safety Agency (EFSA), Bundesamt für Gesundheit (Switzerland), Bundesinstitut für Risikobewertung (BfR/ Germany), Bundesamt für Verbraucherschutz und Lebensmittelsicherheit (BVL/Germany), Food Standards Agency (FSA/UK), Food and Drug Administration (FDA/USA), Eidgenössische Kommission für Konsumentenfragen, Health Protection Agency (HPA), health officials, Nationalparkverwaltung,

ambassadors, Sustainable Development Commission, Food Safety and Inspection Service (FSIS), UNICEF, Health and Safety Executive (HSE/UK), Bundeswahlleiter

104 Judiciary
Examples: European Court of Justice, individual judges, juries

105 Police/internal security agencies/military
Examples: police, marechaussee, Bundesgrenzschutz, secret service, Verfassungsschutz, Europol, Bundeswehr, NATO. Note: The Police Union is coded as a union.

106 'Central banks'
Includes EU monetary and financial institutions. Examples: IWF, Weltbank, ECB

999 Other/unclear → **specify in V8**
Includes all political actors that cannot be assigned to any of the other codes.

V4.3 Actor group: Civil society actors
This variable specifies accounts belonging to the group of civil society actors. Civil society refers to individual as well as collective activists, organizations and movements without party affiliation and profit-orientations who want to impact public debates and public opinion (societal power). This variable is coded only if V4=30. Categories are based on the 'Measuring movement-party networks on the political right'-codebook by Heft et al. (2022). All codes should be read as including movements, NGOs, activist groups, and individual activists.

301 Environmental movements/organizations
Including animal protection. Examples: Greenpeace, BUND (Germany), PETA - People for the Ethical Treatment of Animals, WWF, The Humane Society of the US, Alliance to Save our Antibiotics, Compassion in World Farming (CIWF), Friends of the Earth – foe, environmentalists, WRAP, umweltinstitut.org, Natural Resources Defense Council (NRDC)

302 Migrant organizations
Examples: Jugendliche ohne Grenzen e.V. (JOG), Flüchtlingsrat, DIDF, Türkischer Bund, sea-watch e.V., Migrants Rights Network, Pro Asyl

303 Pro- and Anti-European campaign organizations
Examples: Pulse of Europe, Junge Europäische Förderalisten (JEF), Union of European Federalists (UEF), Polis180, Euromat, DiEM 25

304 Racist, extreme right, and terrorist organizations
Examples: Identitäre Bewegung, Generation Identity UK & Ireland, Generation Identitær, Generazione Identitaria, Pegida, Blood and Honour, Combat 18, Burschenschaften

305 Women's rights, LGBTQI, feminist organizations
Examples: femen, terre des femmes, Deutscher Frauenrat, Jugendnetzwerk lambda, Lesben- und Schwulenverband Deutschland (LSVD)

306 Solidarity, human rights, peace movements and organizations
This includes only private organizations such as Anti-Racist Alliance, Amnesty International, Terre des Hommes, médecins sans frontières, Alliance Sud, Erklärung von Bern, Germanwatch, Gesellschaft für bedrohte Völker, Oxfam, Welthungerhilfe, Brot für die Welt, Population Connection, Südwind Institut, Farmer-to-Consumer Legal Defense Fund (FTCLDF) etc.

307 Welfare organizations
Examples: Red Cross, Arbeiterwohlfahrt. Der Paritätische, Caritas Note: does not include state welfare agencies (these are coded as state executive agencies).

308 Scientific and research professionals and institutions
Note: Not everybody who has a university degree is a scientific actor. There needs to be an official position in a research organization or at a University as well (e.g. university professors, PIs/heads at research institutes, etc.). Examples: research institutes, universities, scientific associations, professional researchers, other experts (such as think tanks, Club of Rome, Testbiotech e.V.), Bruegel.org, Wahlrecht.de

309 Churches and religious organizations
Examples: Evangelische Kirche in Deutschland, Papst Franziskus, but also „Juden in der AfD".

310 Consumer organizations
Examples: Verbraucherzentrale, Die Verbraucher Initiative, Stiftung Warentest, Bund der Energieverbraucher, Verbraucher fürs Klima, Consumers Union, consumer advocates, consumer activists.

999   **Other/unclear**   →   **specify in V8**

Includes all civil society actors and groups that cannot be assigned to any other code. This also includes groups of people whose members share a common trait, attribute, or aim. Examples: groups of parents of allergic kids or food allergy sufferers, profile of le marque jeune (Gelbwesten), @Tschechinnen.

V4.4 Actor group: Media actors

This variable specifies accounts belonging to the group of media actors. This variable is coded only if V4=40. Categories are based on the codebook by Heft et al. (2022).

401   **Legacy/traditional media and journalists**

This includes the online presence of legacy media (e.g. Die ZEIT as well as ZEIT ONLINE). Examples: @tagesschau, @lemonde, BBC, Junge Freiheit, El País

402   **Online only media and journalists**

Examples: @AfDKompakt, @breitbart, @tichyseinblick, @journalistenwatch, Correctiv, Übermedien, Stefan Niggemeier, Europe Elects

403   **Bloggers, social media influencers**

Included here are private persons that link to their own blogs/homepages or other social media pages explicitly state that they are bloggers/influencers in their self-description. Examples: Rezo, LeFloid

999   **Other/unclear**   →   **specify in V8**

Includes all other media actors that cannot be assigned to any other code.

V4.5 Political Actors: Party Membership

This variable is coded for all political actors (V4=10) and captures the party membership of the specific actor, i.e. for all political actors, the party they belong to is coded as an open string in this variable. If the information on Twitter is insufficient to code this variable, Google may be used to evaluate party membership. Please insert the parties' names as well as, if necessary, a brief explanation of its nature/goals.

       open string variable

99   **unidentifiable**   →   **specify in V8**

V5.1 Actor: individual or collective

This variable denotes whether the account belongs to an individual or a collective actor. Individual actors are single persons (e.g. individual politicians, journalists, single activists, etc.); collective accounts refer to a whole party, organization, media outlet, etc. (e.g. SPD, Die ZEIT, Fridays for Future). For example, the FDP would be a collective actor while the account of Christian Lindner (even though it is managed by a social media team) refers to an individual.

1   **account belongs to an individual person**

This refers to all accounts that refer to a single person only. The person may be part of a group of the people, a party, or an organization, but the account can be assigned to one individual only. This includes accounts of individual politicians that might be managed by a social media team. Citizens (V4=60) are always coded as individuals.

Examples: Jörg Meuthen, Christian Lindner, Rezo, Fynn Kliemann

2   **account belongs to a collective actor**

This refers to all accounts that cannot be assigned to one single person. This refers to all overarching accounts of parties, governments, parliaments, media outlets, activist groups, social movements, etc.

Examples: FDP, AfD, WHO, Journalistenwatch, Amnesty International, Sea Watch, Fraktionen des EP

9   **unclear/not identifiable**   →   **specify in V8**

V5.2 Scope of actor
This variable refers to the scope of the actor. If the information given in an actor's profile or on a website denote different scopes, the largest scope of the actor is coded (e.g. If Nico Semsrott refers to himself as member of the German party *Die Partei* as well as member of the European Parliament, his scope is coded as EU-actor).

1   local, regional, national
Incudes all actors whose (intended) scope does not extend beyond national borders of a specific country. Examples: all national, regional and local parties; national governments; national, local, and regional media, also national accounts of global firms (e.g. Amazon UK). Note: Citizens are always coded as national scope, even if their profile description provides other information (e.g. "The world is my home.").

2   EU (only EU member states)
Includes all actors whose scope transcends the borders of one country and these countries are members of the EU. Examples: European Commission, Council of the European Union, European Parliament (and its Fractions, MEPs, etc.), European Council, European Court of Justice, ARTE, etc. Note: "Europe, European, and pan-European" might be used as synonyms when actually the EU is referred to. Please double-check scope in these cases. Thus, when we find references to the EU as well as to Europe by the same actors, we assume that they mean the EU. Volt will always be coded as EU scope (including national sub-parties like Volt Deutschland, because these national sub-parties only exist because of the nationally bounded election procedure of the EP).

3   European (including non-member states)
Includes all actors whose scope transcends the borders of one country and all countries are European countries but at least one country is not a member of the EU (e.g. Switzerland). Note: Russia and Turkey are treated as European countries. Examples: Euronews, Council of Europe, European Court of Human Rights, Europe Elects

4   international (including only non-European countries)
Includes all actors whose scope transcends the borders of one country and all countries included are non-European. Examples: NAFTA, African Union, ASEAN.

5   global
Includes all actors whose scope transcends the borders of one country and at least one European and one non-European country are included. Examples: UN, WHO, Amnesty International, FIFA, OECD.

9   unidentifiable   → **specify in V8**
This code is used whenever the scope of an actor cannot be identified. Note: Citizens (V4=60) are always coded as national scope, even if no hints about their scope is present in their user profile.

V6 Country
This variable refers to the country an actor can be associated with. Since coding nationalities and/or residency of actors is a difficult task for Twitter data, no distinction is made between the nationality of actors and their residency for the purpose of this analysis. Visual information in the actors' profile (e.g. flag emojis or flags in profile pictures) may be used to identify the country.
001
002
003
etc. (for list of all countries see excel sheet *list of countries*)
999   unidentifiable/unclear   → **specify in V8**

V7 Political leaning/party family of actor
This categorization and definition of party families is taken from the MARPOR-project (Volkens et al., 2019a, 2019b). The MARPOR-project classifies parties into party families based on expert evaluations of parties' profiles. In combination with parties' positions on four areas of policies (state policy, economic policy, social policy, and foreign policy) coded in the manifesto data set, it can be postdicted which policy positions are taken up by members of which party families (see Klingemann et al., 2013 for a detailed description of how policy positions for different party families are derived from the manifesto data set). Thus, the classification can be expanded to other actor groups than political actors by transferring positions on issues and policies issued by actors on Twitter to the categorization of the MARPOR-project. For a detailed description of which statements and positions are associated with

which party family see Table 1 in the appendix of this codebook (taken from Klingemann et al., 2013, p. 64) as well as the coding definitions used in the MARPOR-project (Table 2 in the appendix, taken from Klingemann et al., 2006, p. 45-50).

