

Eisele, Olga; Heidenreich, Tobias; Maares, Phoebe

Article — Published Version

Pics or it didn't happen! EU institutions' visual communication and user engagement on Facebook and Instagram

European Journal of Political Research

Provided in Cooperation with:

WZB Berlin Social Science Center

Suggested Citation: Eisele, Olga; Heidenreich, Tobias; Maares, Phoebe (2026) : Pics or it didn't happen! EU institutions' visual communication and user engagement on Facebook and Instagram, European Journal of Political Research, ISSN 1475-6765, Cambridge University Press, Cambridge, Iss. FirstView, pp. 1-26,
<https://doi.org/10.1017/S1475676526100668>

This Version is available at:

<https://hdl.handle.net/10419/337875>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by/4.0/>

RESEARCH ARTICLE

Pics or it didn't happen! EU institutions' visual communication and user engagement on Facebook and Instagram

Olga Eisele¹ , Tobias Heidenreich² and Phoebe Maares^{3,4}

¹Amsterdam School of Communication Research, University of Amsterdam, Amsterdam, Netherlands, ²Research Group Global Governance, WZB Berlin Social Science Center, Berlin, Germany, ³Department of Communication Science, University of Vienna, Vienna, Austria and ⁴Institute for Research on Far-right Extremism, University of Tübingen, Tübingen, Germany

Corresponding author: Olga Eisele; Email: o.eisele@uva.nl

(Received 13 November 2024; revised 17 September 2025; accepted 13 November 2025)

Abstract

Social media often follow a visual logic found to increase engagement, as images are more likely to attract attention, presenting information on a holistic-associative basis. For a political entity like the EU, social media are a promising route to overcome the remoteness to its citizens, identified as one of the crucial challenges to its public legitimacy. Against this broader background, our study analyses the influence of 10 years of EU visual social media communication on user engagement as an indicator of successfully creating visibility in a crucial communication space. For this purpose, we conducted an image-type analysis, combining quantitative and qualitative features of visual analysis: First, a subsample of posts was inductively analysed to identify recurring image types and subsequently used to implement a manual quantitative visual content analysis. Building on the results, we drew on a machine learning approach, allowing us to analyse over 40,000 posts, including more than 20,000 pictures. Our results emphasise the crucial influence of social media affordances in explaining user engagement with EU visual social media communication. Implications are discussed with reference to the ongoing discussion about the EU's democratic deficit.

Keywords: European Union; social media; image analysis; automated content analysis; user engagement

Introduction

The European Union (EU) is repeatedly found to suffer from a communication and participation deficit, perceived as far away from people's lives, providing little room for directly experiencing European politics. Social media were welcomed as a promising way to communicate to European publics directly, circumventing the gatekeeping position of mass media (De Wilde 2019) and giving EU institutions greater agenda-setting power regarding their own public image (Michailidou 2008). In 2023, social media platforms were used by almost 60% of individuals in the EU (Eurostat 2024), demonstrating their potential to reach a broad audience, thereby increasing opportunities for experiencing and engaging with EU politics.

Social media communication is not only shaped by the sender (Marwick and Boyd 2011; Bruns 2013) but also influenced by the affordances of different platforms, guiding how users can engage in terms of liking, sharing, or communicating in the comment section (Evans, Pearce, Vitak, et al. 2017;

Kakavand 2024). Moreover, social media often follow a visual logic which is generally found to increase engagement (Highfield and Leaver 2016). Images are more likely to attract (immediate) attention and present information on a holistic-associative basis, communicating meaning more comprehensively (Graber 1996; Autenrieth and Neumann-Braun 2011; Schill 2012; Vraga, Bode and Troller-Renfree 2016; Leaver Highfield and Abidin 2020). Visual communication has, therefore, gained relevance in political communication (Farkas 2023) and is a promising route for increasing public visibility for, and potentially also engagement with, a political entity with contested democratic credentials like the EU. Accordingly, our study is guided by the question: *To what extent do different (visual) content features in EU social media communication enhance user engagement?*

We focus on (1) the image types and other visual features used in the social media communication of EU institutions and (2) user engagement, accounting also for (3) differences across platforms. So far, the literature focuses on descriptive analyses of EU social media contents with a broader interest in EU legitimacy (Rocca, Lawall, Tsakiris *et al.* 2024; Özdemir Graneng and de Wilde 2025), EU campaigning on social media (Fazekas, Popa, Schmitt *et al.* 2021), the broader topic of engagement and Euroscepticism (De Wilde, Michailidou and Trenz, 2014; De Wilde, Rasch and Bossetta 2022), or the Europeanising potential of social media (Hänksa and Bauchowitz 2019); such analyses routinely control for the presence of multimedia features (Bene, Magin, Jackson *et al.* 2022; Özdemir and Rauh 2022). Scholarship has investigated visual politics and discourse in the EU, especially with regard to symbolism and logos (Bruter 2003, 2009; Cram and Patrikios 2015; Popa and Dumitrescu 2017; Casiraghi, Cusumano and Chryssogelos 2024). Yet, visual communication is, to our best knowledge, not a focus of EU social media research so far, and thus we do not know what visual contents may be more successful in engaging users, potentially amplifying EU communication.

We, therefore, used a mixed-methods approach to content-analyse static visual and textual EU social media communication as well as user engagement between 2015 and 2022. Comparing Facebook and Instagram, we also contribute to the evolving academic discussion on social media affordances (Evans, Pearce, Vitak *et al.* 2017; Kakavand 2024). We followed three steps: (1) we employed an inductive-deductive image-type analysis (Grittmann and Ammann 2011; Tarnutzer Lobinger and Lucchesi 2024), on a subsample of posts ($n = 400$). We inductively identified recurring image types, connecting these image types to broader categories in the literature. (2) We used these image types to implement a manual quantitative visual content analysis ($n = 4,800$). (3) Building on the results, we implemented a computational approach and analysed 46,467 posts, including more than 20,000 pictures. Eventually, we explored the influence of different (visual) content features on user engagement in a regression analysis. Our results highlight the crucial role of social media affordances in explaining engagement.

Theoretical framework

Europeanised communication in a networked public sphere

The public sphere is an intermediate communication system between citizens and political decision-makers (Castells 2013), defined as a ‘constellation of communicative spaces in society that permit the circulation of information, ideas, debates’ (Dahlgren 2005, p. 14). Social media are increasingly factored in and explicitly focused on in conceptualisations of the public sphere (Dahlgren 2005; Bruns 2023; also Habermas 2021), emphasising the networked character emerging with the structural diversification of communication spaces. This implies easier access for more actors and also more personalised environments (Maier, Waldherr, Miltner *et al.* 2018, p. 5). The increased importance of social media also highlights the ideal nature of *one unified* public sphere (eg Gitlin 1998; Kruse Norris and Flinchum 2018; also Habermas 2006), instead promoting a pragmatic view focused on studying multiple, interconnected public spheres. Such

approaches also acknowledge the increasingly fluid and interwoven nature of public and private communication that, empirically, cannot be neatly separated (Bruns 2023; see also Gitlin 1998; Dahlgren 2005).

While research on EU social media communication is evolving, this pragmatic view on the networked, fragmented structure of the public sphere is mirrored in EU research. The empirical reality suggests a fragmentation along national borders, based on the idea that national public spheres are vertically (top-down, eg news contents focusing on the EU and its institutions) and horizontally (eg news contents focusing on other EU member states) Europeanised (Koopmans and Erbe 2004; Kleinen-von Königsłow 2012). This resonates with the idea that there are many public spheres under a European roof, united by the fact that public communication revolves around the issue of European politics in the broadest sense. Such approaches have been discussed in terms of issue spaces, defined as 'the spatial shape of any particular, empirically observable issue discourse' (Stoltenberg 2021, p. 8; also, Bruns 2023; Luoma-aho and Vos 2010).

While theoretical models of a networked public sphere (eg Bruns 2023) pertain to different communication channels fragmented along language barriers, the idea of Europeanised public spheres implies that member states have their own political and media context defining national public spheres that increasingly include European content. Building on these considerations, we embed our analysis in a theoretical model of multiple, potentially overlapping, coinciding, and/or mutually influencing Europeanised public spheres: within a constellation of different member states and different intermediate communication channels. Given its underexplored nature, we limit our analysis to social media to enhance the overall discussion with regard to direct public communication by EU institutions in particular.

Understanding the dynamics of networked Europeanised public spheres and the input of EU institutions themselves is crucial for evaluating the EU's democratic credentials. Citizens need information and debate about the EU as a basis to exert democratic control, for example, for holding elected political decision-makers accountable for the EU's political outcomes (Habermas 1962). For the EU, however, these democratic credentials have been contested for long. Discussed as the democratic deficit, one of the challenges to EU legitimacy is to bring remote, that is, complex and opaque, EU politics closer to (citizens') home (Follesdal and Hix 2006): this implies a participation deficit (Michailidou 2008), prominently manifested in notoriously low voter turnout in EU elections (Gattermann de Vreese, and van der Brug 2021). Relatedly, the communication deficit long implied low news visibility of EU affairs in public debate (Boomgaarden, De Vreese, Schuck et al. 2013): in the wake of several accumulating crises, this lack of communication has decreased and given way to increased negative reporting and Euroscepticism. While heightened visibility in public debate should generally be welcomed from a democratic theory point of view, negative public discourse and party campaigning against the EU are contributing to an erosion of the EU's legitimacy (De Wilde 2019), confronting EU leaders with a constraining public dissensus that effectively limits their discretion in moving the EU forward (Hooghe and Marks 2009).

Remoteness

Remoteness, one of the central challenges for the EU's legitimacy, is often associated with difference – in the sense of remoteness or difference from dominant meanings and interpretations of the world (Membretti Dax and Machold 2022, p. 18). Follesdal and Hix (2006, p. 536) described remoteness in their classic account of the EU's democratic deficit as follows: 'Psychologically, the EU is too different from the domestic democratic institutions that citizens are used to. As a result, citizens cannot understand the EU, and so will never be able to assess and regard it as a democratic system writ large, nor to identify with it'. Remoteness in the EU debate, thus, is also described in terms of difference: in cognitive terms regarding its difference from the national context and the resulting difficulty to understand what it is and does; this makes it hard to evaluate its political output and make informed decisions in EU elections, for example. It is also described in affective

terms regarding the difficulty to develop a European identity (Kuhn 2015). This can be rooted in a lack of opportunity to overcome these differences: a lack of first-hand experience, public debate, and regular exposure to diverse information and opinions about it, which would help with familiarising oneself with EU politics and forming an opinion about it (Scharpf 1999; Boomgaarden, De Vreese, Schuck *et al.* 2013).

Remoteness, in cognitive and affective terms, is mirrored in the second-order paradigm used to describe EU elections, implying the prevalence of the national context as a lens, yardstick, or proxy for citizens to understand and evaluate the EU (eg Anderson 1998; De Vries 2018). The same finding prevails in analyses of EU news media coverage where a national angle dominates (eg Boomgaarden, De Vreese, Schuck *et al.* 2013). Thus, the debate overall highlights the (national) differences that still prevail amongst member states and their citizens, identifying different national contexts as EU citizens' point of reference (Eisele and Heidenreich, 2025). Communication with the aim of bridging remoteness in the EU should, therefore, be understood as communication tailored to the ultimate goal of overcoming these differences. This is to foster a political community of European citizens as the precondition for a legitimate political entity, that is, one that is built on values and beliefs that are shared within this community (Beetham 1991; Scharpf 1999).

User engagement

Connecting back to the debate about the constraining dissensus (Hooghe and Marks 2009), existing studies of social media communication about the EU come to quite sobering results, highlighting the negativity of user comments (De Wilde Michailidou and Trenz 2014), higher user engagement with national politics (Bene, Magin, Jackson *et al.* 2022), and even traits of populism in user comments (Galpin and Trenz 2019). Yet, in a time where people increasingly stop actively seeking news and get their information about politics curated by social media algorithms (eg Gil de Zúñiga Copeland and Bimber 2014), the possibility of direct communication between EU institutions and EU citizens via social media platforms has the potential of bridging remoteness. As such, social media platforms live off user attention and engagement (eg Lamot and Paulussen 2024), defined as 'the extent to which varying functionalities like comment fields or "e-mail a friend" links were used' (Larsson 2023, p. 2747). In that sense, engagement metrics offer unique opportunities for monitoring users' interaction with and exposure to content (Ksiazek Peer and Lessard 2016). But the dependence on engagement also makes social media users effective secondary gatekeepers of visibility (Singer 2014), increasing pressure on the communicator to adapt to the social media logic (Lamot and Paulussen 2024).