For parties and all political actors belonging to a party, the categorization is coded as described in the excel sheet *list of parties*. This categorization is taken from and therefore equal to the MARPOR-data set (Volkens et al., 2019b). For actors belonging to other actor groups, the categorization must be decided based on information from their Twitter profiles and/or websites (if available). This is done as follows: (1) For all actors who disclose affiliation to a party on their Twitter profile (e.g. "proud AfD-supporter"), the classification of the party as provided by the MARPOR-project is used as political leaning of the actor (see excel sheet *list of parties*). (2) If actors provide a self-description that fits the categorization (e.g. "social democrat from head to toe"), the self-description is used. (3) Otherwise any information about issues/policies of importance to the actor (e.g. "climate change activist") can be used to evaluate political leaning according to the descriptions of the categories below. The policy positions are numbered according to their importance for the respective actor family (see also Table 1). In case of insufficient or ambiguous information, the codes 99 (other) or 999 (cannot be evaluated) can be used.

1   Socialist or other left actors

(1) The most central issue of socialist and left actors are peace and détente. Issues and positions addressed include peace as a general goal; belief in peace and peaceful means of solving crises; desirability of joining in negotiations with hostile countries; favorable mentions of decreasing military expenditures; disarmament; the 'evils of war'; promises to reduce conscription.

(2) Furthermore, they often promote the expansion of the welfare state, including the following positions: need to introduce, maintain or expand any social service or security scheme; support for social services such as health service or social housing; need to expand and/or provide educational provisions at all levels; favorable references to labor groups, working class, unemployed; support for trade unions; good treatment of manual and other employments; concept of equality; need for fair treatment of all people; special protection for underprivileged; need for fair distribution of resources; removal of class barriers; end of discrimination such as racial, sexual etc.

(3) To a lesser degree they might also refer to positions on planned economy. These include partial or complete government ownership (e.g. of land), direct government control of economy; control over prices, wages, rents, etc.; publicly owned industries, positive use of Marxist-leninist concepts; negative references to privatization; domestic economic protectionism (e.g. quota restrictions).

Examples: Die Linke, linksjugend ['solid], DiEM 25, GUE/NGL

2   Ecologist actors

(1) The most central issue of ecologist actors is environmental protection. This includes references to the preservation of the countryside, forests, etc.; the general preservation of natural resources against selfish interests; environmental improvement; favorable mentions of anti-growth politics and steady-state economy; ecological orientation as a way of life (e.g. vegan lifestyle for reasons of animal and environmental protection).

(2) To a lesser degree, they might also refer to positions in the field of peace and détente, including peace as a general goal; belief in peace and peaceful means of solving crises; desirability of joining in negotiations with hostile countries; favorable mentions of decreasing military expenditures; disarmament; the 'evils of war'; promises to reduce conscription.

Examples: Bündnis 90/Grüne, Fridays for Future, Scientists for Future, climate change activists and organizations, animal rights activists and organizations, Greens/EFA

3   Social democratic actors

(1) The most central issue of social democratic actors is the expansion of the welfare state. Issues and positions addressed include the need to introduce, maintain or expand any social service or security scheme; support for social services such as health service or social housing; need to expand and/or provide educational provisions at all levels; favorable references to labor groups, working class, unemployed; support for trade unions; good treatment of manual and other employments; concept of equality; need for fair treatment of all people; special protection for underprivileged; need for fair distribution of resources; removal of class barriers; end of discrimination such as racial, sexual etc.

(2) To a lesser degree they might also refer to economic infrastructures, including the importance of modernization of industries, transport, and communication; importance of science and technological

development in industry and research; the paradigm of growth. Examples: SPD, Jusos, SPE, Young European Socialists (YES), Labour Party, SPÖ, PSOE, S&D

4   Liberal actors

(1) The most central issues of liberal actors are market economy and the limitation of the welfare state. Positions and issues addressed include favorable mentions of free enterprise and capitalism; superiority of individual enterprise over state and control systems; private property rights; need for unhampered individual enterprise; positive references to privatization; negative references to governmental control of economy; support for traditional economic institutions such as the stock market and baking system; support for strong currency; need for wage and tax policies to induce enterprise; encouragement to start enterprises; regulation to make private enterprises work better; actions against monopolies and trusts; defense of consumer and small businesses; encouraging economic competition.

(2) Positions on the limitation of the welfare state include limiting expenditures on social services or social security; private welfare provisions because of economic constraints; desirability of competition in welfare service provisions; limiting expenditures on education; private education; desirability of competition in education; abuse of power trade unions.

(3) To a lesser degree they might also refer to human rights and freedom, including the importance of personal freedoms and human rights, such as freedom from coercion in the political and economic sphere; freedom of speech, freedom from bureaucratic control; individualism. Freedom of nations to decide freely.

Examples: FDP, Neos, Liberal Democrats, ALDE (Attention: now under the name "Renew")

5   Christian democratic actors

(1) The most central issue for Christian democratic actors is traditional morality (law and order). Positions include favorable mentions of traditional moral values; the prohibition, censorship, and suppression of immorality and unseemly behavior; maintenance and stability of family and religion; enforcement or encouragement of cultural integration; better law enforcement; actions against crime; support of and more resources for the police, tougher court action; general sense of crises and alienation; negative mentions of cultural autonomy of Roma. Generally, Christian democratic actors can be conceived as a special case between classic program party families and sociocultural party families. Therefore, they are expected to address special interest issues as well as more general issues of public concern (see also Table 1 in the appendix).

Examples: CDU/CSU, EPP (German: Europäische Volkspartei (Christdemokraten) (EVP))

6   Conservative   actors

(1) The most central issues of conservative actors are market economy and military strength. This includes favorable mentions of free enterprise and capitalism; superiority of individual enterprise over state and control systems; private property rights; need for unhampered individual enterprise; positive references to privatization; negative references to governmental control of economy; support for traditional economic institutions such as the stock market and baking system; support for strong currency; need for wage and tax policies to induce enterprise; encouragement to start enterprises; regulation to make private enterprises work better; actions against monopolies and trusts; defense of consumer and small businesses; encouraging economic competition.

(1) Military strength includes the following positions: the need to maintain or increase military expenditure; modernizing armed forces; improvement in military strength; rearmament and self-defense; need to keep military treaty obligations; need to secure adequate manpower in the military. (3) To a lesser degree they might also address the issue of economic infrastructure. This includes: the importance of modernization of industries, transport, and communication; importance of science and technological development   in   industry   and   research;   the   paradigm   of   growth.

Examples: PiS, Open Europe, ECR (German: Europäische Konservative und Reformer (EKR))

7   Nationalist actors

(1) The most central issues of national actors are nationalism and military strength. This includes the following positions: appeal for national efforts and solidarity; need for society to see itself as united; appeal for public spiritedness; decrying anti-social attitudes in times of crises; support for public interest; national independence and sovereignty, opposing internationalism; need to maintain national security in all spheres of societal life (e.g. politics, economy, science, etc.); hostile mentions of EU; opposition to specific European policies which are preferred by European authorities; appeal to patriotism and/or nationalism; suspension of some freedoms in order to protect the state from subversion; support for established national ideas.

(2) Military strength positions relate to the need to maintain or increase military expenditure; modernizing armed forces; improvement in military strength; rearmament and self-defense; need to keep military treaty obligations; need to secure adequate manpower in the military.

(3) To a lesser degree they might also refer to positions related to centralization, including opposing political decision-making at lower levels; support for more centralization in political and administrative procedures. Note: This category also includes all radical right and right-wing populist actors and their positions.

Examples: AfD, Identitäre Bewegung, NPD, Marine Le Pen, Tichys Einblick, ENF (Attention, now under the name Identity and Democracy (ID)), FPÖ, Lega, Salvini

8 Agrarian actors

(1) The most central issue of agrarian actors is agriculture. This includes support for agriculture and farmers; any policy aimed specifically at benefiting agriculture and farmers. In contrast to ecologist actors, the thematic range of agrarian actors is therefore much more limited (only agriculture and farmers!). Additionally, agrarian actors are located more to the right of traditional left-right-distinctions compared to ecologist actors (see Klingemann et al., 2006, p. 52 for the left-right-positioning of political actors and their supporters).

Examples: Deutscher Bauernverband (DBV)

9 Ethnic minority and regional actors

(1) The most central issues of ethnic and regional actors are decentralization and social group politics. These include support for federalism or devolution; more regional autonomy for policy or economy; support for keeping up local and regional customs and symbols; favorable mentions of special consideration for local areas; deference to local expertise; strengthening republican powers; negative reference to exerting strong influence over other states and to controlling other countries as if they were part of an empire; favorable mentions of decolonization; greater self-governance and independence of colonies; cultural diversity, communalism, cultural plurality; preservation of autonomy of religious, linguistic heritages within the country; including special educational provisions.

(2) Social group politics include favorable references to middle class, professional groups, such as physicians or lawyers; old and new middle class; favorable references to underprivileged minorities who are defined neither in economic nor in demographic terms (e.g. handicapped, LGBTQI, immigrants); references to ethnic minorities in foreign countries or in the own country (e.g. Latvians living in Estonia).

Examples: Scottish National Party (SNP), Esquerra Republicana de Catalunya (ERC), Südschleswigscher Wählerverband (SSW), Bayernpartei, Süd-Tiroler Freiheit

10 Special issue actors

Special issue actors are defined by very specific interests that relate to small parts of society only and are not covered by any other code (!). For political parties, this usually refers to parties with only one electoral goal (e.g. Brexit party). The issues addressed by different special issue actors can be very diverse, including but not limited to Brexit and abortion laws. This category also includes special interest media.

Examples: Brexit Party, Volt, Metal Hammer

11 (Electoral) alliances of diverse origin

This category includes alliances of actors with usually diverse positions and/or interests who formed a strategic coalition for a certain situation/goal (e.g. in electoral contexts). This category is used for alliances of actors who would fall into different categorizations if coded separately. Note: This does not include the EP Fractions, these are rather categorized into the codes 1 to 7 depending on their policy positions.

Examples: Große Koalition (SPD+CDU)

12 Non-partisan

This categorization includes all actors whose positions and functions are explicitly not affected by any political agenda. This includes state actors (e.g. Police, Military) who act on behalf of the state but should not have political agendas on their own. This category is also used for media actors who explicitly point towards their neutrality in reporting as well as scientific institutions (which are generally meant to be neutral research institutions). Note: This must not necessarily refer to private accounts of researchers – if they denote political leanings in their profile descriptions, they are coded accordingly. This does also not include actors whose information is insufficient to decide on a political affiliation; these actors are coded as 999.