User engagement is, therefore, an ambivalent indicator that is difficult to connect to larger concepts such as legitimacy or trust: it only shows that people clicked on something, but not why. How users interact with content on social media is highly influenced by algorithmic curation where complex machine learning models largely operate in a black box, ordering, highlighting, and suggesting content (Salgado and Bobba 2019; Lamot and Paulussen 2024). Given the theoretical ambiguity, we focus on user engagement as an indicator of success in creating visibility on social media platforms. Visibility, as the basic rationale of the EU communication literature of the past decades goes (Eisele and Heidenreich 2025), is a necessary condition for legitimacy as it allows familiarising and understanding as a basis for social judgements such as legitimacy (Scharpf 1999). However, visibility is contingent: it does, in itself, not allow further conclusions as to its effects since this depends on what exactly becomes more or less visible.

Studies focusing on shareworthiness (Trilling Tolochko and Burscher 2017) have looked into the feature patterns in contents that might induce user engagement. This research highlights the role of different news values present in a post in triggering engagement, such as negativity and conflict, emotions, and proximity (Trilling Tolochko and Burscher 2017; García-Perdomo, Salaverría, Kilgo *et al.* 2018). Visual communication is found to be particularly engaging (Vraga,

Bode and Troller-Renfree 2016): images resemble reality and are often interpreted as directly picturing it (Graber 1996), while allowing for subjective interpretation by different people. Visuals can help people remember information more easily and help create an emotional connection (see León Negrodo and Erviti 2022, p. 977), which again corroborates the relevance of visual communication as a potential path to bridging the EU's remoteness from its citizens.

Cognition and affection are important for categorising user engagement: while likes, as one of the most common ways to engage with social media content, can be seen as 'click-speech', expressing usually a positive reaction, they might be used as recognition, or to 'express a variety of affective responses such as excitement, agreement, compassion, understanding, but also ironic and parodist liking' (Gerlitz and Helmond 2013, p. 1358). In that sense, liking content is described as being affectively triggered, responding to sensory and visual features of a post (Kim and Yang 2017). Comments require a higher level of cognitive effort and are seen as 'speech acts that contribute to the collective interpretation and engagement', driving a (political) discussion (Bossetta Dutceac Segesten and Trenz 2017, p. 6). In contrast to liking, commenting is found to be cognitively triggered, induced by rational and interactive features of a post (Kim and Yang 2017, also Marcella Baxter and Walicka 2019).

In sum, we perceive user engagement as an indicator of success in catering to user needs programmed into intransparent algorithms. User engagement metrics can generally show if EU social media communication is successful in creating visibility on social media: increased visibility increases opportunities for EU citizens to experience EU politics more directly, which is a precondition for forming opinions about its legitimacy.

Linking visual content and user engagement

The following section draws on literature explaining the mechanisms behind user engagement more generally to formulate open research questions and hypotheses regarding (1) image types used in EU social media communication and (2) user engagement. Lastly, we also investigate (3) differences across two platforms. We develop expectations as to how different visuals and the extent of textual elements influence user engagement with EU social media communication. Given the scarce research to build on, these expectations are interdisciplinarily grounded in visual communication research and the political science literature focusing on EU legitimacy.

Image types in EU social media communication

Visual political communication draws on conventionalised patterns to portray traits of politicians. Such practices are conceptualised as political image-making, which is the strategic use of 'visual and verbal messages, that provide a shorthand cue to audiences for the identification and enhancement of specific character traits' (Strachan and Kendall 2004, p. 135). Scholarship has conceptualised and examined such conventionalised visuals that imply specific (symbolic) meaning as image types which allows for a systematic analysis (Schill 2012; Müller and Geise 2015). For example, the image type of *politicians shaking hands with other leaders* appeals to their agency (Grittmann and Ammann 2011), the type of *commander-in-chief visiting troops* visualises their strength as leaders (Müller and Geise 2015), the image type of *family (wo)man* appeals to family values (Bast 2024), and the type of *bathing in a crowd of voters* or as *(wo)man of the people* aims at appearing relatable (Schill 2012).

Visual political communication research has long observed a growing professionalisation of how politicians are portrayed in the media (Schill 2012), as well as an increase in the personalisation of strategic political communication and media coverage (Bucy and Grabe 2007; Coleman and Wu 2015). Social media perpetuates these trends (Farkas 2023) and, consequently, political image-making incorporates (self-)branding strategies from other actors on social media (Marwick 2013; Abidin 2016). Such strategies emphasise features anticipated to come across as

relatable and authentic (Maeres Banjac and Hanusch 2021), which can result in politicians portraying themselves as ‘one of the people’ (Metz Kruikemeier and Lecheler 2020) or decreasing social distance in their visual communication (Liebhart and Bernhardt 2017; Lalancette and Raynauld 2019).

Research examining visual political communication on social media primarily focuses on accounts of politicians instead of political institutions and finds politicians to embrace personalisation and self-branding strategies (Lalancette and Raynauld 2019; Metz Kruikemeier and Lecheler 2020). The focus is more on actors and their achievements rather than issues (Ekman and Widholm 2017). Dominant image types relate to granting politicians legitimacy by picturing them on the job, for example, giving a speech, shaking hands with other politicians, and engaging in media work (Bast 2024). The few studies investigating parties’ or governmental institutions’ social media accounts similarly find that they focus on personalising the lead candidate(s) of their party or office holders (Filimonov Russmann and Svensson 2016; Turnbull-Dugarte 2019). Again, social media is used to communicate image types relating to media work and give insight into the ‘behind the scenes’ of political work (Liebhart and Bernhardt 2017). As EU institutions are perceived as remote and out of touch with EU citizens, we first aim to understand patterns in EU visual social media communication, generally taking stock of the image types used:

RQ1: What image types can we identify in visual EU communication contents posted on Facebook and Instagram?

Exploring the influence of (visual) content features on user engagement

In the following, four theoretical categories are in focus, identified in the literature as connecting to the broader aim of community-building: the actor- and structure-centred categories of *people* and *place* as well as the *affection*- and *cognition*-centred categories of political symbolism and political communication. People and places are identified as important categories in the visual political communication literature; affection and cognition directly link back to the EU’s remoteness in terms of cognitive complexity as well as the resulting difficulty to identify with it (Follesdal and Hix 2006).

People. Research indicates that social media users engage more with images that feature people (Aramendia-Muneta Olarte-Pascual and Ollo-López 2021). Scholarship on politicians’ social media strategies shows that images featuring politicians were much more successful in garnering likes than images without people (Brands Kruikemeier and Trilling 2021; Farkas and Bene 2021; Peng 2021). This also connects to the debate on the personalisation of EU politics (Gattermann 2022), which revolves around the idea that giving Europe a human face could help reduce the remoteness of EU politics. While this research shows that personalisation is not an easy fix, it does not focus on social media platforms which follow their own logic in engaging the audience (eg Larsson 2023). This leads us to the following assumption:

H1: EU communication posted on Facebook and Instagram with visual contents featuring humans generates more user engagement in comparison to EU communication with visual contents not featuring humans.

The category of ‘humans’ is rather broad and undefined. Relating back to remoteness as one of the central challenges in the relationship between the EU and its citizens, we may distinguish between politicians as the representatives of the people and the people as such. ‘Humans’ might, thus, be politicians attempting to appear as relatable and hard-working representatives of the people (Liebhart and Bernhardt 2017; Metz Kruikemeier and Lecheler 2020; Aramendia-Muneta Olarte-Pascual and Ollo-López 2021; Farkas and Bene 2021; Peng 2021; Bast 2024), increasing engagement with such posts:

H2: EU communication posted on Facebook and Instagram with visual contents featuring politicians generates more user engagement in comparison to EU communication with visual contents not featuring politicians.

However, another strategy of engaging the audience may be to put those arguably feeling remote at the centre of communication. The latter aspect has been discussed in studies of EU media coverage focusing on the visibility of EU citizens, arguing that increased visibility of ordinary citizens in elite-produced communication, like the news, can reduce a perception of the EU as elitist and far away from EU citizens and their daily lives (Walter 2017a, 2017b; also De Wilde 2019). While the underlying argument of this research is helpful to establish plausibility, it does not allow more concrete conclusions as to the effects of citizens featured in EU visual social media communication on user engagement. We, therefore, formulate an open research question:

RQ2: To what extent does the visual presence of citizens in EU communication on Facebook and Instagram influence user engagement?

Place. Visual communication not featuring people is a more heterogeneous category in which different aspects of the context or places surrounding people may be relevant. Following Harvey (1996), places can contribute to people's identity, experiences, and memory, depending on how they interact with each other and the material objects in it. This identity and community formation around places has also been conceptualised as placemaking, describing the practices through which material places are socially imbued with meaning (Halegoua 2020, p. 5). Placemaking can also occur through mediatisation, as images can carry an 'imagined presence across the members of a local community, although much of the time members of such a place may not be conscious of this imagined community' (Urry 2004, p. 14). Further, affordances of digital media can shape how we experience place and placemaking (Halegoua 2020). Digital placemaking can occur bottom-up, strategically through (government) organisations, or as a mix of both (Basaraba 2023).

From a communication perspective, the concept of *place-naming* is closely related to placemaking. It is defined as a process in which, first, 'issues become associated with 'places'; second, through their discursive connection to the same issue, these places are synthesised as relating to each other and belonging to the same issue 'space' (Stoltenberg 2021, p. 8). Reconnecting to our understanding of the EU's public sphere as an issue space, visual placemaking or-naming on social media, for example, sharing photographs of (representative) buildings and related stories, could, thus, contribute to community-building.

Scholarship examining digital placemaking primarily stems not only from urban, media, and tourism studies but also from political communication (Basaraba 2023), for example, focusing on textual digital placemaking through hashtags during the refugee crisis (Ozduzen Korkut and Ozduzen 2021). Studies on digital visual placemaking do, however, not consider audience engagement. For lack of conclusive evidence in the literature, we resort to the following open research question:

RQ3: To what extent does the visual reference to places in EU communication on Facebook and Instagram influence user engagement?

Political Symbolism. Following Durkheim (1951), symbols can generally be seen as important signifiers of communities, increasing the self-consciousness of societies. Political symbols are perceived and also found to function as effective drivers of integration and solidarity amongst individuals tied together in a unified community (Klatch 1988, p. 139; Bruter 2009). They signal a common identity based on shared values and beliefs (eg Kariyaa, Rundé, Heuer et al. 2022),

which is the basis for political legitimacy (Beetham 1991). While image types are in themselves perceived as carrying symbolic meaning (Schill 2012; Müller and Geise 2015), the effects of more explicit European symbols, like the EU flag or the common currency, have been analysed and found to be central integration and legitimising tools of the EU (Bruter 2003; Cram and Patrikios 2015; Popa and Dumitrescu 2017), fostering a European identity (Negri Nicoli and Kuhn 2021). The role of such political symbols in political online communication is generally understudied; one finding, here, is that effects of national flags in social media communication increase engagement but are context-dependent (Kariryaa, Rundé, Heuer *et al.* 2022). Given the scarce evidence, we explore the influence of political symbolism on user engagement with the following research question.

RQ4: To what extent does the visual presence of political symbols in EU communication on Facebook and Instagram influence user engagement?

Political Information. Another important aspect of remoteness is the dynamic complexity of the political system of the EU. This complexity leads to a public information deficit (Clark 2014; Marquart, Goldberg, Van Elsas *et al.* 2019) as the EU is hard to explain to the public, even for experts. Accordingly, research has long highlighted that participation in European politics is mostly for knowledgeable and educated elites (eg Schlesinger 1999; Clark 2014). Consuming political communication online has been positively linked to increased political participation (eg Valenzuela 2013; Gil de Zúñiga Copeland and Bimber 2014) and could help to alleviate the information and participation deficits at the core of the EU's democratic deficit. However, communicating complex or abstract information is difficult using visual communication only (eg Highfield and Leaver 2016). In response to this challenge, political campaigning on Instagram, for example, has been found to circumvent its 'image-first' rationale by integrating textual elements to increase the political content of posts (Hassler Kümpel and Keller 2023, p. 534). While our research is focused on visual EU communication as such, we follow this line of reasoning. Providing a more comprehensive picture, we take the extent of textual elements in visual communication as a proxy for additional political information that EU institutions post on social media. For lack of conclusive evidence regarding effects on user engagement, we pose an open research question:

RQ5: To what extent does the degree of textual in addition to visual contents in EU communication on Facebook and Instagram influence user engagement?