Examples: Europe Elects, Leopoldina, universities, RKI, Euromat, Wahl-O-Mat, public service broadcasting, generally all (state) executive agencies, judiciary, central banks

99   Other/unclear   → specify in V8
This category is used for actors who do disclose political statements in their Twitter profiles or on their websites, but for which the information given is ambiguous. Please copy and paste the ambiguous information in the open string in V7.1 and if necessary, explain any problems in V8.

999   Cannot be evaluated
This category is coded whenever the political leaning of an actor cannot be coded because no information is given in the actor's Twitter profile or when the account is no longer available.

V7.1 Explanation: Political leaning/party family of actor
This variable is an open string variable used to explain the coding decision in V7 in order to make it comprehensible for data cleansing. Note: Please copy the exact wording that lead to your coding decision into the open string. If the information is taken from additional websites (i.e. if the profile information on Twitter was insufficient to code this variable and the coding decision is not based on an official website of the actor), please also refer to the website used to make the coding decision.
open string variable

V8 Notes and specifications
This variable shall be used to note down any problems that arise during coding. Please describe problems and questions as detailed as possible so that they can be replicated and potentially recoded during data cleansing. This variable is also used to specify any variable which has been coded as 99 or 999 ('other'). Please always start your notes with the name or number of the variable the note refers to (e.g. "V3: Link to website does not work.").
        open string variable

Coding Appendix
Table A1: Dominant policy characteristics of the party families (discriminant functions distinctly differentiating between election programs of parties)

Party family	Dominant policy characteristics	Weight for index (rounded correlation with discriminant function)
Classic program families		
Left/socialist	Peace and détente	0.5
	Welfare state expansion	0.5
	Planned economy	0.3
Social democrat	Welfare state expansion	0.5
	Economic infrastructure	0.3
Liberal	Market economy	0.5
	Welfare state limitation	0.5
	Freedom and human rights	0.3
Conservative	Market economy	0.6
	Military strength	0.5
	Economic infrastructure	0.4
Nationalist	National orientation	0.5
	Military strength	0.5
	Centralization	0.2
In between families		
Christian democrat	Traditional morality: law and order	0.9
Sociocultural families		
Ecologist	Environmental protection	0.9
	Peace and détente	0.3
Agrarians	Agriculture	0.9
Ethnic minorities	Decentralization	0.8
	Social groups	0.1

Source: adapted from Klingemann & Budge, 2013, p. 64

Table A2: MARPOR classification scheme of election programs: definition of categories

Category	Definition
State Policy	
Freedom and human rights	Favourable mentions of importance of personal freedoms and human rights, such as freedom from coercion in the political and economic sphere; freedom of speech, freedom from bureaucratic control; individualism. Freedom of nations to decide freely.
Democracy	Favourable mentions of democracy as a method or goal in national and other organizations; involvement of all citizens in decision-making, as well as generalized support for a country's democracy. General references to the transition process of one-party states to pluralist democracy.
Constitution	Preferences for specific constitutions; use of constitutionalism as a policy argument. Preferences for a Republic, a Monarchy, or a Presidential regime. Reference to citizenship and election laws. Support for checks and balances and separation of powers.
Centralization	Opposition to political decision-making at lower political levels; support for more centralization in political and administrative procedures.
Decentralization	Support for federalism or devolution; more regional autonomy for policy or economy; support for keeping up local and regional customs and symbols; favourable mentions of special consideration for local areas; deference to local expertise. Support for a strengthening of republican powers. Negative references to exerting strong influence (political, military, and commercial) over other states; negative references to controlling other countries as if they were part of an empire; favourable mentions of decolonization; favourable references to greater self-government and independence of colonies; negative reference to imperial behaviour of countries. Cultural diversity, communalism, cultural plurality, and polarization; preservation of autonomy of religious, linguistic heritages within the country, including special educational provisions. Favourable mentions of cultural autonomy in general.
Modes of government	Favourable mentions of strong government, including government stability; party's competence to govern and/or other parties' lack of such competence. Need for efficiency and economy in government and administration; cutting down civil service; improving governmental procedures; appeal to make the process of government and administration cheaper and more effective. Need to eliminate corruption, and associated abuse in political and public life.
Communists, positive	Cooperation with former authorities and communists in the period of transition; pro communist involvement in the transition process; 'let sleeping dogs lie' in dealing with the nomenklatura. 'Hunting the witches': negative references to the situation in public life, after the election of the Supreme Council. References to the need of a broader political coalition, need for cooperation on the political level, and necessity of collaboration of all political forces, including the communists in the current crises situation. Rebuilding the USSR. Negative references to physical restitution of property to previous owners.
Communists, negative	Against communist involvement in democratic government; weeding out the guilty and the collaborators from government service. References to civic rehabilitation of politically persecuted people in the communist era; references to juridical compensation concerning communist expropriations; moral compensation. Favourable references to physical restitution of property to previous owners.
Economic policy	
Market economy	Favourable mentions of free enterprise, capitalism; superiority of individual enterprise over state and control systems; favourable mentions of private property rights, personal enterprise and initiative; need for unhampered individual enterprises. Favourable references to privatization and of privatization by vouchers. Negative references for general need for direct government control of the economy. Support for the concept of free trade. Need for reduction of budget deficits; retrenchment in crisis, thrift and savings; support for traditional economic institutions such as the stock market and banking system; support for strong currency. Need for wage and tax policies to induce enterprise; encouragement to start enterprises; need for financial and other incentives. Need for regulations to make private enterprises work better; actions against monopolies and trusts; and in defense of consumer and small business; encouraging economic competition.

Planned or mixed economy	Government ownership, partial or complete, including government ownership of land. General need for direct government control of the economy; control over prices, wages, rents, etc. Favourable references to creation or preservation of cooperative or non-state social ownership within a market economy. Favourable mentions to publicly owned industry. Position references to socialist property and negative references to privatization; positive use of Marxist-Leninist concepts for an analysis of the economic situation. Demand-oriented economic policy, economic policy devoted to the reduction of depressions and/or to increase private demand through increasing public demand and/or through increasing social expenditures. Favourable mentions of extensions or maintenance of tariffs to protect internal markets; other domestic economic protectionism such as quota restrictions. Favourable mentions of the need for the collaboration of employers and trade union organizations in overall economic planning and direction through the medium of tripartite bodies of government, employers, and trade unions. Favourable mentions of long-standing economic planning of a consultative or indicative nature, need for government to create such a plan. Negative references to privatization.
Economic infrastructure	Importance of modernization of industry and methods of transport and communication; importance of science and technological development in industry; need for training and research. Need to encourage or facilitate greater economic production; need to take measures to aid this; appeal for greater production and importance of productivity to the economy; the paradigm of growth.
Environmental protection	Preservation of countryside, forests, etc.; general preservation of natural resources against selfish interests; proper use of national parks, soil banks, etc.; environmental improvement. Favourable mentions of anti-growth politics and steady-state economy; ecological orientation as a way of life; Green politics.
Agriculture	Support for agriculture and farmers; any policy aimed specifically at benefiting agriculture and farmers.
Social policy	
Traditional morality, law and order	Favourable mentions of traditional moral values; prohibition, censorship, and suppression of immorality and unseemly behaviour; maintenance and stability of family and religion. Enforcement or encouragement of cultural integration. Better law enforcement; actions against crime; support of and more resources for the police: tougher court action. General sense of crisis and alienation. Negative mentions of cultural autonomy of Roma.
Cultural libertarianism	Opposition to traditional moral values; support for divorce, abortion, etc. Multiculturalism, pro Roma.
Welfare state, limitation	Limiting expenditure on social service and social security. Necessity of private welfare provisions because of economic constraints; desirability of competition in welfare service provisions; private funding in addition to public activity. Limiting expenditure on education. Necessity of private education because of economic constraints: desirability of competition in education. Necessity of restrictive provisions because of economic constraints; private funding in addition to public activity. Abuse of power of trade unions.
Welfare state, expansion	Favourable mentions of need to introduce, maintain, or expand any social service of social security scheme; support for social services such as health service or social housing. Need to expand and/or improve educational provision at all levels. Need to provide cultural and leisure facilities including arts and sport; need to spend money on museums; art galleries, etc.; need to encourage worthwhile leisure activities and cultural mass media. Favourable references to labour groups, working class, unemployed; support for trade unions; good treatment of manual and other employees. Concept of equality; need for fair treatment of all people; special protection for underprivileged; need for fair distribution of resources; removal of class barriers; end of discrimination such as racial, sexual, etc.
Social group politics	Favourable mention to middle class, professional groups, such as physicians or lawyers; old and new middle class. Favourable references to underprivileged minorities who are defined neither in economic nor in demographic terms, for example, the handicapped, homosexuals, immigrants. References to ethnic minorities in foreign countries. References to ethnic minorities living in the country such as Latvians living in Estonia, and so on. Favourable mentions of, or need for, assistance to women, old people, young people, war participants, refugees, linguistic, and all other special interest groups.

Foreign policy	
Military strength	Need to maintain or increase military expenditure; modernizing armed forces and improvement in military strength; rearmament and self-defence [sic!]; need to keep military treaty obligations; need to secure adequate manpower in the military.
Peace and détente	Peace as a general goal; declarations of belief in peace and peaceful means of solving crises; desirability of countries joining in negotiations with hostile countries. Favourable mentions of decreasing military expenditures; disarmament; 'evils of war'; promises to reduce conscription. Need to withdraw the Russian army.
Nationalism	Appeal for national effort and solidarity; need for society to see itself as united; appeal for public spiritedness; decrying anti-social attitudes in times of crisis; support for public interest. Favourable mentions of national independence and sovereignty as opposed to internationalism. Support for, or need to maintain national security in all spheres of societal life : politics, economy, science, etc. Policy devoted to this goal. Hostile mentions of the EU; opposition to specific European policies which are preferred by European authorities. Appeals to patriotism and/or nationalism; suspension of some freedoms in order to protect the state against subversion; support for established national ideas. Against cooperation in the Nordic Council or in a Yugoslav Federation.
International corporation	Need for international cooperation; need for world planning of resources; need for international courts; support for any international goal or world state; support for UN. Favourable mentions of EU in general; desirability of expanding the EU and/or increasing its competence; desirability of joining or remaining a member. Position references [sic!] to cooperation in the Nordic Council. Against patriotism and/or nationalism.
Special relationships	Mentions of particular countries with which the country has a special relationship. For example, in the British case: former colonies; in the German case: East Germany; in the Swedish case: other Scandinavian countries. In the East European countries special relationships refer to positive mentions of countries formerly belonging to the USSR and the rest of the CMEA bloc. In addition, they refer to positive or negative mentions of Germany and other Western states, Eastern European countries, Baltic countries, and in a positive way to the former Yugoslavian countries. Included in this category are also mentions of the Karabakh and Cyprus issues.