Differences across platforms

Lastly, user behaviour differs across different social media platforms due to differences in affordances, contexts, audience cohort, and audience expectations (Heft, Buehling, Zhang *et al.* 2024). While social media are often viewed as one entity of communication, they follow distinct platform logics depending on their materiality and what kind of behaviour they afford (Evans, Pearce, Vitak *et al.* 2017). Generally, Facebook and Instagram are thought of as platforms that foster citizen–politician connections rather than facilitating connections among politicians or politicians and journalists (Boulianne and Larsson 2023). Visual communication research still mostly focuses on single platforms without embracing a comparative approach despite studies indicating that the type of social media makes a difference in what images are communicated and with what effect (Farkas and Bene 2021).

Scholarship generally points to differences in social media affordances, as Facebook, for example, allows for hypertextuality by linking to external sources, whereas Instagram only allows to create connections to themes and people within the platform through tags and hashtags (Hase

Boczek and Scharrow 2023). Facebook further provides more options for audience interactions through the possibility to share posts as well as multiple reactions (eg Eberl, Tolochko, Jost et al. 2020), whereas Instagram only allows sharing posts in stories or as direct messages, making shares ephemeral and relocating follow-up discussions into private chats (Schreiber 2017). Moreover, Instagram follows an inherently visual logic as posts cannot be purely text-based (Hase Boczek and Scharrow 2023); thus, visuals have to be especially succinct to attract audience attention, whereas in Facebook any visual could attract immediate attention when compared to text-only posts.

Research further points to different norms of what can and should be communicated on different social media platforms (Waterloo, Baumgartner, Peter et al. 2018). Here, Instagram is perceived as a platform that allows for more affect and intimacy when compared to Facebook where audiences expect a more neutral communication style from politicians (Bossetta and Schmokel 2023). Furthermore, content that showcases politicians in more private settings appears to be more popular on Instagram than on Facebook (Farkas and Bene 2021). Lastly, in EU countries, users of Facebook tend to be slightly older than Instagram users (Newman, Fletcher, Eddy et al. 2023), who have been assumed to prefer 'lighter' and less formal communication styles (Larsson 2018). As such, Instagram audiences might be more inclined to engage with EU accounts as younger citizens tend to support the EU in some parts of Europe (Lauterbach and De Vries 2021). We do, however, not know whether visual communication strategies fare similarly for political institutions. Therefore, we ask:

RQ6: To what extent are there differences between Facebook and Instagram regarding the (a) contents featured in EU communication and (b) user engagement with these contents?

Data and methods

We analysed data from the social media platforms Facebook and Instagram as two established and popular platforms in Europe. Both sites rank among the most used social media in EU countries (European Parliament 2023) and feature static visual content prominently. The data were analysed in a multi-step approach, including (1) an inductive-deductive approach to identify a range of image types, (2) the development of a coding scheme and implementation of a quantitative manual content analysis based on that scheme, and (3) an automated visual content analysis based on the manually coded data.

Facebook and Instagram data

Relying on the EU's official information,¹ a list of nine EU institutions and bodies was compiled with corresponding Facebook and/or Instagram accounts. All data from these accounts were gathered using the CrowdTangle API, including all posts,² metadata, and content of static visuals (ie images) for eight years (2015–2022). This timeframe was chosen as most of the targeted accounts started their platform activities in the mid-2010s. Additionally, the eight years cover several important political events, ranging from the 2015 refugee movements, the Brexit referendum in 2016, EU elections in 2019, and the Covid pandemic starting in 2020, to the escalation of the Russian invasion and start of the war in Ukraine in 2022, which may be mirrored in the EU's social media communication strategies.

¹https://european-union.europa.eu/institutions-law-budget/institutions-and-bodies/types-institutions-and-bodies_en, last accessed 13 June 2024.

²Temporarily visible 'stories' on Instagram are not available via the API.

Table 1. EU institutions and bodies on Facebook and Instagram

Institution/body	Username on Facebook (followers)	Username on Instagram (followers)	Number of posts on Facebook (static visual content)	Number of posts on Instagram (static visual content)
Council of the European Union	eucouncil (491,882)	eucouncil (257,624)	3,864 (1,123)	1,519 (1,130)
European Commission	EuropeanComission (1,402,838)	europeancomission (776,522)	5,738 (3,451)	5,174 (4,498)
European Committee of the Regions	European.Committee.of.the.Regions (58,143)	eu_regions_cities (10,541)	2,357 (908)	486 (326)
European Economic and Social Committee	EuropeanEconomicAndSocialCommittee (44,475)	eu_civilsociety (12,126)	2,826 (1,755)	556 (512)
European External Action Service	EuropeanExternalActionService (252,210)	eudiplomacy (111,392)	3,271 (1,227)	2,368 (1,541)
European Investment Bank	EuropeanInvestmentBank (51,575)	europeaninvestmentbank (21,170)	2,453 (1,204)	617 (451)
European Parliament	europeanparliament (2,682,323)	europeanparliament (390,396)	5,379 (2,129)	3,656 (2,354)
Total	-	-	25,888 (11,797)	13,890 (10,812)

Note: Each follower count is taken from the most recent post in the dataset (ie December 2022).

For maintaining comparability, we only included accounts available on both platforms in the statistical analysis; we, therefore, excluded the European Court of Auditors and the European Central Bank. We also ran all models with the two accounts included which yielded very similar results, underscoring the robustness of our findings.

Yielding a total of $n = 25,888$ Facebook and $n = 13,890$ Instagram posts (see Table 1), we found a large share of static visuals on both platforms (with $n = 11,797$ posts (largest share with 45.57% of all posts) including static visual content for Facebook and $n = 10,812$ (largest share with 77.84% of all posts) for Instagram).

For further analyses, we used only static visuals (ie status type ‘Photo’ on Facebook and status types ‘Photo’ and ‘Album’³ for Instagram) and different subsamples of the data. Descriptive insights into the data show that visual content involved in a post on Facebook elicits more user engagement than other communication forms. On Instagram, where every post contains some kind of visual element, static images, as compared to videos, lead to more user engagement (see online Appendix Tables A2 and A3). Moreover, omitting videos reduced the complexity of our already quite complex analysis.

A multi-step approach to coding image types

The central independent variable for our study is the image type. To uncover different types used, we employed a three-fold analysis: (1) an inductive-deductive qualitative analysis to identify distinct image types in EU social media communication and (2) a manual quantitative content analysis to quantify image types and create a foundation for the training and validation for (3) the automated visual content analysis.

³For albums on Instagram, we used the first picture of the album, as this is also the one presented on the account overview.

(1) Identifying image types

In the first step, three researchers inductively extracted the image types for our study, based on a stratified sample of 400 pictures. The sample was stratified by account and publication year to avoid systematic biases. Each researcher examined the subsample with the aim to find patterns (Grittmann and Ammann 2011). We then discussed these patterns and through this discussion looked for bundles of visual 'motifs of similar content or meaning' (Brantner Lobinger and Stehling 2020, p. 680). This bundling process, that is, after the inductive identification of image types, was informed by the relevant literature to ensure a thorough theoretical grounding eschewing a reinvention of the wheel. This led to 24 identified image types.

These image types relate to the political work of the EU, EU symbols, citizens of the EU, and representations of the land, culture, and technology of the EU, as well as more abstract image types capturing infographics and pictograms (see Table A4 in the online Appendix for further details). Furthermore, we noticed an image type relating to the communication of measures against the COVID-19 pandemic. We considered this as a single case study as it specifically appealed to the central interest of our study, namely citizens' engagement by, for example, explaining mitigation measures, underlining the importance of cooperation by the public in this unique crisis. Other potential case studies were far less citizen-oriented, such as Brexit or the war in Ukraine, which focused more on political negotiations.

(2) Manual quantification

We conducted a manual quantitative content analysis on a sample of 4,800 images, annotated in an iterative process. This analysis generated first insights of the distribution of image types in the data and a better understanding of different image types' manifestations. Importantly, we used the manually annotated data to implement and validate the automated approach.

Coding. For the quantitative manual coding, we used the information obtained in the qualitative assessment to formulate extensive coding instructions for the 24 image types (see Figure 1). Containing descriptions of the respective image types as well as individual example cases, the codebook was subject to constant development during multiple rounds of coder training, test codings, and feedback loops involving two independent coders as well as the three authors of this manuscript. Upon completion of the codebook development phase, a fresh sample of 4,800 cases was manually annotated by the two coders, exhibiting a satisfactory level of consensus with an average Krippendorff's alpha ranging from 0.71 to 0.95 (for more details, see online Appendix Table A1).

As displayed in Figure 1 (see Results section), we find that many of the image types we found in the qualitative assessment are not as relevant as they were not coded very often. The 10 most often coded image types were *Pictograms*, *Ordinary Citizens*, *Behind the Scenes*, *Buildings*, *Professional Citizens*, *Flags*, *in Session*, *Nature*, *Collage*, and *Infrastructure*.

Image Type Selection for Automated Content Analysis. For implementing our machine learning approach, we needed to make sure that image types could be used to test hypotheses and explore research questions in all four categories of people, place, political symbolism, and political information. However, not all image types could be selected (1) either because they did not occur often enough, thus not providing sufficient data for learning, or (2) because the categories as clusters of images were not coherent enough, impeding a valid implementation of a machine learning approach. Based on this rationale, that is, theoretical coverage, sufficient amount of data, and increased homogeneity of clusters, we selected the following image types for the upscaled analysis of the whole corpus: *Pictograms*, *Ordinary Citizens*, *Buildings*, *EU flags*, *Flags*, *in Session*, and *Family Pictures* (see Table 2 for the assignment of each image type to the four categories of hypotheses and research questions).

Pictograms are generally understood as picture-writing, next to sound-writing (eg using the Latin alphabet), one of the two writing systems created by humans (Kolers 1969). We assigned this

Table 2. Operationalisation of different categories of independent variables included in the statistical analysis

Theoretical Category	Operationalisation
People	Image types: <i>Ordinary Citizens, in Session, Family pictures</i>
Place	Image type: <i>Buildings</i>
Political Symbolism	Image type: <i>Flags</i> Additional variable: EU flags
Political Information	Image type: <i>Pictograms</i> Additional variables: <i>textual elements (text embedded, text caption)</i>

image type to the category of *political information*, thus perceiving it as a form of text embedded in an image. Pictograms are ‘signs that allow us to recognise in them the representation of a real object, scene, figure or animal’ (Stötzner 2003, p. 296) and are thus informational; in the context of EU social media communication, it is plausible to perceive this information as political.

(3) Automated visual content analysis

To classify the visual content of the entire dataset of 22,609 pictures, we drew on automated visual content analysis. Using supervised machine learning to annotate image types on the level of the entire picture, the hand-coded material of the previous step was used to inform a model, enabling it to predict a class for each image it is shown.

Following recent methodological developments, we relied on a deep learning approach shown to outperform more basic methods (Joo and Steinert-Threlkeld 2022). We used transfer learning (Kroon, Welbers, Trilling et al. 2024) to avoid having to provide large amounts of manually coded data: this approach harnesses the power of models pretrained on large corpora to learn about the general occurrence and distribution of visual features. Transferring this general knowledge to a specific problem, researchers can fine-tune models by adding layers trained with their manually coded data. Combining the information learned from a vast amount of images seen in the first training stage with the pictures containing target classes, the classifiers can then infer important features for the decision-making (Peng and Lu 2023). We utilised the vision transformer model ‘vit-base-patch16–224’⁴ developed at Google (Dosovitskiy, Beyer, Kolesnikov et al. 2021), trained on 14 million images from the *ImageNet21k* dataset (Ridnik, Ben-Baruch, Noy et al. 2021). Implemented through the *transformers* Python library (Wolf, Debut, Sanh et al. 2020), a multi-class model was fine-tuned using the manually annotated data, adding a linear layer to the existing model.

Splitting the available ground-truth data into train and test data, we were able to fine-tune and validate the approach with the training set being used for the transfer learning and the test set as a holdout sample to assess whether the classifier can correctly predict the target class for unseen data. This procedure yielded excellent performance measures with an average F1 score of 0.87 with values for the individual classes ranging from 0.77 for the image-type *Family Pictures* to 0.93 for the image-type *Buildings* (see Table A5 for an overview of performance measures for individual image types).

EU flags

Similarly to the image types, a classifier to identify the presence of an EU flag was constructed using the manually annotated data and a transfer learning approach involving an instance of the ‘vit-base-patch16–224’ (Dosovitskiy, Beyer, Kolesnikov et al. 2021) model. Opposed to the image-type *flags*, representing an archetype of pictures displaying flags (irrespective of what

⁴<https://huggingface.co/google/vit-base-patch16-224>

specific flag is shown), this variable was not coded on the image-type level and is thus not exclusive to the image type *Flag*. In other words, a picture in our sample can be classified as the image-type *buildings* but, if it shows an EU flag, this variable would still indicate the presence of the EU flag, although the image-type *Flags* is not coded as it is not the main theme of the picture

As for the classifier for the image types, the model for EU flags yielded great performance scores with an F1 score of 0.87.

Textual elements

For coding the extent of textual elements in EU social media communication, we calculated two variables. First, we consider the text displayed on the images giving additional information to the captions of a social media posting as *text embedded*. Second, we incorporate the caption accompanying a picture using the *text caption*.

Text embedded

We calculated a variable accounting for text embedded, meaning textual structures added to a picture in an editing (or creation; ie for pictograms) process. For this variable, we first constructed a classifier to identify the presence of text embedded, again, using transfer learning. Building on the manually annotated data for this variable (Krippendorff's alpha = 0.88 see online Appendix Table A1) and the 'vit-base-patch16-224' (Dosovitskiy, Beyer, Kolesnikov et al. 2021) model, a binary classifier was constructed (F1 = 0.96, see online Appendix Table A5), indicating the presence of embedded text. Second, we chose an OCR (Optical Character Recognition) engine (eg Salamanca, Brandenberger, Gasser et al. 2024) to determine the length of the text. Implemented through the Python wrapper *pytesseract*, the open-source OCR engine *tesseract* processes an image by recognising patterns resembling letters. We extracted the embedded text and included the word count.

Text caption

We accounted for the length of an accompanying caption, operationalised as character count.

User engagement

For our dependent variable *user engagement*, we used the available interaction metrics. To maintain comparability while varying the cognitive effort needed for interacting (eg Matthes Knoll and von Sikorski 2018), we only used *likes* and *comments*: while Facebook users can choose from a variety of reactions (ie like, love, wow, haha, sad, and angry) and can comment on or share posts, Instagram only offers liking or commenting⁵. *Likes* and *comments* were included in the analysis as the number of likes and the number of comments each post received.

Control variables

Four control variables were included to account for possible confounders in the regression analysis.

Issues

To control for the role of different contexts in which EU institutions might communicate and incorporate the text posted alongside the pictures on both platforms, we coded the issue of the caption. To this end, we used the *manifestoberta* model based on XLM-RoBERTa large models which

⁵On Instagram, users can share a post by sending it to others in a private message, within their story, or save a post. As there is no data on these metrics available via the API, we were not able to incorporate them in our analyses.

were then fine-tuned using the roughly 1.5 million manually coded statements of the Manifesto Corpus (Burst, Lehmann, Franzmann *et al.* 2023). Issues, according to the Manifesto Project coding scheme, include 56 issues at the top level, which we boiled down to 7 top-level domains, as described in the manifesto codebook (Volkens, Krause, Lehmann *et al.* 2021). These domains include *Economy*, *External Relations*, *Fabric of Society*, *Freedom and Democracy*, *Political System*, *Social Groups*, and *Welfare and Quality of Life* (see Volkens, Krause, Lehmann *et al.* 2020 for detailed explanations of these categories). We incorporated domains instead of the more detailed issues to control for a rough thematic direction of a post and how it might influence user engagement. Moreover, using all 48 issues as factors would have over-complicated the statistical models (see below), making it impossible to validly estimate the effects of all variables.

Sentiment

We incorporated the tonality of the caption operationalised as *sentiment*, using the Lexicoder dictionary by Young and Soroka (2012). It encompasses 4,567 valenced keywords (2,858 for negative and 1,709 for positive) and is shown to work well for political communication and social media texts. Following the authors' recommendations, multiple steps of preprocessing of the text were applied (eg removing punctuation and special characters). Final sentiment scores for each caption were calculated using the R package *quanteda* (Benoit, Watanabe, Wang *et al.* 2018). Comparing the words in the individual captions with the keywords from the dictionary, we calculated the sum of all words indicating positive sentiment minus the sum of all scores from negative words. Lastly, we divided this score by the number of words to account for the length of the caption.

Over time dynamics

We incorporated further control variables taking into account whether the post was made during the *election period* in 2019 (ie within the six weeks before the EU election on May 26) and the *year* it was published.

Analysis strategy

As indicated above, we assumed that the cognitive as well as technical mechanisms would interact (ie *like* or *comment*) with content work differently on platforms. Therefore, we decided to analyse platforms separately, calculating four models to assess the influence of *image types*, the inclusion of *textual elements*, and the control variables on the number of *likes* and *comments*, respectively.

Inspecting the dependent count variables (see online Appendix Figure A1), we decided for a negative binomial regression given the overdispersed Poisson distribution. The models were estimated through the Stan probabilistic programming language (Carpenter, Gelman, Hoffman *et al.* 2017) and the R package *brms* (Bürkner 2017), using Bayesian methods. To account for potential unobserved heterogeneity across sources, we clustered standard errors at the account level (ie random effects). Variation is adjusted at the level of the individual account, and differences, such as potentially higher engagement due to varying audience dynamics or follower numbers, are absorbed by the account-level clustering. For better interpretability of resulting coefficients, all independent variables and controls that were not initially dichotomous were rescaled to range from 0 to 1. All four models converged with Gelman–Rubin convergence not exceeding 1 (Gelman and Rubin 1992).

Results

We were first interested in the image types generally included in EU social media communication (RQ1, see Figure 1). According to our manual content analysis, the most frequently found images are *Pictograms*, meaning visual content that shows stylised abstractions of people, landscapes, or

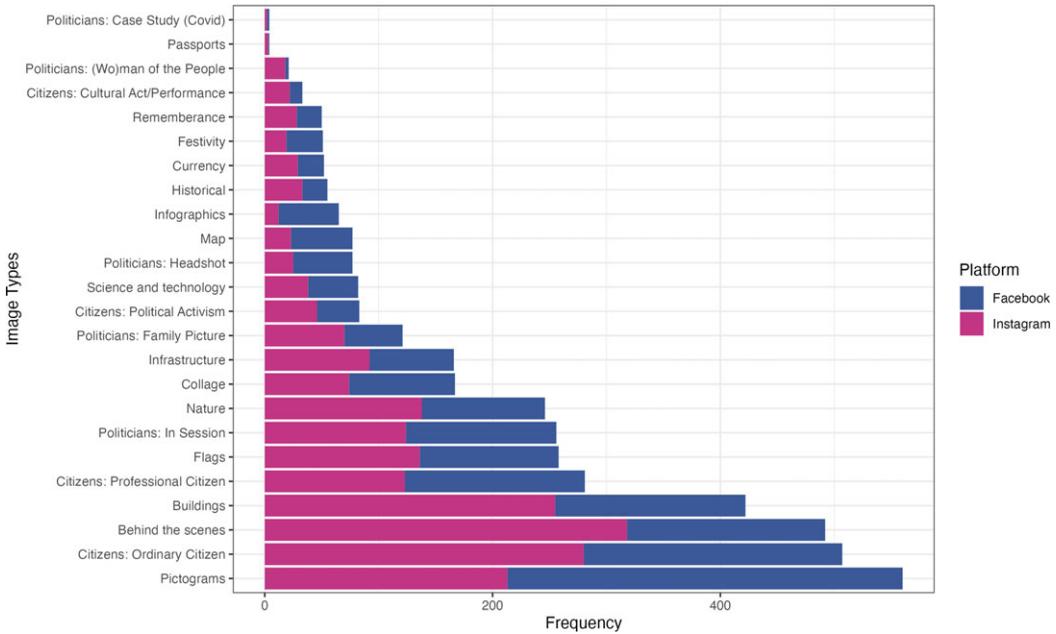


Figure 1. Frequencies of image types in the manually coded samples by platform.
 Notes: N = 4,800.

symbols, generally understood as picture-writing (Kolers 1969; Stötzner 2003). Out of the seven most frequent image types, three relate to persons, namely *Ordinary* and *Professional Citizens* as well as politicians shown during parliamentary sessions (*in Session*). Images frequently convey *Behind the Scenes* impressions, showing, for example, preparations for press conferences or insights that are usually not meant for the public. Many pictures show *Buildings* and *Flags* as main content; only few images relate to the Covid pandemic (*Case Study (Covid)*) or focus on *passports* (see Figure 1).

Focusing only on the image types included in the automated analysis, we find differences across the two platforms. On Facebook, *Pictograms* are the most prominent of the six image types measured (14.49%); Instagram focuses mostly on *Ordinary Citizens* (11.64% as opposed to 8.86% showing *Pictograms*) which is also a prominent category on Facebook (9.48%). Posts rarely depict politicians in a more formal setting defined as *Family Pictures* (2.13% on Facebook; 2.91% on Instagram).

Turning to effects on user engagement, we find that likes and comments on Facebook and Instagram vary across posts containing different image types (for a descriptive overview, see online Appendix Tables A6–A9). We find mixed evidence regarding whether images depicting humans increase user engagement (H1). While on Instagram, politicians *in Session* increases comments ($\beta = 0.3$ or 35% increase⁶), and other types showing people do not have the same effect (see Figures 2 and 3 and online Appendix Tables A10–A13). On the contrary, we find that the depiction of *Ordinary Citizens* decreases likes on Instagram. The results provide support for H2, which states that showing politicians elicits more user engagement; they also tackle RQ2 in that the presence of *Ordinary Citizens* in a social media post does not positively influence user engagement but rather slightly decreases it.

⁶Coefficients are expressed as the expected log count difference, and a β -coefficient of 0.3 can therefore be interpreted as $e^{0.3} = 1.35$, or an increase in likes of 35%.