Source: Klingemann et al., 2006, p. 45-50

Table 24. Reliability scores of the manual analysis of user profiles for four trained coders

Variable	Krippendorff's α
Actor Group (V4)	0.851
Subgroup: Political Actors (V4.1)	0.849
Subgroup: Civil Society (V4.3)	0.830
Subgroup: Media actors (V4.4)	0.819
Political Actors: Party Membership (V4.5)	0.969
Actor: individual or collective (V5.1)	0.862
Actor: Scope (V5.2)	0.879
Country background (V6)	0.979
Political leaning (V7)	0.836

Note. Krippendorff's α was chosen because it can handle multiple coders and provides a comparatively conservative measure of reliability, because it acknowledges the number of values for each variable (i.e. it includes the probability for by chance agreement between coders). Reliability requires values of α ≥ .800 (Krippendorff, 2004, p. 428-429).

Appendix B: Additional analyses of actors

Table 25. Comparison of viral and random sample, in % (N=12,013 coded actors)

	Viral sample n=1,333	Random sample n=11,122	Total sample N=12,013
Actor groups			
Political actors	28.207	13.425	14.210
Economic actors	2.026	2.581	2.522
Civil Society	16.279	10.134	10.589
Media actors	21.455	9.316	10.222
Cultural actors	0.525	1.547	1.482
Citizens	30.683	61.964	59.952
Others	0.825	1.034	1.024
Country (Top 10 in total coding)			
UK	15.760	21.104	20.802
Germany	18.684	19.400	19.343
Netherlands	19.171	15.891	16.037
Ireland	13.810	9.425	9.634
Belgium	13.241	5.233	5.782
Spain	2.193	5.630	5.415
France	3.656	4.070	4.059
USA	0.975	4.029	3.795
Italy	2.112	2.927	2.900
Sweden	0.731	1.316	1.290
Other countries	9.667	10.975	10.943
Political leaning			
Left/Socialist	5.620	6.608	6.326
Green	8.314	7.072	6.909
Social democratic	7.544	5.578	5.502
Liberal	8.930	5.318	5.353
Christian democratic	3.772	1.838	1.873
Conservative	3.002	2.552	2.489
Nationalist	10.778	5.095	5.319
Agrarian	0.000	0.056	0.050
Regional/Ethnic minority	2.156	2.450	2.389
Special Issue	11.393	8.381	8.366
Electoral Alliances	0.077	0.056	0.058
Non-partisan/neutral	18.553	8.473	8.974
Unclear	19.861	46.524	3.072
Actor scope			
National	74.887	91.057	89.054
EU	15.885	4.172	4.811
Europe	4.690	1.509	1.765
International	0.151	0.245	0.241
Global	4.160	2.490	2.581
Unclear	0.227	0.527	1.548

Table 26. Political leaning of users across networks (in %)

Political leaning	Mentions n=11,610	Retweets n=10,866	Quotes n=2,468	Replies n=1,994	Overall N=12,013
Left/Socialist	6.51	6.65	7.01	6.67	6.326
Green	7.11	7.27	9.28	8.88	6.909
Social democratic	5.66	5.46	8.43	8.07	5.502
Liberal	5.49	5.29	8.55	8.43	5.353
Christian democratic	1.91	1.80	3.89	4.06	1.873
Conservative	2.57	2.47	2.92	3.11	2.489
Nationalist	5.48	5.54	6.28	8.63	5.319
Agrarian	0.05	0.06	0.12	0.05	0.050
Ethnic minorities	2.48	2.54	1.05	0.75	2.389
Special Issue	8.64	8.90	10.25	10.38	8.366
Electoral alliances	0.06	0.06	0.20	0.05	0.058
Non-partisan	9.13	8.43	18.76	13.49	8.974
Unclear	44.91	45.54	23.26	27.43	3.072
Total	**100.00**	**100.00**	**100.00**	**100.00**	**100.000**

Note. Analysis based on N=12,013 coded user profiles including viral and random sample. Sum of coded profiles in all four networks exceeds 12,013 since the same user can be part of more than one network.

Appendix C: Additional analyses of the edges

Table 27. Edge scope of coded edges per sending actor group per network (in %)

Edge scope	Political actors	Economic actors	Civil society	Media	Cultural actors	Citizens
Mentions						
National	54.21	57.10	26.41	36.54	35.42	48.34
Horizontal	3.71	4.40	2.28	4.61	14.96	6.51
Vertical ↑	13.54	15.69	10.11	12.44	23.54	16.62
Vertical ↓	8.93	5.89	12.47	8.23	3.96	----
Supranat.	13.75	10.79	26.69	13.44	2.97	----
Transnat.	2.28	1.98	3.91	6.15	4.29	4.60
unclear	3.59	4.16	18.13	18.59	14.85	23.94
Total	100.00 (n=27407)	100.00 (n=2021)	100.00 (n=15641)	100.00 (n=12229)	100.00 (n=909)	100.00 (n=69828)
Retweets						
National	57.57	52.30	22.20	35.74	29.54	46.28
Horizontal	3.60	6.78	2.77	4.89	13.94	5.83
Vertical ↑	10.09	16.71	9.14	9.00	23.67	14.12
Vertical ↓	7.92	5.08	11.47	7.16	3.85	----
Supranat.	12.85	8.84	23.49	10.91	3.30	----
Transnat.	3.09	2.91	5.24	5.12	5.87	4.06
unclear	4.88	7.38	25.69	27.18	19.82	29.71
Total	100.00 (n=13163)	100.00 (n=826)	100.00 (n=7640)	100.00 (n=5766)	100.00 (n=545)	100.00 (n=44120)
Quotes						
National	43.47	36.54	24.77	41.04	-----	61.27
Horizontal	4.67	0.00	5.81	3.76	-----	6.48
Vertical ↑	13.53	7.69	12.69	9.39	-----	17.73
Vertical ↓	14.37	15.38	14.07	7.66	-----	----
Supranat.	16.53	36.54	27.22	20.23	-----	----
Transnat.	1.08	3.85	2.14	4.77	-----	1.48
unclear	6.35	0.00	13.30	13.15	-----	13.05
Total	100.00 (n=835)	100.00 (=52)	100.00 (n=654)	100.00 (n=692)	----- (n=29)	100.00 (n=2437)
Replies						
National	56.33	83.33	47.59	74.44	44.12	75.18
Horizontal	0.28	1.59	0.28	0.39	11.76	3.32
Vertical ↑	5.83	12.70	2.90	1.16	41.18	9.05
Vertical ↓	5.26	0.00	4.14	1.00	0.00	----
Supranat.	29.16	1.59	42.21	16.45	0.00	----
Transnat.	0.85	0.79	0.41	1.31	0.00	2.56
unclear	2.28	0.00	2.48	5.25	2.94	9.89
Total	100.00 (n=703)	100.00 (n=126)	100.00 (n=725)	100.00 (n=1295)	100.00 (n=34)	100.00 (n=2619)

Note. Only edges between coded actors depicted that exceed n=30. *National edges* occur between two actors from the same country. *Horizontal edges* occur between two actors with national actor scope from different European countries. *Vertical edges* occur between national and European level actors from European countries. ↑ refers to bottom-up communication (i.e. from the national to the European level). ↓ refers to top-down communication (i.e. from the European to the national level). *Supranational edges* occur between actors with European actor scope. Per definition, citizens cannot be senders of supranational or top-down vertical edges because they always have national scope. *Transnational edges* include all ties where the sending or the receiving actor is based in a non-European country.

Table 28. Edge scope of coded edges per political leaning of sending actors per network (in %)

Edge scope	Left	Green	Soc. Dem.	Liberal	Christ. Dem.	Con-serv.	Nation-alist	Agrarian	Ethn. Minor.	Special issue	Elect. Allian.	Non-part.
Mentions												
National	46.55	46.46	58.59	55.22	43.65	52.58	71.46	16.13	34.71	32.52	89.23	27.54
Horizontal	8.41	6.38	4.62	3.35	4.62	3.99	4.21	0.00	0.99	5.01	0.00	2.60
Vertical ↑	17.72	15.57	13.96	17.20	14.06	10.69	9.19	74.19	25.12	16.83	3.08	11.80
Vertical ↓	4.37	6.81	5.35	5.90	9.11	6.28	3.27	0.00	1.60	9.52	0.00	10.69
Supranat.	7.92	5.79	5.94	7.31	21.51	5.86	0.68	9.68	1.54	19.46	7.69	26.12
Transnat.	2.34	2.82	1.36	1.78	0.19	4.02	2.33	0.00	19.32	5.68	0.00	2.76
unclear	12.68	16.17	10.18	9.24	6.86	16.58	8.86	0.00	16.72	10.98	0.00	18.49
Total	100.00 (n=8414)	100.00 (n=12500)	100.00 (n=9204)	100.00 (n=6918)	100.00 (n=3613)	100.00 (n=2834)	100.00 (n=12555)	100.00 (n=31)	100.00 (n=2930)	100.00 (n=16455)	100.00 (n=65)	100.00 (n=10946)
Retweets												
National	47.70	44.81	57.17	54.24	48.59	50.41	72.98	-----	36.97	32.32	-----	22.85
Horizontal	7.87	7.57	3.84	3.00	6.40	4.28	3.73	-----	0.92	4.75	-----	2.90
Vertical ↑	16.71	11.27	10.02	14.74	11.57	7.63	3.99	-----	22.87	19.08	-----	9.67
Vertical ↓	3.53	7.59	5.72	4.82	4.05	7.16	3.13	-----	0.98	6.17	-----	9.55
Supranat.	5.06	4.15	4.64	5.88	18.27	5.11	0.35	-----	0.49	17.40	-----	23.93
Transnat.	3.22	3.78	1.99	1.91	0.18	5.11	2.49	-----	14.78	4.93	-----	3.78
unclear	15.91	20.83	16.61	15.41	10.93	20.31	13.34	-----	22.99	15.36	-----	27.32
Total	100.00 (n=4841)	100.00 (n=6510)	100.00 (n=4719)	100.00 (n=3400)	100.00 (n=1702)	100.00 (n=1704)	100.00 (n=6898)	(=7)	100.00 (n=1631)	100.00 (n=9110)	(n=15)	100.00 (n=5003)
Quotes												
National	52.85	50.45	47.53	63.35	39.58	50.94	61.87	-----	47.50	38.06	-----	22.12
Horizontal	3.47	10.18	6.23	3.73	1.04	7.55	2.28	-----	5.00	5.41	-----	5.45
Vertical ↑	16.13	15.61	18.96	13.35	20.83	13.21	14.61	-----	30.00	13.43	-----	13.24
Vertical ↓	2.73	8.82	9.09	4.35	16.67	1.89	8.90	-----	2.50	10.45	-----	13.40
Supranat.	7.20	7.01	10.13	4.35	17.71	3.77	0.68	-----	2.50	20.52	-----	32.24
Transnat.	2.98	1.13	1.82	3.11	1.04	0.94	2.74	-----	12.50	1.31	-----	2.18
unclear	14.64	6.79	6.23	7.76	3.12	21.70	8.90	-----	0.00	10.82	-----	11.37
Total	100.00 (n=403)	100.00 (n=442)	100.00 (n=385)	100.00 (n=322)	100.00 (n=96)	100.00 (n=106)	100.00 (n=438)	(n=1)	100.00 (n=40)	100.00 (n=536)	(n=3)	100.00 (n=642)
Replies												
National	75.17	63.27	66.20	83.02	43.36	56.47	78.69	-----	22.22	49.17	-----	58.26
Horizontal	1.05	3.79	3.88	0.19	0.88	3.53	2.34	-----	0.00	2.32	-----	0.13
Vertical ↑	4.55	10.50	6.37	5.15	3.54	5.88	9.78	-----	0.00	6.95	-----	1.54
Vertical ↓	0.70	2.92	1.94	0.76	3.54	0.00	1.75	-----	0.00	6.13	-----	2.05
Supranat.	11.19	14.29	19.67	6.87	48.67	21.18	1.02	-----	0.00	29.47	-----	29.83
Transnat.	0.00	2.04	0.28	0.38	0.00	0.00	2.63	-----	44.44	1.32	-----	1.66
unclear	7.34	3.21	1.66	3.63	0.00	12.94	3.80	-----	33.33	4.64	-----	6.53
Total	100.00 (n=286)	100.00 (n=343)	100.00 (n=361)	100.00 (n=524)	100.00 (n=113)	100.00 (n=85)	100.00 (n=685)	(n=1)	100.00 (n=9)	100.00 (n=604)	(n=2)	100.00 (n=781)

Note. Only edges between coded actors depicted that exceed n=30. *National edges* occur between two actors from the same country. *Horizontal edges* occur between two actors with national actor scope from different European countries. *Vertical edges* occur between national and European level actors from European countries. ↑ refers to bottom-up communication (i.e. from the national to the European level). ↓ refers to top-down communication (i.e. from the European to the national level). *Supranational edges* occur between actors with European actor scope. *Transnational edges* include all ties where the sending or the receiving actor is based in a non-European country.

Appendix D: Additional material for ERGMs

Figure 23. GOF statistics for quote network (model 3: country and language)
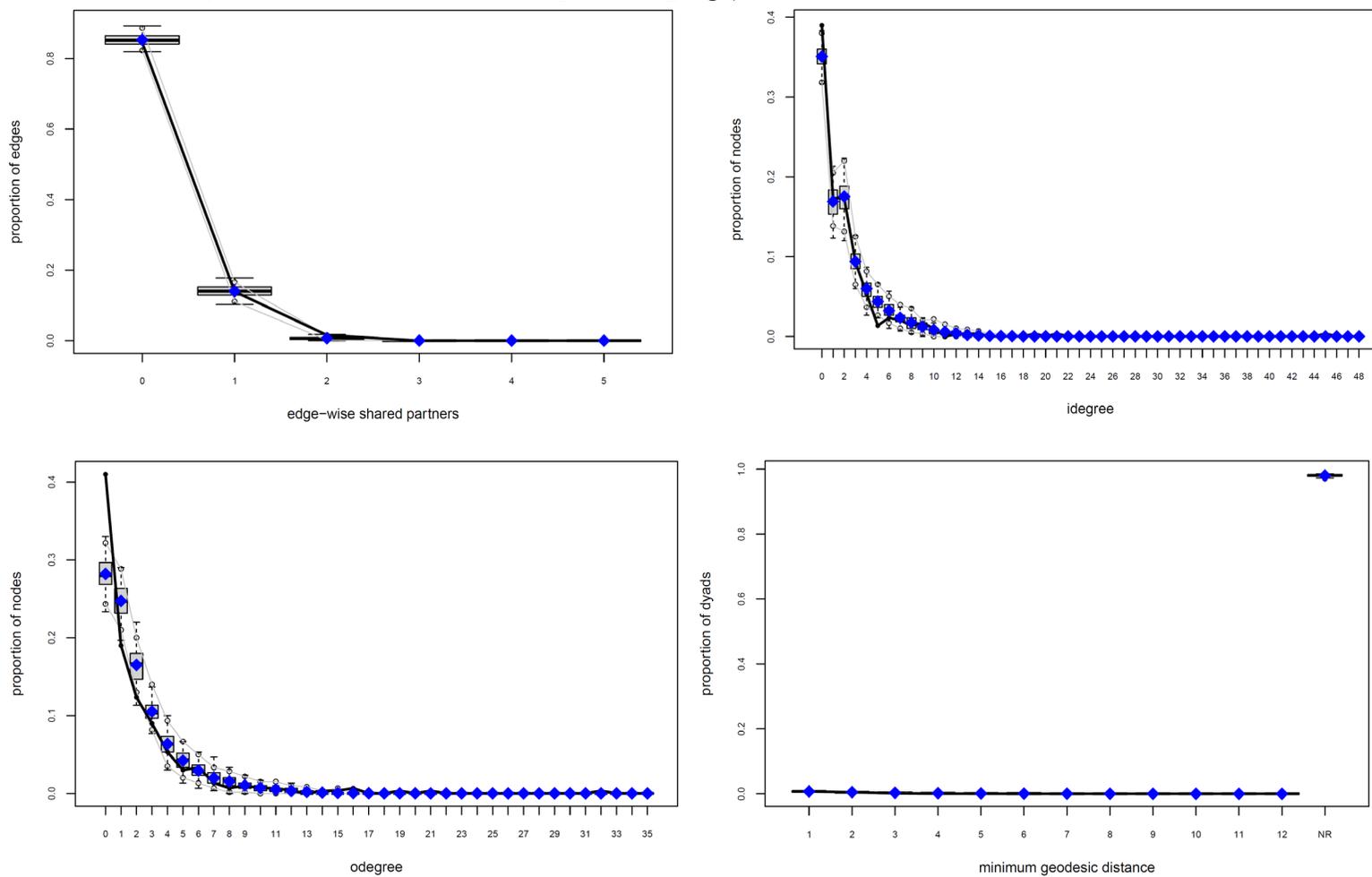
Figure 24. GOF statistics for reply network (model 3: country and language)
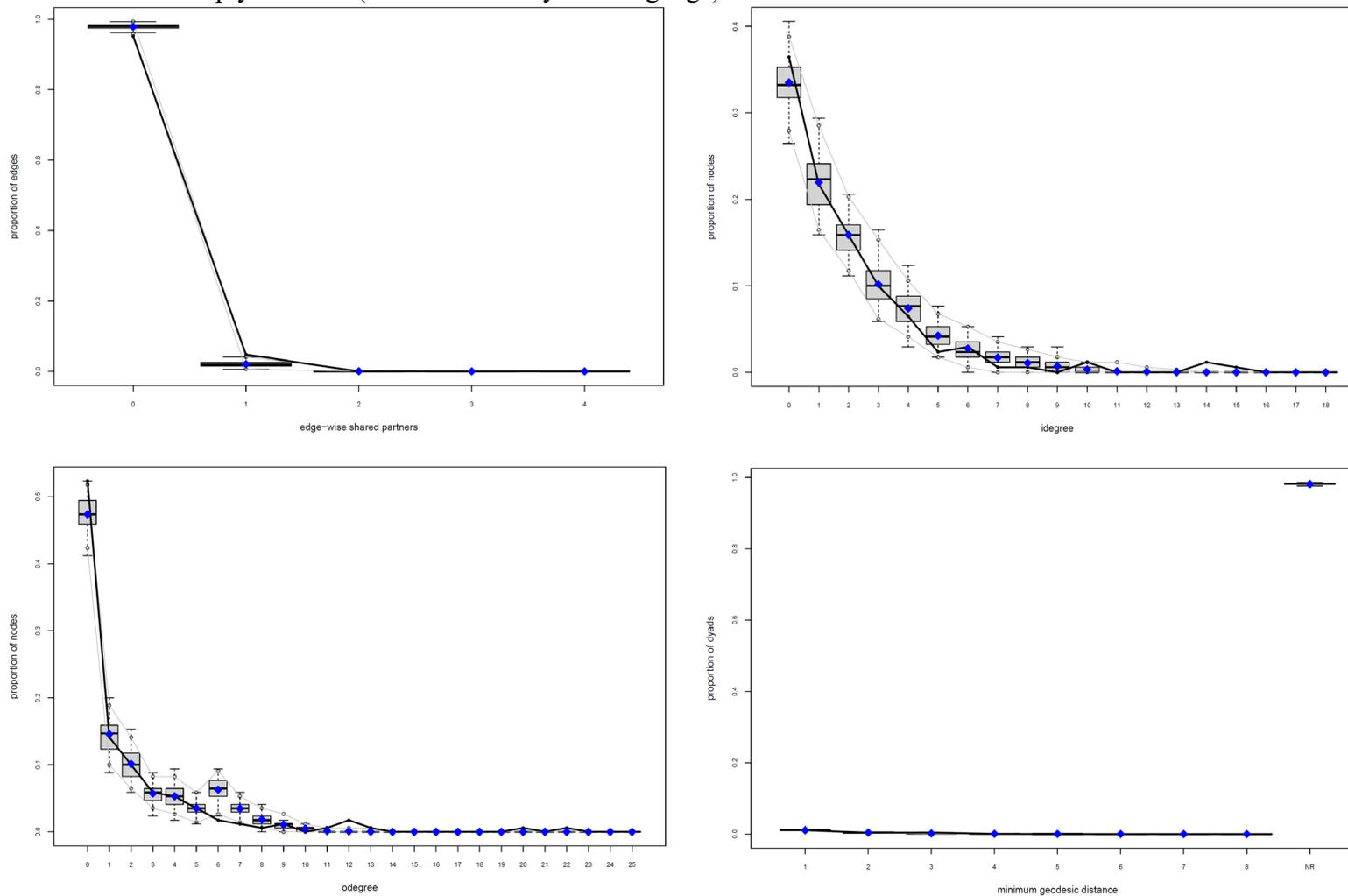
Appendix E: Additional material for the STM

Table 29. Statistical fit of STM topic models with various K

K	Semantic Coherence[1]	Heldout Likelihood[2]	Exclusivity
15	-170.142	-7.190	9.735
20	-173.952	-7.152	9.799
25	-176.536	-7.137	9.841
30	-181.404	-7.117	9.874
35	-187.807	-7.122	9.896
40	-196.080	-7.110	9.914
45	-199.903	-7.096	9.925
50	-198.471	-7.231	9.893
55	-210.759	-7.097	9.941
60	-215.815	-7.089	9.947

[1] Semantic coherence measures the co-occurrence of words and it correlates well with human interpretability of topic quality (Mimno et al., 2011). Higher values indicate higher semantic coherence.