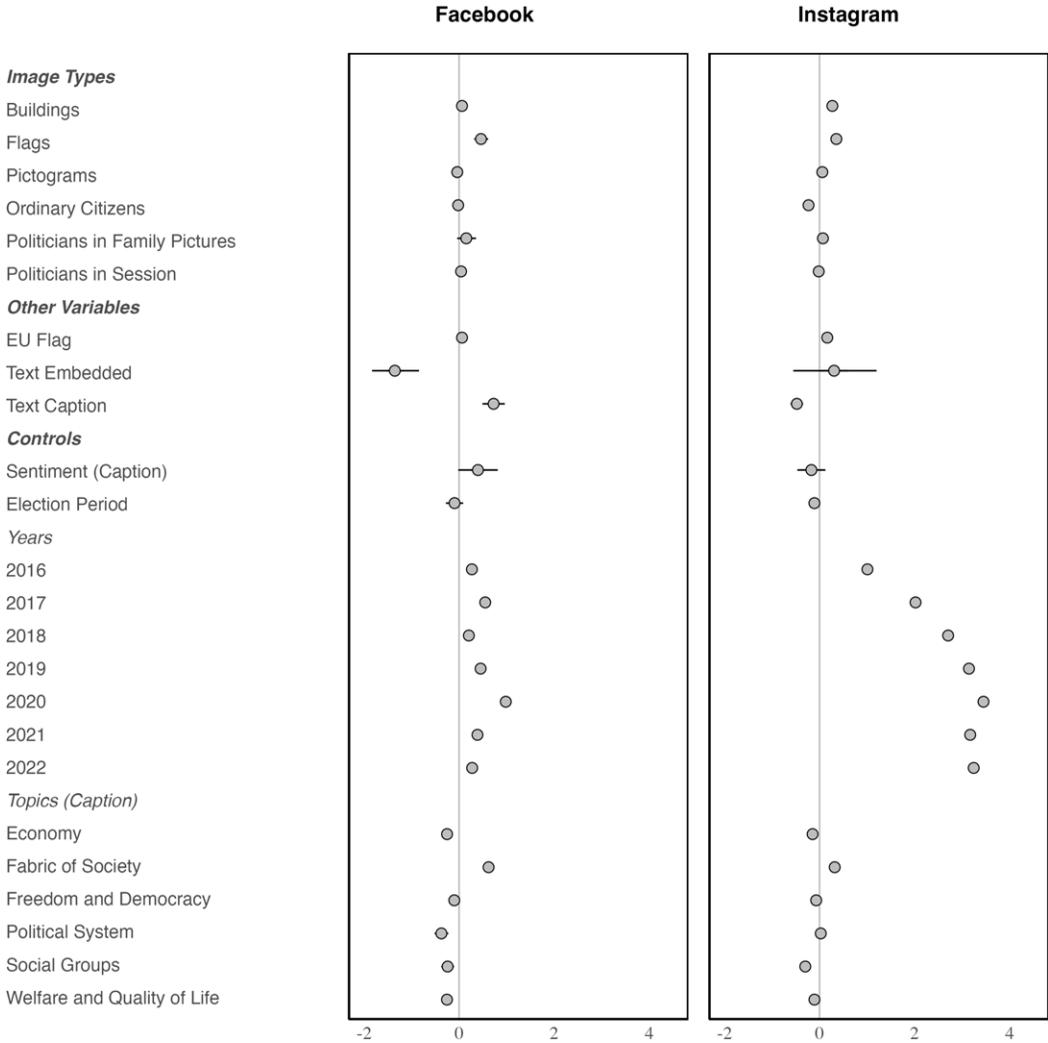


Figure 2. Estimated posterior fixed-effects parameters for likes on Facebook (left) and Instagram (right). Notes: Means of posterior samples are represented as dots. Thin lines represent 95% credible intervals. $n = 11,552$ for Facebook (left) and $n = 10,797$ for Instagram (right). Reference group for Image Types is the category 'Other'; for Years it is 2015; and for Topics it is 'External Relations'.

Buildings, the most prominent image type on Instagram, has a positive effect on likes but not comments. For Facebook, we find no effect of this image type, suggesting that the visual presence of places does not spark user engagement (RQ3).

Turning to RQ4, *Flags* are the strongest positive predictor of likes and comments on both platforms, although politicians *in Session* elicit slightly more comments on Instagram. Flags as political symbols, therefore, are found to be the strongest predictor of user engagement. Examining the effect of an EU flag shown (be it within the image-type *Flags* or not), the results showed no effect for comments on Facebook. On Instagram, in turn, we find a positive effect with a slightly increased number of likes ($\beta = 0.16$; 17% increase) and comments ($\beta = 0.28$; 32% increase), similarly to likes on Facebook ($\beta = 0.06$; 6% increase).

Turning to RQ5, we were interested in the effects of additional political information, indicated by the presence of textual elements. The most common image type on Facebook, *Pictograms*, has a slight negative impact on the number of comments on the platform, with no effects on likes on

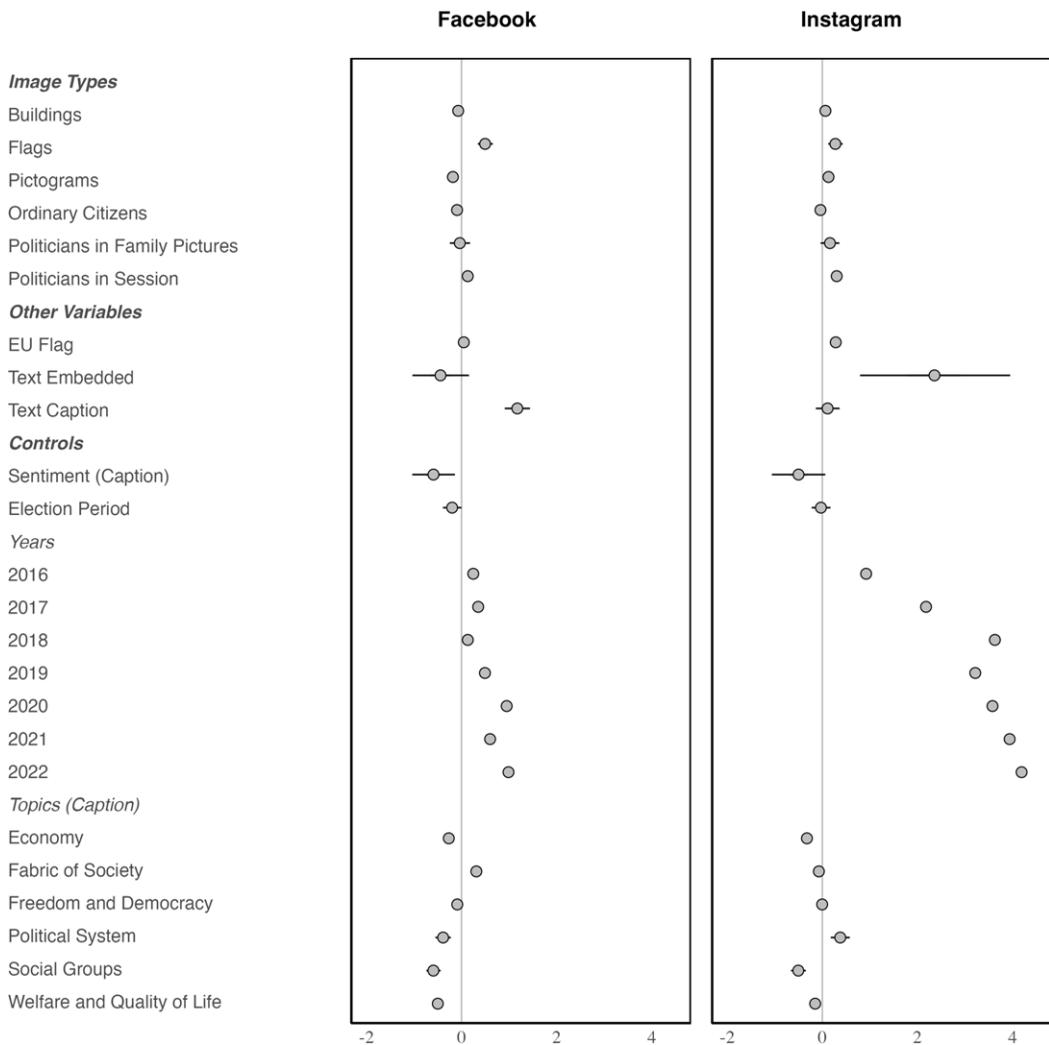


Figure 3. Estimated posterior fixed-effects parameters for *comments* on Facebook (left) and Instagram (right). *Notes:* Means of posterior samples are represented as dots. Thin lines represent 95% credible intervals. $n = 11,552$ for Facebook (left) and $n = 10,797$ for Instagram (right). Reference group for Image Types is the category 'Other'; for Years it is 2015; and for Topics it is 'External Relations'.

Facebook and Instagram, but a slight positive effect on comments on Instagram. We also found very mixed results across the two platforms for both *text embedded* and *text caption*: first, the longer a text embedded in an image is, the less people are likely to like the post on Facebook, with no effect for comments on the platform. In turn, people appear to appreciate longer additional textual information embedded in pictures on Instagram, making them more likely to receive comments, but not likes. Considering the caption text, the effect is almost reversed for the two platforms. Here, a longer caption distinctly boosts likes and comments on Facebook. On Instagram, a longer caption text decreases the number of likes with no effect on comments. Table 3 provides an overview of hypotheses and research questions and corresponding results.

Regarding our control variables, we found that more positive sentiment decreases the number of comments. Considering the topic addressed in the caption, it is mostly *Fabric of Society* that sparks engagement on both platforms (although *Political System* is the strongest predictor among

Table 3. Overview of effects on user engagement by platform and engagement type

Hypothesis/RQ	FB		Instagram	
	Like	Comment	Like	Comment
H1: EU communication posted on Facebook and Instagram with visual contents featuring humans generates more user engagement in comparison to EU communication with visual contents not featuring humans.	See results for H2 and RQ2			
H2: EU communication posted on Facebook and Instagram with visual contents featuring politicians generates more user engagement in comparison to EU communication with visual contents not featuring politicians.	/	/	/	In session: +
RQ2: To what extent does the visual presence of citizens in EU communication on Facebook and Instagram influence user engagement?	/	/	-	/
RQ3: To what extent does the visual reference to places in EU communication on Facebook and Instagram influence user engagement?	/	/	+	/
RQ4: To what extent does the visual presence of political symbols in EU communication on Facebook and Instagram influence user engagement?	Image-type flags: +		Presence of EU flag: +	
RQ5: To what extent does the extent of textual in addition to visual contents in EU communication on Facebook and Instagram influence user engagement?	Pictograms: -; Text caption: + Text embedded: - /		Text capt.: -	Text emb.: +

caption topics for comments on Instagram), whereas topics like *Economy* or *Social Groups* decrease engagement across both platforms and engagement types. While being posted during the election period did not make a difference, we found a strong impact of the different years under investigation, especially for Instagram. Here, user engagement was distinctly higher in the year 2018 and later, as compared to 2015, indicating an increase in engagement over time that stagnates around 2018 or 2019. This reflects the general development and popularity of Instagram (Weston 2023).

Discussion and conclusion

Our study explored the image types used in visual EU social media communication and the engagement they trigger on Facebook and Instagram as two of the most popular social media platforms today. Focusing on the EU's democratic deficit, manifested in its participation and communication deficits, we argued that the creation of visibility is a necessary condition for enabling a direct experience of EU politics, potentially leading to greater familiarity and, in turn, reduced remoteness. Social media communication, especially visual communication, was identified as having great potential in this respect, while still remaining under-researched in the academic EU debate.

Regarding the image types used in EU social media communication, results reveal that *Pictograms* were the most prominent image type. Pictograms in general have been found to be an effective way of communication across languages and cultures (eg Clawson, Leafman, Nehrenz et al. 2012; Barros, Alcântara, Mesquita et al. 2014). This result could be read as the EU institutions' strategy to effectively speak to all EU citizens with the same contents, aiming to unify a linguistically diverse audience. In addition, the prominent image types that we identified can, based on the relevant literature, be read as an attempt to motivate users to engage by, for example, featuring citizens themselves (*Ordinary* and *Professional Citizens*), making EU politicians more relatable by showing their behind-the-scenes and active work (*Behind the Scenes* and *in Session*), *Buildings* and *Nature* as connections to places, and *Flags* symbolising the unity and diversity of the EU as a political community.

Regarding the effects of posted content on user engagement, our results paint, at first sight, a rather mixed picture but can be interpreted as an expression of underlying structural differences across the platforms. Featuring humans works, but to a limited degree: the visual presence of politicians increases engagement, but the way they are featured matters. Instagram users react more to less arranged pictures of politicians *in Session*, engaged in their daily work. This finding speaks to Instagram's general logic of showcasing more personal images and supports research comparing politicians' visual communication on Facebook and Instagram, which indicated that Instagram users approve more of ostensibly authentic and more private content (Farkas and Bene 2021; Bossetta and Schmokel 2023).

The presence of citizens on pictures seems to, at least slightly, decrease users' likes on Instagram. This is a surprising finding given that people are often linked to higher engagement in the literature focusing on visual communication on social media (Bakhshi Shamma and Gilbert 2014; Peng 2021) and also topics like citizen initiatives are found to yield more engagement for EU social media communication (Rocca, Lawall, Tsakiris et al. 2024). While actual effects of EU communication featuring citizens were not in focus of the relevant EU literature (eg Walter 2017a, 2017b), it is motivated by the underlying assumption that the presence of citizens in elite communication could help to bridge remoteness between the EU and its citizens. However, EU social media communication featuring humans could also be interpreted as an attempt to only appear relatable which may not be perceived as credible or authentic. Results on politicians' visual communication indicated similar mixed findings (Farkas and Bene 2021). These results merit further investigation to draw more substantial conclusions.

Similar to the depiction of politicians and EU officials, users react to political symbolism, but to different representations of it: the image-type *Flags*, that is, an image in which flags are in focus, elicits user engagement on Facebook. On Instagram, where users are generally younger than on Facebook, they engage with images featuring the EU flag. Flags as such are connected to the societal symbol function of visuals which are often used to tap the emotional power associated with them (Schill 2012). (National) flags are usually understood as a symbol for a political community, strongly influenced by historical developments, and often associated with positive emotions (Becker, Butz, Sibley et al. 2017). The EU's coherence as a community is, however, contested; nationalist tendencies are apparent all across the union, manifested in the rise of radical right and left parties, united in their anti-EU stance (eg Brack 2020). A more fine-grained analysis of the effect of individual flags should be conducted to better understand these results.