[2] Heldout likelihood measures how well unseen documents can be categorized with the respective model. The higher the heldout likelihood, the better the model (Wallach et al., 2009). However, when only heldout likelihood is considered, it has been described to not predict human interpretation of topic solutions very well (Chang et al., 2009).

3 Exclusivity describes how exclusive a topics' vocabulary is. Exclusivity should be interpreted together with semantic coherence, since high semantic coherence is easily achieved when topics are dominated by a set of very common words (Roberts et al., 2019).

Table 30. Topic distribution per actor group (STM results, expected topic proportions in %)

K	Political actors (n=124,360)	Econ. actors (n=4,019)	Civil society (n=57,475)	Media (n=109,922)	Cultur. actors (n=699)	Citizens (n=48,084)	Other (n=49)	Deleted (n=7)	Not coded (n=96,200)	Total (N=440,815)
1	7.04	7.81	7.86	7.53	8.58	6.47	12.12	7.97	8.87	8.12
2	4.62	6.41	16.21	22.73	7.54	6.81	11.61	4.71	7.48	7.50
3	2.86	1.67	2.63	1.83	4.69	3.65	1.53	1.68	2.77	2.46
4	2.19	1.23	1.03	0.90	1.13	2.57	1.11	1.13	1.65	1.90
5	11.81	11.44	8.58	11.52	5.88	6.29	11.93	3.37	9.47	9.38
6	2.62	2.06	1.64	1.63	2.93	3.61	1.78	3.91	2.88	2.85
7	1.41	1.32	1.39	2.41	5.34	1.89	2.41	0.68	1.61	1.72
8	9.00	11.11	6.27	3.03	4.12	4.99	5.08	3.20	6.43	6.07
9	5.78	3.45	4.87	3.29	3.74	3.37	3.33	1.48	4.09	3.78
10	1.82	1.91	2.28	1.81	1.79	1.75	1.77	1.26	2.37	2.34
11	3.43	4.14	2.84	3.01	6.35	3.43	3.80	1.97	4.13	3.78
12	3.58	3.74	3.29	3.58	3.84	6.38	3.56	2.78	5.29	5.55
13	4.42	4.00	5.77	4.57	5.48	4.35	6.13	3.15	5.33	5.27
14	2.71	2.36	3.77	1.16	2.95	2.26	1.78	0.95	2.60	2.69
15	4.77	3.58	3.56	3.56	3.71	3.42	3.80	2.03	4.48	4.44
16	3.50	4.90	3.46	2.38	2.78	2.50	1.58	3.72	3.17	3.32
17	4.51	4.67	3.71	2.49	5.32	3.50	5.63	3.53	4.57	4.37
18	3.38	2.98	2.09	1.61	2.10	3.19	2.76	6.37	2.72	2.61
19	3.74	2.64	3.45	6.79	3.59	3.06	3.17	1.07	3.24	3.55
20	2.27	1.75	3.30	3.01	4.39	3.61	1.93	8.64	2.92	3.02
21	3.37	2.82	2.13	1.86	2.70	2.31	2.13	2.19	2.75	2.80
22	3.36	6.02	3.89	2.92	2.81	7.74	3.46	2.58	3.14	3.17
23	2.84	4.14	2.43	3.36	3.07	4.09	2.31	19.96	3.29	3.80
24	2.96	2.09	1.79	1.42	2.59	6.79	2.82	8.85	2.70	3.52
25	2.02	1.77	1.78	1.60	2.60	1.96	2.46	2.82	2.07	2.01
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table 31. Topic distribution in tweets per political leaning of sending actor (in %)

K	Left (n=29,889)	Green (n=33,462)	Soc.dem. (n=20,349)	Liberal (n=28,775)	Christ. dem. (n=9,558)	Conserv. (n=5,134)	Nation. (n=43,911)	Argrar. (n=147)	Ethnic Min. (n=12,906)	Special issue (n=376)	Elect. Allian. (n=173)	Non-partis. (n=90,923)	Other (n=3,212)	Deleted/ Not eval. (n=28,185)	Not coded (n=96,589)	Total (N=440,815)
1	6.52	7.30	8.08	9.38	5.92	5.93	5.02	5.39	5.65	8.46	7.25	7.87	8.04	6.64	8.85	8.12
2	7.39	5.53	5.22	7.78	4.26	12.66	5.80	3.41	11.94	8.43	3.27	28.02	9.08	7.65	7.48	7.50
3	2.71	2.45	3.38	4.74	2.47	2.65	1.37	1.54	6.75	2.51	2.91	1.69	1.99	3.04	2.76	2.46
4	1.26	1.92	0.99	1.19	3.30	0.86	1.87	1.10	0.69	4.11	1.49	0.82	1.29	1.53	1.64	1.90
5	13.94	9.55	6.34	8.04	6.10	4.76	15.87	6.20	5.05	8.06	9.58	12.05	8.29	7.46	9.44	9.38
6	2.11	2.28	3.53	1.53	3.96	9.42	2.77	1.14	0.88	1.94	1.70	1.59	3.54	2.78	2.88	2.85
7	1.32	0.97	1.06	2.49	1.41	1.14	3.08	1.38	0.74	1.70	1.06	1.69	2.18	2.35	1.61	1.72
8	7.27	12.53	7.79	7.54	9.28	4.24	4.72	12.14	6.44	7.33	6.14	2.80	6.05	4.83	6.41	6.07
9	5.23	3.06	5.68	5.03	3.38	2.78	3.28	6.04	20.30	4.09	5.54	2.94	3.89	4.65	4.08	3.78
10	1.86	2.54	2.04	2.78	1.90	2.12	1.31	1.96	1.11	2.21	1.37	1.61	2.15	1.77	2.36	2.34
11	3.76	3.53	4.30	3.80	2.43	2.41	2.39	2.23	3.65	3.22	2.68	2.75	3.63	3.79	4.11	3.78
12	4.37	3.56	4.66	4.45	5.54	3.87	5.15	2.19	1.57	3.76	3.59	2.88	4.42	5.01	5.28	5.55
13	5.80	4.19	3.98	4.79	4.29	6.39	4.63	8.16	4.80	5.33	8.56	4.32	4.66	4.60	5.32	5.27
14	1.93	3.96	3.76	2.05	4.89	1.97	2.06	4.25	1.78	3.35	2.85	1.20	2.33	2.15	2.59	2.69
15	4.27	4.98	3.98	4.15	4.40	3.27	4.04	7.57	4.51	3.88	8.47	3.46	3.89	3.78	4.47	4.44
16	3.13	3.08	3.80	2.65	3.32	2.24	2.24	3.67	1.89	4.84	9.18	2.63	2.74	3.13	3.16	3.32
17	3.28	5.33	5.75	3.65	6.56	4.91	2.94	3.52	2.64	3.97	3.67	2.57	4.33	3.22	4.56	4.37
18	4.58	4.38	2.67	2.82	2.70	2.56	2.60	2.32	1.22	2.52	3.50	1.19	5.38	2.63	2.72	2.61
19	2.97	1.94	2.65	3.85	5.16	4.14	8.36	10.89	2.92	3.36	4.44	5.68	4.20	4.11	3.23	3.55
20	3.08	1.92	4.19	2.98	1.85	4.97	1.47	2.17	1.94	3.14	1.31	3.18	3.37	3.04	3.13	3.02
21	2.76	3.16	4.52	3.14	3.53	2.53	2.06	4.03	1.79	2.44	3.12	1.92	2.28	2.26	2.74	2.80
22	3.10	3.60	3.26	2.98	3.80	2.83	5.46	2.70	7.13	4.57	3.13	1.70	2.91	9.81	3.13	3.17
23	3.13	3.99	3.47	3.91	5.27	7.02	1.99	2.26	0.95	2.15	1.68	2.82	4.07	4.63	3.28	3.80
24	2.31	2.22	2.97	2.13	2.34	2.37	7.73	1.74	1.76	2.59	1.61	1.12	2.99	3.27	2.70	3.52
25	1.93	2.04	1.98	2.15	1.95	1.95	1.79	1.99	1.90	2.05	1.91	1.48	2.28	1.86	2.07	2.01
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Note. *Other/unclear* is coded when a user profile did include political references but these could not be coded unambiguously. *Not evaluated* is coded when no information about political leaning was provided in a user profile or the profile was deleted. *Not coded* includes all tweets from users that were not part of the coding sample.

Table 32. Topic distribution per Top 12 countries across all actor groups (in %)

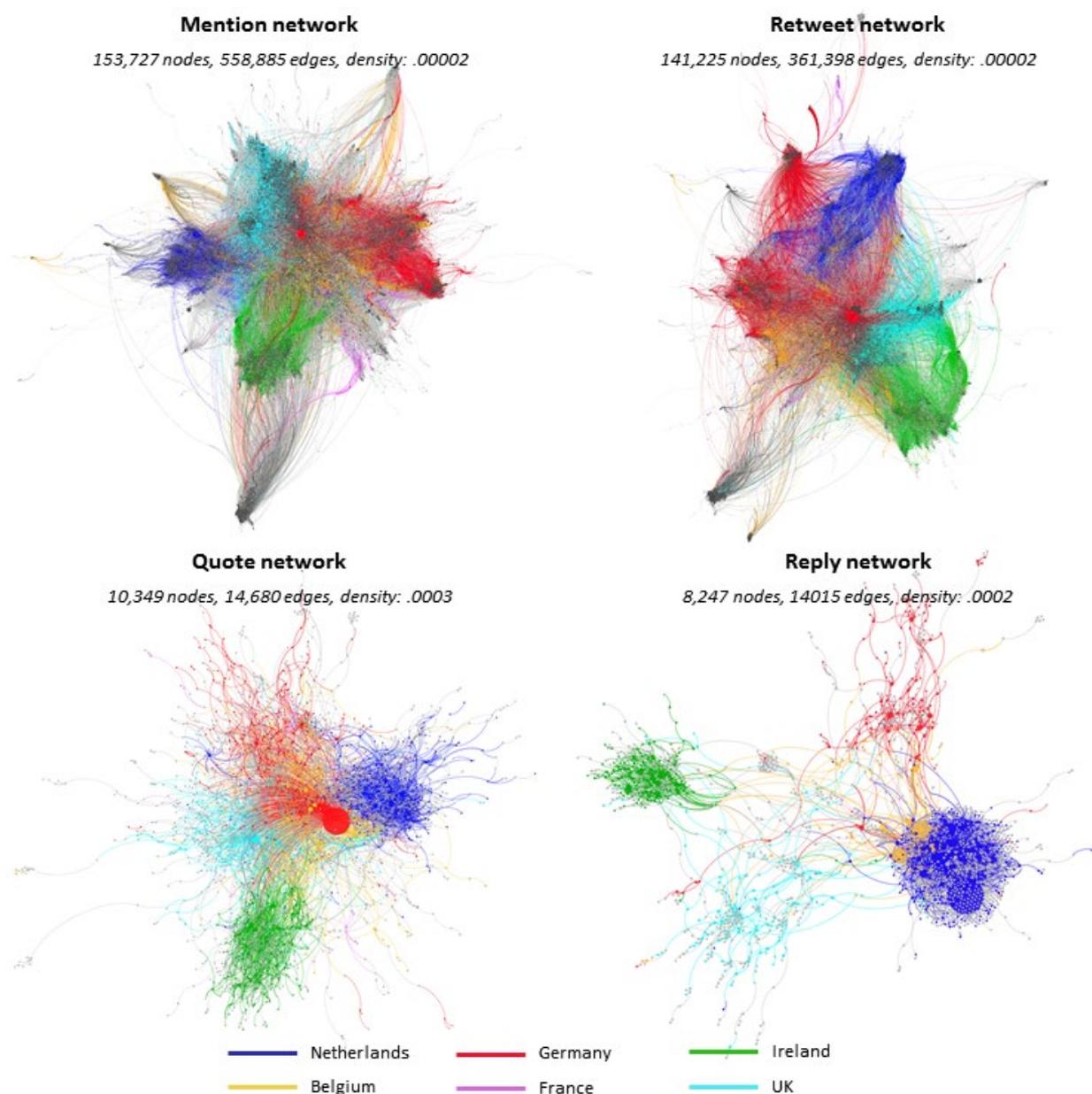|							Country						
K	Austria (n=2,540)	Belgium (n=39,028)	France (n=4,829)	Germany (n=64,582)	Greece (n=1,886)	Hungary (n=1,686)	Ireland (n=40,847)	Italy (n=2,168)	Nether-lands (n=50,063)	Spain (n=13,245)	UK (n=54,145)	US (n=13,585)	Total debate (N=440,815)
1	8.48	8.54	8.06	6.03	14.72	6.04	6.23	8.11	6.47	6.97	9.42	6.52	8.12
2	9.81	5.78	8.37	4.79	17.67	9.00	4.86	9.30	4.21	2.96	24.93	17.75	7.50
3	1.25	2.42	2.22	1.36	1.33	1.14	3.28	1.24	1.59	2.17	6.79	0.93	2.46
4	0.86	2.09	1.34	1.76	0.68	0.98	0.88	3.16	3.77	1.21	0.89	0.51	1.90
5	14.32	7.91	7.73	25.56	5.31	5.15	4.48	10.97	6.72	5.33	4.87	5.90	9.38
6	1.26	1.45	1.45	1.48	1.40	1.05	8.04	1.52	1.38	1.11	1.90	0.96	2.85
7	1.02	2.46	12.72	1.14	2.38	3.75	0.99	1.53	1.27	0.99	1.07	6.21	1.72
8	6.87	10.01	4.83	8.24	2.72	6.00	7.26	5.00	6.74	8.35	3.22	1.90	6.07
9	4.53	7.11	3.79	3.76	8.66	4.85	2.94	2.86	3.08	24.86	2.46	2.79	3.78
10	2.21	2.17	4.98	1.67	1.85	1.44	2.31	1.38	1.88	1.37	2.07	1.90	2.34
11	2.80	2.98	2.68	3.23	2.86	2.40	2.39	4.01	4.13	5.51	3.47	2.07	3.78
12	2.58	2.75	2.97	2.64	5.05	2.27	2.13	2.44	12.12	1.99	2.66	2.35	5.55
13	5.10	5.85	4.71	5.25	7.50	4.98	4.00	4.22	4.58	5.37	4.91	5.02	5.27
14	3.17	4.13	3.16	2.46	0.99	2.09	2.45	4.05	2.44	2.79	1.42	0.82	2.69
15	7.76	4.23	4.67	5.93	3.10	3.63	3.55	5.96	3.84	4.76	2.82	2.80	4.44
16	2.95	4.24	2.77	2.60	1.86	2.51	2.46	8.11	5.07	2.93	1.98	2.88	3.32
17	4.75	3.59	3.24	3.40	2.61	2.30	6.88	3.17	3.60	2.60	3.63	1.81	4.37
18	1.71	2.28	2.57	2.78	1.24	1.68	4.53	1.62	4.29	2.34	1.35	1.08	2.61
19	3.64	5.69	6.19	4.27	6.33	25.63	1.75	5.35	2.73	3.54	2.39	16.39	3.55
20	1.37	1.76	1.80	1.17	3.78	1.94	4.91	1.43	1.37	1.41	6.96	2.41	3.02
21	1.86	2.84	2.32	2.61	1.65	2.03	3.37	6.83	3.09	2.45	1.96	1.09	2.80
22	7.54	3.86	2.13	2.98	1.54	2.30	2.93	3.13	3.13	3.56	3.05	10.71	3.17
23	1.07	1.72	1.80	1.09	1.35	1.25	13.24	1.46	1.31	1.05	2.46	2.56	3.80
24	1.29	2.14	1.65	2.03	1.60	3.86	2.06	1.42	9.05	2.28	1.46	1.23	3.52
25	1.82	1.99	1.86	1.78	1.82	1.72	2.08	1.72	2.13	2.12	1.87	1.42	2.01
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Note. The column "total" includes the topic distribution in all countries in the analysis.

Table 33. Topic distribution per actor scope across all actor groups (in %)

| K	national (n=217,636)	EU (n=60,918)	Euro-pean (n=55,613)	Intern-ational (n=168)	global (n=9,391)	unclear (n=858)	Not coded (n=96,231)	Total (N=440,815)
1	6.62	8.74	7.86	6.34	9.11	8.70	8.87	8.12
2	9.28	7.65	32.26	10.11	8.13	7.85	7.48	7.50
3	2.80	3.09	1.36	2.73	1.84	4.02	2.77	2.46
4	1.56	2.62	0.84	0.77	1.27	1.43	1.64	1.90
5	11.34	7.16	10.51	6.54	9.01	7.53	9.47	9.38
6	2.67	1.91	1.26	5.03	1.39	2.09	2.88	2.85
7	1.66	1.81	1.83	6.76	4.83	1.16	1.61	1.72
8	6.41	8.20	2.75	7.85	5.14	4.83	6.43	6.07
9	3.76	8.02	3.06	4.17	6.00	6.19	4.09	3.78
10	1.86	2.02	1.38	2.05	4.59	2.48	2.37	2.34
11	3.16	3.66	2.60	1.76	4.88	4.72	4.13	3.78
12	4.60	2.75	2.65	1.81	3.34	3.56	5.29	5.55
13	4.58	5.54	4.01	4.91	5.01	7.73	5.33	5.27
14	2.21	3.20	1.76	2.65	2.51	1.90	2.60	2.69
15	4.09	4.33	3.16	3.14	4.12	3.99	4.48	4.44
16	3.02	3.46	2.28	1.36	4.30	2.38	3.17	3.32
17	3.87	3.82	2.34	3.35	3.16	4.48	4.57	4.37
18	3.05	2.28	1.02	1.45	2.29	3.38	2.72	2.61
19	4.26	3.65	6.59	6.09	5.19	3.32	3.24	3.55
20	3.08	2.78	2.13	1.36	2.57	4.15	2.92	3.02
21	2.67	2.71	1.83	3.33	2.10	2.37	2.75	2.80
22	4.57	3.82	1.65	5.96	4.00	3.25	3.14	3.17
23	3.49	2.66	2.47	1.34	1.84	2.70	3.29	3.80
24	3.51	2.09	0.99	7.30	1.59	3.62	2.70	3.52
25	1.90	2.03	1.39	1.83	1.78	2.15	2.07	2.01
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Appendix F: Additional material for the community analysis

Figure 25. Country distribution across networks

Note. Directed networks. Layout: ForceAtlas2 (Gephi). Only largest component and nodes with degree > 2 depicted. Node size based on indegree, node color based on country background of node. Edge color based on target node. Grey: uncoded nodes and edges.