The visually anchored nature of communication on Instagram shows stronger results regarding the effects of (different features of) images in comparison to Facebook. Visual references to places increase likes on Instagram but have no effect on comments; they are also insignificant for interaction on Facebook in general. Additional text can help to engage users on Instagram if it is embedded in the visual, which further informs the literature on Instagram and political campaigning (eg Hassler Kümpel and Keller 2023). Our analysis of Facebook, in contrast, shows stronger results for text-related variables, in line with the platform's affordances and logics. A visual anchoring seems generally less successful than on Instagram as text embedded in the image, and also *Pictograms* as an image type decrease interaction with the post. In contrast, additional text outside visual components, such as a caption, makes users engage on Facebook.

These findings emphasise the different ways users consume EU communication on different platforms: when coming across a new post, Facebook users might read the text first and engage with it, whereas on Instagram, the visual logic presents the image first and requires audiences to click to expand the caption. Likes on Instagram can therefore be expected to be more closely linked to the visual than the caption text. This might also be indicated in the finding that images with embedded text received slightly more comments on Instagram, which could be interpreted as an immediate textual response to text visible in the timeline (in contrast to a haptic like). Future research should disentangle this relationship further.

Overall, our results emphasise the crucial moderating function of social media affordances, dynamically ‘emerging from the relationship between the user, the object, and its features’ (Evans, Pearce, Vitak *et al.* 2017, p. 40). It is, thus, crucial to keep the specific users in mind when devising a communication strategy that aims at stimulating the whole range of user behaviour invited on specific platforms for successfully creating visibility. This highlights the fact that EU communication, like any other communication on social media, is subject to the commercial logics created by for-profit organisations, shaping the dynamics of public political debate in unparalleled ways (eg Zuboff 2015). These dynamics are already ingrained in the broader process of mediation, implying an increased adaptation to the media logic (Strömbäck 2008), and become more visible with the rise of social media: The relevant platforms offer great potential for creating opportunities for EU experience, given their increased outreach and importance in public debate. But they also force a commercial audience logic of popularity on any communication (eg Singer 2014; Lamot and Paulussen 2024), also of public institutions communicating for transparency rather than profit.

While our study is, to our best knowledge, the first to undertake a systematic evaluation of EU visual social media communication of different platforms, it comes with several limitations. First of all, only two platforms were included in our analysis. The strong differences we found across these two platforms warrant a more explicit focus on the consequences of different affordances of platforms. To complement already existing research engaging in large-scale comparisons of social media affordances (Peng 2021; Bossetta and Schmokel 2023), scholars should invest in including more platforms to further substantiate results for this crucial public communication space.

In addition, working with image types implies that many aspects of a visual representation remain unaccounted for. Using only one classification per image means missing out on many more details which could explain user engagement. Future studies should also consider videos, given their increasing importance, especially on Facebook, but also TikTok, for example. Also the fact that an image might be (labelled as) AI-generated is an interesting additional variable to consider.

Moreover, the theoretical ambiguity of social media engagement could be alleviated by considering user comments. While we took the sentiment and topic of captions into account, we did not include an analysis of comment contents to keep a clear focus on EU visual communication and how successful it is in creating visibility. We do, therefore, not know whether user comments were accepting or critical of the EU’s communication. In addition, the longevity of effects of social media communication is an important aspect when thinking about legitimacy as a rather slow-moving and inert phenomenon. Leveraging methodologies such as diary and experience sampling methods or panel experimental surveys could help to create insights in this respect.

Lastly, while results suggest that EU communication fares similarly as other political communication on social media, the EU as a case study is still fairly specific. Our results inform the specific debate about EU social media communication, but they might not be generalisable to other political organisations with a different setup and context. Future research should invest in comparing cases to better evaluate the consequences that social media affordances might have for differently structured political entities.

Regardless, our study provides rich empirical findings, via a large-scale exploration of different image types in the social media communication of EU institutions and user engagement. Regarding the potential to create visibility and thereby opportunities for experiencing EU politics, the patterns found in visual EU social media communication broadly align with the literature on what makes social media posts more or less engaging, even if not all strategies seem successful. Engagement patterns show the strategic importance of tailoring communication to the affordances and audiences of different platforms which is a crucial point for practitioners developing EU social media campaigns. It is also an important step in developing the scholarly debate on EU communication in the digital age.

Supplementary material. The supplementary material for this article can be found at <https://doi.org/10.1017/S1475676526100668>

Data availability statement. The data and code needed to reproduce all analyses in this study are available on the Open Science [OSF.io](https://osf.io) under the following link: osf.io/6zvp5.

Acknowledgements. The authors would like to thank Duoduo Hua and Ting Zhang for their diligent and reliable support with the visual content analysis. The authors would furthermore like to thank the participants of the panel 'Political Communication in the Digital Age' at the ECPR's 2024 Standing Group of the European Union's Biennial Conference in Lisbon as well as the participants of the colloquium of the Research Department Global Governance at the Berlin Social Science Centre for their valuable feedback on earlier versions of this manuscript.

Funding statement. Open access funding provided by University of Amsterdam.

Competing interests. The authors declare that there is no conflict of interest.

Ethics statement. This study received ethical approval from the Ethics Committee of the Department of Communication at the University of Amsterdam prior to data collection.

References

- Abidin, C. (2016). 'Visibility labour: engaging with influencers' fashion brands and #OOTD advertorial campaigns on Instagram'. *Media International Australia*, **161**(1), 86–100. <https://doi.org/10.1177/1329878X16665177>
- Anderson, C.J. (1998). 'When in doubt, use proxies: attitudes toward domestic politics and support for European integration'. *Comparative Political Studies*, **31**(5), 569–601. <https://doi.org/10.1177/0010414098031005002>
- Aramendia-Muneta, M.E., Olarte-Pascual, C. and Ollo-López, A. (2021). 'Key image attributes to elicit likes and comments on Instagram'. *Journal of Promotion Management*, **27**(1), 50–76. <https://doi.org/10.1080/10496491.2020.1809594>
- Autenrieth, U. and Neumann-Braun, K. (eds.). (2011). *The Visual Worlds of Social Network Sites: Images and Image-Based Communication on Facebook and Co.* Nomos.
- Bakhshi, S., Shamma, D.A. and Gilbert, E. (2014). 'Faces engage us: photos with faces attract more likes and comments on Instagram'. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, 965–974. <https://doi.org/10.1145/2556288.2557403>
- Barros, I.M.C., Alcântara, T.S., Mesquita, A.R., Santos, A.C.O., Paixão, F.P. and Lyra, D.P. (2014). 'The use of pictograms in the health care: a literature review'. *Research in Social and Administrative Pharmacy*, **10**(5), 704–719. <https://doi.org/10.1016/j.sapharm.2013.11.002>
- Basaraba, N. (2023). 'The emergence of creative and digital place-making: a scoping review across disciplines'. *New Media & Society*, **25**(6), 1470–1497.
- Bast, J. (2024). 'Managing the image. the visual communication strategy of European right-wing populist politicians on Instagram'. *Journal of Political Marketing*, **23**(1), 1–25. <https://doi.org/10.1080/15377857.2021.1892901>
- Becker, J.C., Butz, D.A., Sibley, C.G., Barlow, F.K., Bitacola, L.M., Christ, O., Khan, S.S., Leong, C.H., Pehrson, S., Srinivasan, N., Sulz, A., Tausch, N., Urbanska, K. and Wright, S.C. (2017). 'What do national flags stand for? An exploration of associations across 11 countries'. *Journal of Cross-Cultural Psychology*, **48**(3), 335–352. <https://doi.org/10.1177/0022022116687851>
- Beetham, D. (1991). *The Legitimation of Power*. Palgrave. <http://link.springer.com/10.1007/978-1-349-21599-7>
- Bene, M., Magin, M., Jackson, D., Lilleker, D., Balaban, D., Baranowski, P., Haßler, J., Kruschinski, S. and 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>
- Benoit, K., Watanabe, K., Wang, H., Nulty, P., Obeng, A., Müller, S. and Matsuo, A. (2018). 'Quanteda: an R package for the quantitative analysis of textual data'. *Journal of Open Source Software*, **3**(30), 774–774. <https://doi.org/10.21105/joss.00774>
- Boomgaarden, H.G., De Vreese, C.H., Schuck, A.R.T.T., Azrout, R., Elenbaas, M., Van Spanje, J.H.P.P. and Vliegenthart, R. (2013). 'Across time and space: explaining variation in news coverage of the European Union'. *European Journal of Political Research*, **52**(5), 608–629. <https://doi.org/10.1111/1475-6765.12009>
- Bossetta, M. and Schmokel, R. (2023). 'Cross-platform emotions and audience engagement in social media political campaigning: comparing candidates' Facebook and Instagram images in the 2020 US election'. *Political Communication*, **40**(1), 48–68. <https://doi.org/10.1080/10584609.2022.2128949>
- Bossetta, M., Dutceac Segesten, A. and Trenz, H.J. (2017). 'Engaging with European Politics through Twitter and Facebook: participation beyond the National?', in M. Barisione and A. Michailidou (Eds.), *Social Media and European Politics* (pp. 53–76). Springer International Publishing. https://link.springer.com/chapter/10.1057/978-1-137-59890-5_3

- Boulianne, S. and Larsson, A.O.** (2023). 'Engagement with candidate posts on Twitter, Instagram, and Facebook during the 2019 election'. *New Media & Society*, 25(1), 119–140. <https://doi.org/10.1177/14614448211009504>
- Brack, N.** (2020). 'Towards a unified anti-Europe narrative on the right and left? The challenge of Euroscepticism in the 2019 European elections'. *Research & Politics*, 7(2), 2053168020952236. <https://doi.org/10.1177/2053168020952236>
- Brands, C., Kruikemeier, S. and Trilling, D.** (2021). 'Insta(nt)amous? Visual self-presentation and the use of masculine and feminine issues by female politicians on Instagram'. *Information, Communication & Society*, 24(14), 2016–2036. <https://doi.org/10.1080/1369118X.2021.1962942>
- Brantner, C., Lobinger, K. and Stehling, M.** (2020). 'Memes against sexism? A multi-method analysis of the feminist protest hashtag #distractinglysexy and its resonance in the mainstream news media'. *Convergence: The International Journal of Research into New Media Technologies*, 26(3), 674–696. <https://doi.org/10.1177/1354856519827804>
- Bruns, A.** (2013). 'Faster than the speed of print: reconciling 'big data' social media analysis and academic scholarship'. *First Monday*, 18(10). <https://doi.org/10.5210/fm.v18i10.4879>
- Bruns, A.** (2023). 'From "the" public sphere to a network of publics: towards an empirically founded model of contemporary public communication spaces'. *Communication Theory*, 33(2–3), 70–81. <https://doi.org/10.1093/ct/qtad007>
- Bruter, M.** (2003). 'Winning hearts and minds for Europe: the impact of news and symbols on civic and cultural European identity'. *Comparative Political Studies*, 36(10), 1148–1179. <https://doi.org/10.1177/0010414003257609>
- Bruter, M.** (2009). 'Time bomb?: the dynamic effect of news and symbols on the political identity of European citizens'. *Comparative Political Studies*, 42(12), 1498–1536. <https://doi.org/10.1177/0010414009332465>
- Bucy, E.P. and Grabe, M.E.** (2007). 'Taking television seriously: a sound and image bite analysis of presidential campaign coverage, 1992–2004: taking television seriously'. *Journal of Communication*, 57(4), 652–675. <https://doi.org/10.1111/j.1460-2466.2007.00362.x>
- Bürkner, P.C.** (2017). 'brms: an R package for Bayesian multilevel models using Stan'. *Journal of Statistical Software*, 80, 1–28. <https://doi.org/10.18637/jss.v080.i01>
- Burst, T., Lehmann, P., Franzmann, S., Al-Gaddooa, D., Ivanusch, C., Regel, S., Riethmüller, F., Weßels, B., Zehnter, L., Wissenschaftszentrum Berlin Für Sozialforschung (WZB), & Institut Für Demokratieforschung Göttingen (IfDem).** (2023). *Manifestoberta (56topics.sentence.2023.1.1)*. Manifesto Project. <https://doi.org/10.25522/MANIFESTO.MANIFESTOBERTA.56TOPICS.SENTENCE.2023.1.1>
- Carpenter, B., Gelman, A., Hoffman, M. D., Lee, D., Goodrich, B., Betancourt, M., Brubaker, M. A., Guo, J., Li, P. and Riddell, A.** (2017). 'Stan: a probabilistic programming language'. *Journal of Statistical Software*, 76, 1. <https://doi.org/10.18637/jss.v076.i01>
- Casiraghi, M.C., Cusumano, E. and Chryssogelos, A.** (2024). 'European integration and political party logos: a 'visual Europeanization'?. *European Union Politics*, 25(1), 86–105. <https://doi.org/10.1177/14651165231207088>
- Castells, M.** (2013). *Networks of Outrage and Hope: Social Movements in the Internet Age*. Polity.
- Clark, N.** (2014). 'Explaining low turnout in European elections: the role of issue salience and institutional perceptions in elections to the European parliament'. *Journal of European Integration*, 36(4), 339–356.
- Clawson, T.H., Leafman, J., Nehrenz, G.M Sr and Kimmer, S.** (2012). Using pictograms for communication. *Military Medicine*, 177(3), 291–295. <https://doi.org/10.7205/MILMED-D-11-00279>
- Coleman, R. and Wu, D.** (2015). *Image and Emotion in Voter Decisions: The Affect Agenda*. Bloomsbury Publishing PLC.
- Cram, L. and Patrikios, S.** (2015). 'Visual Primes and European Union Identity: Designing Experimental Research', in K. Lynggaard, I. Manners, and K. Löfgren (Eds.), *Research methods in European Union studies*, (pp. 184–205). Palgrave Macmillan. https://doi.org/10.1057/9781137316967_12
- Dahlgren, P.** (2005). 'The internet, public spheres, and political communication: dispersion and deliberation'. *Political Communication*, 22(2), 147–162. <https://doi.org/10.1080/10584600590933160>
- De Vries, C.E.** (2018). *Euroscepticism and the Future of European Integration*. Oxford University Press. <https://doi.org/10.1093/oso/9780198793380.001.0001>
- De Wilde, P.** (2019). 'Media logic and grand theories of European integration'. *Journal of European Public Policy*, 26(8), 1193–1212. <https://doi.org/10.1080/13501763.2019.1622590>
- De Wilde, P., Michailidou, A. and 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 Wilde, P., Rasch, A. and Bossetta, M.** (2022). 'Analyzing citizen engagement with European politics on social media'. *Politics and Governance*, 10(1), 90–96. <https://doi.org/10.17645/pag.v10i1.5233>
- Dosovitskiy, A., Beyer, L., Kolesnikov, A., Weissenborn, D., Zhai, X., Unterthiner, T., Dehghani, M., Minderer, M., Heigold, G., Gelly, S., Uszkoreit, J. and Hounsby, N.** (2021). *An Image is Worth 16x16 Words: Transformers for Image Recognition at Scale* (arXiv:2010.11929). arXiv. <https://doi.org/10.48550/arXiv.2010.11929>
- Durkheim, E.** (1951). *Suicide*. Routledge. <https://doi.org/10.4324/9780203994320>
- Eberl, J.M., Tolochko, P., Jost, P., Heidenreich, T. and Boomgaarden, H.G.** (2020). 'What's in a post? How sentiment and issue salience affect users' emotional reactions on Facebook'. *Journal of Information Technology and Politics*, 17(1), 48–65. <https://doi.org/10.1080/19331681.2019.1710318>

- Eisele, O. and Heidenreich, T. (2025). 'European Union'. in A. Nai, M. Grömping, D. Wirz (Eds.), *Elgar Encyclopedia of Political Communication*, (pp. 533–536). Edward Elgar Publishing. <https://doi.org/10.4337/9781035301447.vol1.00133>
- Ekman, M. and Widholm, A. (2017). 'Political communication in an age of visual connectivity: exploring Instagram practices among Swedish politicians'. *Northern Lights: Film & Media Studies Yearbook*, 15(1), 15–32. https://doi.org/10.1386/nl.15.1.15_1
- European Parliament. (2023). *TV still main source for news but social media is gaining ground*. Press Release, 17 November 2023. <https://www.europarl.europa.eu/news/en/press-room/20231115IPR11303/tv-still-main-source-for-news-but-social-media-is-gaining-ground>
- Eurostat. (2024). *59% of EU individuals using social networks in 2023*. Eurostat News Article. <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/ddn-20240319-1>
- Evans, S.K., Pearce, K.E., Vitak, J. and Treem, J.W. (2017). 'Explicating affordances: a conceptual framework for understanding affordances in communication research'. *Journal of Computer-Mediated Communication*, 22(1), 35–52. <https://doi.org/10.1111/jcc4.12180>
- Farkas, X. (2023). 'Visual political communication research: a literature review from 2012 to 2022'. *Journal of Visual Political Communication*, 10(2), 95–126. https://doi.org/10.1386/jvpc.00027_1
- Farkas, X. and Bene, M. (2021). 'Images, politicians, and social media: patterns and effects of politicians' image-based political communication strategies on social media'. *The International Journal of Press/Politics*, 26(1), 119–142. <https://doi.org/10.1177/1940161220959553>
- Fazekas, Z., Popa, S.A., Schmitt, H., Barberá, P. and 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>
- Filimonov, K., Russmann, U. and Svensson, J. (2016). 'Picturing the party: Instagram and party campaigning in the 2014 Swedish elections'. *Social Media + Society*, 2(3), 2056305116662179. <https://doi.org/10.1177/2056305116662179>
- Follesdal, A. and Hix, S. (2006). 'Why there is a democratic deficit in the EU: a response to Majone and Moravcsik'. *JCMS: Journal of Common Market Studies*, 44(3), 533–562. <https://doi.org/10.1111/j.1468-5965.2006.00650.x>
- Galpin, C. and Trenz, H.J. (2019). 'Participatory populism: online discussion forums on mainstream news sites during the 2014 European parliament election'. *Journalism Practice*, 13(7), 781–798. <https://doi.org/10.1080/17512786.2019.1577164>
- García-Perdomo, V., Salaverria, R., Kilgo, D.K. and Harlow, S. (2018). 'To share or not to share: the influence of news values and topics on popular social media content in the United States, Brazil, and Argentina'. *Journalism Studies*, 19(8), 1180–1201. <https://doi.org/10.1080/1461670X.2016.1265896>
- Gattermann, K. (2022). *The Personalization of Politics in the European Union*. Oxford University Press.
- Gattermann, K., de Vreese, C. H. and van der Brug, W. (2021). 'Introduction to the special issue: no longer second-order? Explaining the European parliament elections of 2019'. *Politics*, 41(4), 423–432. <https://doi.org/10.1177/02633957211035096>
- Gelman, A. and Rubin, D.B. (1992). 'Inference from iterative simulation using multiple sequences'. *Statistical Science*, 7(4), 457–472. <https://doi.org/10.1214/ss/1177011136>
- Gerlitz, C. and Helmond, A. (2013). 'The like economy: social buttons and the data-intensive web'. *New Media & Society*, 15(8), 1348–1365.
- Gil de Zúñiga, H., Copeland, L. and Bimber, B. (2014). 'Political consumerism: civic engagement and the social media connection'. *New Media and Society*, 16(3), 488–506. <https://doi.org/10.1177/1461444813487960>
- Gitlin, T. (1998). 'Public sphere or public spherules?'. in J. Curran and T. Liebes (Eds.), *Media, Ritual and Identity*, (pp. 168–174). Routledge.
- Graber, D.A. (1996). 'Say it with pictures'. *The ANNALS of the American Academy of Political and Social Science*, 546(1), 85–96. <https://doi.org/10.1177/0002716296546001008>
- Grittmann, E. and Ammann, I. (2011). 'Quantitative bildtypenanalyse [Quantitative image type analysis]'. in T. Petersen and C. Schwender (Eds.), *Die Entschlüsselung der Bilder. Methoden zur Erforschung visueller Kommunikation. Ein Handbuch* (pp. 163–178). Halem.
- Habermas, J. (1962). *Strukturwandel der Öffentlichkeit. Untersuchungen zu einer Kategorie der bürgerlichen Gesellschaft*. Suhrkamp.
- 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, 411–426.
- Habermas, J. (2021). 'Überlegungen und Hypothesen zu einem erneuten Strukturwandel der politischen Öffentlichkeit'. in *Ein neuer Strukturwandel der Öffentlichkeit? Leviathan Sonderheft* (Vol. 37, pp. 470–500). Nomos. <https://doi.org/10.5771/9783748912187-470>
- Halegoua, G.R. (2020). *The Digital City: Media and the Social Production of Place*. New York University Press. <https://doi.org/10.18574/nyu/9781479839216.001.0001>
- Hänska, M. and 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), 2056305119854686. <https://doi.org/10.1177/2056305119854686>
- Harvey, D. (1996) *Justice, Nature and the Geography of Difference*. Blackwell.

- Hase, V., Boczek, K. and Scharkow, M. (2023). Adapting to affordances and audiences? A cross-platform, multi-modal analysis of the platformization of news on Facebook, Instagram, tiktok, and Twitter. *Digital Journalism*, 11(8), 1499–1520. <https://doi.org/10.1080/21670811.2022.2128389>
- Hassler, J., Kümpel, A. S. and Keller, J. (2023). 'Instagram and political campaigning in the 2017 German federal election. A quantitative content analysis of German top politicians' and parliamentary parties' posts'. *Information, Communication & Society*, 26(3), 530–550. <https://doi.org/10.1080/1369118X.2021.1954974>
- Heft, A., Buehling, K., Zhang, X., Schindler, D. and Milzner, M. (2024). 'Challenges of and approaches to data collection across platforms and time: conspiracy-related digital traces as examples of political contention'. *Journal of Information Technology & Politics*, 21(3), 323–339. <https://doi.org/10.1080/19331681.2023.2250779>
- Highfield, T. and Leaver, T. (2016). 'Instagrammatics and digital methods: studying visual social media, from selfies and GIFs to memes and emoji'. *Communication Research and Practice*, 2(1), 47–62. <https://doi.org/10.1080/22041451.2016.1155332>
- Hooghe, L. and Marks, G. (2009). 'A postfunctionalist theory of European integration: from permissive consensus to constraining dissensus'. *British Journal of Political Science*, 39(01), 1–23. <https://doi.org/10.1017/S0007123408000409>
- Joo, J. and Steinert-Threlkeld, Z.C. (2022). 'Image as data: automated content analysis for visual presentations of political actors and events'. *Computational Communication Research*, 4(1), 11–67. <https://doi.org/10.5117/CCR2022.1.001.JOO>
- Kakavand, A.E. (2024). 'Far-right social media communication in the light of technology affordances: a systematic literature review'. *Annals of the International Communication Association*, 48(1), 37–56. <https://doi.org/10.1080/23808985.2023.2280824>
- Kariryaa, A., Rundé, S., Heuer, H., Jungherr, A. and Schöning, J. (2022). 'The role of flag emoji in online political communication'. *Social Science Computer Review*, 40(2), 367–387. <https://doi.org/10.1177/0894439320909085>
- Kim, C. and Yang, S.U. (2017). 'Like, comment, and share on Facebook: how each behavior differs from the other'. *Public Relations Review*, 43(2), 441–449. <https://doi.org/10.1016/j.pubrev.2017.02.006>
- Klatch, R.E. (1988). 'Of meanings & masters: political symbolism & symbolic action'. *Polity*, 21(1), 137–154. <https://doi.org/10.2307/3234927>
- Kleinen - von Königslöw, K. (2012). 'Europe in crisis? Testing the stability and explanatory factors of the Europeanization of national public spheres'. *International Communication Gazette*, 74(5), 443–463. <https://doi.org/10.1177/1748048512445153>
- Kolers, P.A. (1969). 'Some formal characteristics of pictograms'. *American Scientist*, 57(3), 348–363.
- Koopmans, R. and 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>
- Kroon, A., Welbers, K., Trilling, D. and van Atteveldt, W. (2024). 'Advancing automated content analysis for a new era of media effects research: the key role of transfer learning'. *Communication Methods and Measures*, 18(2), 142–162. <https://doi.org/10.1080/19312458.2023.2261372>
- Kruse, L.M., Norris, D.R. and Flinchum, J.R. (2018). 'Social media as a public sphere? Politics on social media'. *The Sociological Quarterly*, 59(1), 62–84. <https://doi.org/10.1080/00380253.2017.1383143>
- Ksiazek, T.B., Peer, L. and Lessard, K. (2016). 'User engagement with online news: Conceptualizing interactivity and exploring the relationship between online news videos and user comments'. *New Media & Society*, 18(3), 502–520.
- Kuhn, T. (2015). *Experiencing European Integration: Transnational Lives and European Identity*. OUP Oxford.
- Lalancette, M. and Raynauld, V. (2019). 'The power of political image: Justin Trudeau, Instagram, and celebrity politics'. *American Behavioral Scientist*, 63(7), 888–924. <https://doi.org/10.1177/0002764217744838>
- Lamot, K. and Paulussen, S. (2024). 'News content promotion pressure: a content analysis of the cross-media visibility of and engagement with news stories'. *Journalism*, 26(12), 2563–2580. <https://doi.org/10.1177/14648849241279012>
- Larsson, A.O. (2018). 'The news user on social media: a comparative study of interacting with media organizations on Facebook and Instagram'. *Journalism Studies*, 19(15), 2225–2242. <https://doi.org/10.1080/1461670X.2017.1332957>
- Larsson, A.O. (2023). 'The rise of Instagram as a tool for political communication: a longitudinal study of European political parties and their followers'. *New Media & Society*, 25(10), 2744–2762.
- Lauterbach, F. and De Vries, C.E. (2021). 'Europe belongs to the young? Generational differences in public opinion towards the European Union during the Eurozone crisis'. in S.B. Hobolt and T. Rodon (Eds.), *Domestic Contestation of the European Union* (pp. 8–27). Routledge.
- Leaver, T., Highfield, T. and Abidin, C. (2020). *Instagram: Visual Social Media Cultures*. Polity.
- León, B., Negrodo, S. and Erviti, M.C. (2022). 'Social engagement with climate change: principles for effective visual representation on social media'. *Climate Policy*, 22(8), 976–992. <https://doi.org/10.1080/14693062.2022.2077292>
- Liebhart, K. and Bernhardt, P. (2017). 'Political storytelling on Instagram: key aspects of Alexander Van der Bellen's successful 2016 presidential election campaign'. *Media and Communication*, 5(4), 15–25. <https://doi.org/10.17645/mac.v5i4.1062>
- Luoma-aho, V. and Vos, M. (2010). 'Towards a more dynamic stakeholder model: acknowledging multiple issue arenas'. *Corporate Communications: An International Journal*, 15(3), 315–331. <https://doi.org/10.1108/13563281011068159>
- Maares, P., Banjac, S. and Hanusch, F. (2021). 'The labour of visual authenticity on social media: exploring producers' and audiences' perceptions on Instagram'. *Poetics*, 84, 101502. <https://doi.org/10.1016/j.poetic.2020.101502>