Figure 26. Language distribution across networks
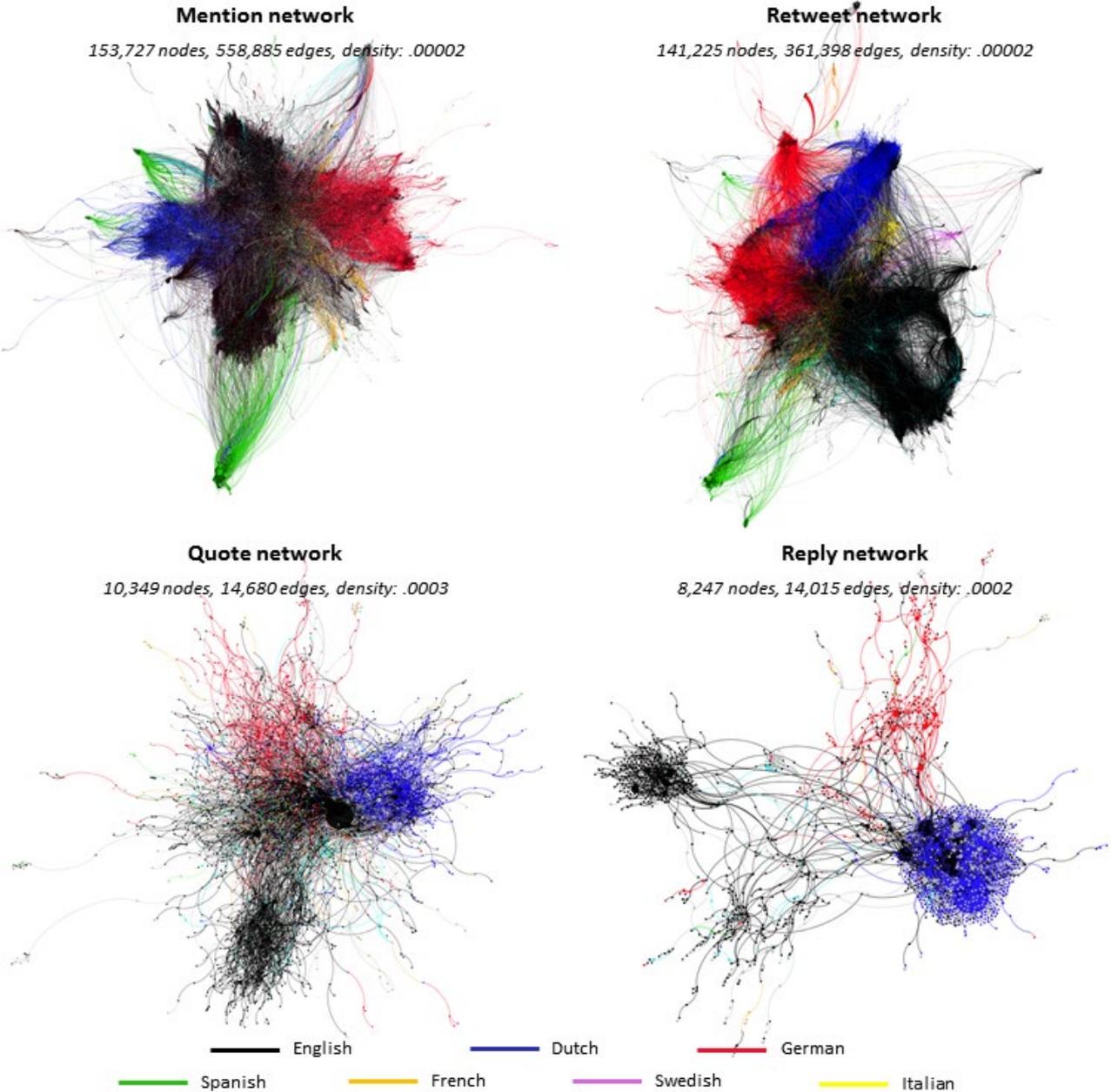
Note. Directed networks. Layout: ForceAtlas2 (Gephi). Only largest component and nodes with degree > 2 depicted. Node size based on indegree, node and edge color based on language of tweet (as identified by *rtweet* and the Twitter API).

Table 34. Nodes with highest in- and outdegree in community RT140

	Authorities (Indegree)		Hubs (Outdegree)	
	User name	*Actor group*	*User name*	*Actor group*
1	astroehlein	civil society	*anonymous*	*private individual*
2	hrw	civil society	philippe_dam	civil society
3	philippe_dam	civil society	WenzelMichalski	civil society
4	WenzelMichalski	civil society	KooyJan	civil society
5	Benjamin_P_Ward	civil society	Roussos90	media
6	UdoBullmann	political actor	ozanceyhun	political actor
7	Lea_li	civil society	hrw	civil society
8	ClaFrancavilla	civil society	*anonymous*	*private individual*
9	LydsG	civil society	*anonymous*	*private individual*
10	*anonymous*	*private individual*	HughAWilliamson	civil society

Table 35. Nodes with highest in- and outdegree in community RT569

	Authorities (Indegree)		Hubs (Outdegree)	
	User name	*Actor group*	*User name*	*Actor group*
1	geertwilderspvv	political actor	*anonymous*	*private individual*
2	arnoldkarskens	media	*anonymous*	*private individual*
3	Percolator_HNJ	media	*anonymous*	*private individual*
4	wierdduk	media	*anonymous*	*private individual*
5	*anonymous*	*private individual*	*anonymous*	*private individual*
6	fvdemocratie	political actor	*anonymous*	*private individual*
7	*anonymous*	*private individual*	*anonymous*	*private individual*
8	MeyerRon	political actor	*anonymous*	*private individual*
9	*anonymous*	*private individual*	*anonymous*	*private individual*
10	SPnl	political actor	*anonymous*	*private individual*

Table 36. Nodes with highest in- and outdegree in community RT80

	Authorities (Indegree)		Hubs (Outdegree)	
	User name	*Actor group*	*User name*	*Actor group*
1	astroehlein	civil society	*anonymous*	*private individual*
2	hrw	civil society	philippe_dam	civil society
3	philippe_dam	civil society	WenzelMichalski	civil society
4	WenzelMichalski	civil society	KooyJan	civil society
5	Benjamin_P_Ward	civil society	Roussos90	media
6	UdoBullmann	political actor	ozanceyhun	political actor
7	Lea_li	civil society	hrw	civil society
8	ClaFrancavilla	civil society	*anonymous*	*private individual*
9	LydsG	civil society	*anonymous*	*private individual*
10	*anonymous*	*private individual*	HughAWilliamson	civil society

Table 37. Nodes with highest in- and outdegree in community M751

	Authorities (Indegree)		Hubs (Outdegree)	
	User name	*Actor group*	*User name*	*Actor group*
1	GoodwinMJ	civil society	*anonymous*	*private individual*
2	LeaveEUOfficial	civil society	*anonymous*	*private individual*
3	TiceRichard	political actor	*anonymous*	*private individual*
4	Nigel_Farage	political actor	*anonymous*	*private individual*
5	SkyNewsPolitics	media	*anonymous*	*private individual*
6	brexitparty_uk	political actor	*anonymous*	*private individual*
7	RedHotSquirrel	political actor	*anonymous*	*private individual*
8	lewis_goodall	media	*anonymous*	*private individual*
9	ActionBrexit	civil society	*anonymous*	*private individual*
10	*anonymous*	*private individual*	James7Holland	media

Table 38. Nodes with highest in- and outdegree in community RT865

	Authorities (Indegree)		Hubs (Outdegree)	
	User name	*Actor group*	*User name*	*Actor group*
1	geertwilderspvv	political actor	*anonymous*	*private individual*
2	arnoldkarskens	media	*anynomous*	*private individual*
3	Percolator_HNJ	media	*anonymous*	*private individual*
4	wierdduk	media	*anonymous*	*private individual*
5	*anonymous*	*private individual*	*anonymous*	*private individual*
6	fvdemocratie	political actor	*anonymous*	*private individual*
7	*anonymous*	*private individual*	*anonymous*	*private individual*
8	MeyerRon	political actor	*anonymous*	*private individual*
9	*anonymous*	*private individual*	*anonymous*	*private individual*
10	SPnl	political actor	*anonymous*	*private individual*

Table 39. Nodes with highest in- and outdegree in community M428

	Authorities (Indegree)		Hubs (Outdegree)	
	User name	*Actor group*	*User name*	*Actor group*
1	astroehlein	civil society	*anonymous*	*private individual*
2	hrw	civil society	philippe_dam	civil society
3	philippe_dam	civil society	WenzelMichalski	civil society
4	WenzelMichalski	civil society	KooyJan	civil society
5	Benjamin_P_Ward	civil society	Roussos90	media
6	UdoBullmann	political actor	ozanceyhun	political actor
7	Lea_li	civil society	hrw	civil society
8	ClaFrancavilla	civil society	*anonymous*	*private individual*
9	LydsG	civil society	*anonymous*	*private individual*
10	*anonymous*	*private individual*	HughAWilliamson	civil society

Table 40. Nodes with highest in- and outdegree in community RT111

	Indegree		Outdegree	
	User name	*Actor group*	*User name*	*Actor group*
1	astroehlein	civil society	*anonymous*	*private individual*
2	hrw	civil society	philippe_dam	civil society
3	philippe_dam	civil society	WenzelMichalski	civil society
4	WenzelMichalski	civil society	KooyJan	civil society
5	Benjamin_P_Ward	civil society	Roussos90	media
6	UdoBullmann	political actor	ozanceyhun	political actor
7	Lea_li	civil society	hrw	civil society
8	ClaFrancavilla	civil society	*anonymous*	*private individual*
9	LydsG	civil society	*anonymous*	*private individual*
10	*anonymous*	*private individual*	HughAWilliamson	civil society

Table 41. Nodes with highest in- and outdegree in community Q1108

	Indegree		Outdegree	
	User name	*Actor group*	*User name*	*Actor group*
1	groenlinks	political actor	*anonymous*	*private individual*
2	europeangreens	political actor	KlokSabine	political actor
3	Die_Gruenen	political actor	judithbogner	media
4	TerryReintke	political actor	*anonymous*	*private individual*
5	BasEickhout	political actor	ConnyCulemborg	civil society
6	StemopeenVrouw	civil society	TerryReintke	political actor
7	CANEurope	civil society	ZuzanaPlk	civil society
8	rotterdam	political actor	*anonymous*	*private individual*
9	kimvsparrentak	political actor	GLCulemborg	political actor
10	grueneneukoelln	political actor	*anonymous*	*private individual*

Selbstständigkeitserklärung

Name: Benert
Vorname: Vivien

Ich erkläre gegenüber der Freien Universität Berlin, dass ich die vorliegende Dissertation selbstständig und ohne Benutzung anderer als der angegebenen Quellen und Hilfsmittel angefertigt habe. Die vorliegende Arbeit ist frei von Plagiaten. Alle Ausführungen, die wörtlich oder inhaltlich aus anderen Schriften entnommen sind, habe ich als solche kenntlich gemacht. Diese Dissertation wurde in gleicher oder ähnlicher Form noch in keinem früheren Promotionsverfahren eingereicht.

Mit einer Prüfung meiner Arbeit durch ein Plagiatsprüfungsprogramm erkläre ich mich einverstanden.

Datum: 24.07.2023

· ·

Declaration of authorship

Name: Benert
First name: Vivien

I declare to the Freie Universität Berlin that I have completed the submitted dissertation independently and without the use of sources and aids other than those indicated. The present thesis is free of plagiarism. I have marked as such all statements that are taken literally or in content from other sources. This dissertation has not been submitted in the same or similar form in any previous doctoral procedure.

I agree to have my thesis examined by a plagiarism examination software.

Date: 24.07.2023