- Maier, D., Waldherr, A., Miltner, P., Jähnichen, P. and Pfetsch, B. (2018). 'Exploring issues in a networked public sphere: combining hyperlink network analysis and topic modeling'. *Social Science Computer Review*, 36(1), 3–20. <https://doi.org/10.1177/0894439317690337>
- Marcella, R., Baxter, G. and Walicka, A. (2019). 'User engagement with political "facts" in the context of the fake news phenomenon: an exploration of information behaviour'. *Journal of Documentation*, 75(5), 1082–1099. <https://doi.org/10.1108/JD-11-2018-0180>
- Marquart, F., Goldberg, A.C., Van Elsas, E.J., Brosius, A. and De Vreese, C.H. (2019). 'Knowing is not loving: media effects on knowledge about and attitudes toward the EU'. *Journal of European Integration*, 41(5), 641–655. <https://doi.org/10.1080/07036337.2018.1546302>
- Marwick, A. E. and Boyd, D. (2011). 'I tweet honestly, I tweet passionately: Twitter users, context collapse, and the imagined audience'. *New media & society*, 13(1), 114–133.
- Marwick, A.E. (2013). *Status Update: Celebrity, Publicity, and Branding in the Social Media Age*. Yale University Press.
- Matthes, J., Knoll, J. and von Sikorski, C. (2018). 'The "Spiral of Silence" revisited: a meta-analysis on the relationship between perceptions of opinion support and political opinion expression'. *Communication Research*, 45(1), 3–33.
- Membretti, A., Dax, T. and Machold, I. (2022). 'Thesis 1: reframing remote places and remoteness as a collective resource and value for Europe'. in A. Membretti, T. Dax and A. Krasteva (Eds.), *The Renaissance of Remote Places—MATILDE Manifesto* (pp. 17–26). Routledge. <https://doi.org/10.4324/9781003260486>
- Metz, M., Kruikemeier, S. and Lecheler, S. (2020). 'Personalization of politics on Facebook: examining the content and effects of professional, emotional and private self-personalization'. *Information, Communication & Society*, 23(10), 1481–1498. <https://doi.org/10.1080/1369118X.2019.1581244>
- Michailidou, A. (2008). 'Democracy and new media in the European Union: communication or participation deficit?'. *Journal of Contemporary European Research*, 4(4), 346–368.
- Müller, M.G. and Geise, S. (2015). *Grundlagen der Visuellen Kommunikation: Theorieansätze und Analysemethoden* (2nd ed.). utb GmbH. <https://doi.org/10.36198/9783838524146>
- Negri, F., Nicoli, F. and Kuhn, T. (2021). 'Common currency, common identity? The impact of the Euro introduction on European identity'. *European Union Politics*, 22(1), 114–132. <https://doi.org/10.1177/1465116520970286>
- Newman, N., Fletcher, R., Eddy, K., Robertson, C. T. and Nielsen, R. K. (2023). *Reuters Institute Digital News Report 2023*. Reuters Institute. <https://reutersinstitute.politics.ox.ac.uk/digital-news-report/2023>
- Özdemir, S. F., Graneng, K. and de Wilde, P. (2025). 'EU executives on social media: assessing the potential and trajectories of legitimization via public communication on Twitter'. *European Union Politics*, 26(2), 255–280. <https://doi.org/10.1177/14651165251320881>
- Özdemir, S. and 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>
- Ozduzen, O., Korkut, U. and Ozduzen, C. (2021). '“Refugees are not welcome”: digital racism, online place-making and the evolving categorization of Syrians in Turkey'. *New Media & Society*, 23(11), 3349–3369.
- Peng, Y. (2021). 'What makes politicians' Instagram posts popular? Analyzing social media strategies of candidates and office holders with computer vision'. *The International Journal of Press/Politics*, 26(1), 143–166. <https://doi.org/10.1177/1940161220964769>
- Peng, Y. and Lu, Y. (2023). 'Computational visual analysis in political communication'. in D. Lilleker and A. Veneti (Eds.), *Research Handbook on Visual Politics* (pp. 42–54). Edward Elgar Publishing. <https://www.elgaronline.com/edcollchap/book/9781800376939/book-part-9781800376939-10.xml>
- Popa, S.A. and Dumitrescu, D. (2017). 'National but European? Visual manifestations of Europe in national parties' Euromanifestos since 1979'. *Party Politics*, 23(5), 526–537. <https://doi.org/10.1177/1354068815610963>
- Ridnik, T., Ben-Baruch, E., Noy, A. and Zelnik-Manor, L. (2021). ImageNet-21K Pretraining for the Masses (arXiv: 2104.10972). arXiv. <https://doi.org/10.48550/arXiv.2104.10972>
- Rocca, R., Lawall, K., Tsakiris, M. and Cram, L. (2024). Communicating Europe: a computational analysis of the evolution of the European commission's communication on Twitter'. *Journal of Computational Social Science*, 7(2), 1223–1274.
- Salamanca, L., Brandenberger, L., Gasser, L., Schlosser, S., Balode, M., Jung, V., Perez-Cruz, F. and Schweitzer, F. (2024). 'Processing large-scale archival records: the case of the Swiss parliamentary records'. *Swiss Political Science Review*, 30(2), 140–153.
- Salgado, S. and Bobba, G. (2019). 'News on events and social media: A comparative analysis of Facebook users' reactions'. *Journalism Studies*, 20(15), 2258–2276. <https://doi.org/10.1080/1461670X.2019.1586566>
- Scharpf, F.W. (1999). *Governing in Europe: Effective and Democratic?*. Oxford University Press.
- Schill, D. (2012). 'The visual image and the political image: a review of visual communication research in the field of political communication'. *Review of Communication*, 12(2), 118–142. <https://doi.org/10.1080/15358593.2011.653504>
- Schlesinger, P. (1999). 'Changing spaces of political communication: the case of the European Union'. *Political Communication*, 16(3), 263–279. <https://doi.org/10.1080/105846099198622>
- Schreiber, M. (2017). 'Audiences, aesthetics and affordances analysing practices of visual communication on social media'. *Digital Culture & Society*, 3(2), 143–164. <https://doi.org/10.14361/dcs-2017-0209>

- Singer, J.B.** (2014). 'User-generated visibility: secondary gatekeeping in a shared media space'. *New Media & Society*, **16**(1), 55–73.
- Stoltenberg, D.** (2021). 'Issue spatiality: a conceptual framework for the role of space in public discourses'. *Media and Communication*, **9**(3), 5–15. <https://doi.org/10.17645/mac.v9i3.3958>
- Stötzner, A.** (2003). 'Signography as a subject in its own right'. *Visual Communication*, **2**(3), 285–302.
- Strachan, J.C. and Kendall, K.E.** (2004). 'Political candidates' convention films: finding the perfect image—an overview of political image making'. in C.A. Hills and M. Helmers (Eds.), *Defining Visual Rhetorics* (pp. 134–154). Routledge.
- Strömbäck, J.** (2008). 'Four phases of mediatization: an analysis of the mediatization of politics'. *Harvard International Journal of Press/Politics*, **13**(3), 228–246.
- Tarnutzer, S., Lobinger, K. and Lucchesi, F.** (2024). 'Image types revisited. A text-material approach for creating image types'. *Studies in Communication Sciences*, **24**(1), 103–121.
- Trilling, D., Tolochko, P. and Burscher, B.** (2017). 'From newsworthiness to shareworthiness: how to predict news sharing based on article characteristics'. *Journalism and Mass Communication Quarterly*, **94**(1), 38–60. <https://doi.org/10.1177/1077699016654682>
- Turnbull-Dugarte, S.J.** (2019). 'Selfies, policies, or votes? Political party use of Instagram in the 2015 and 2016 Spanish general elections'. *Social Media + Society*, **5**(2), 2056305119826129. <https://doi.org/10.1177/2056305119826129>
- Urry, J.** (2004). 'The sociology of space and place'. in J.R. Blau (Ed.), *The Blackwell Companion to Sociology* (pp. 1–15). John Wiley & Sons, Ltd. <https://doi.org/10.1002/9780470693452.ch1>
- Valenzuela, S.** (2013). 'Unpacking the use of social media for protest behavior: the roles of information, opinion expression, and activism'. *American Behavioral Scientist*, **57**(7), 920–942. <https://doi.org/10.1177/0002764213479375>
- Volkens, A., Krause, W., Lehmann, P., Matthiess, T., Regel, S., Weßels, B. and Zehnter, L.** (2021). The manifesto data collection. Manifesto Project (MRG/CMP/MARPOR). <https://doi.org/10.25522/manifesto.mpsd.2021a>
- Vraga, E., Bode, L. and Troller-Renfree, S.** (2016). 'Beyond self-reports: using eye tracking to measure topic and style differences in attention to social media content'. *Communication Methods and Measures*, **10**(2–3), 149–164. <https://doi.org/10.1080/19312458.2016.1150443>
- Walter, S.** (2017a). '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.** (2017b). 'Three models of the European public sphere: an analysis of the actor structure in EU news'. *Journalism Studies*, **18**(6), 749–770. <https://doi.org/10.1080/1461670X.2015.1087815>
- Waterloo, S.F., Baumgartner, S.E., Peter, J. and Valkenburg, P.M.** (2018). 'Norms of online expressions of emotion: comparing Facebook, Twitter, Instagram, and Whatsapp'. *New Media & Society*, **20**(5), 1813–1831. <https://doi.org/10.1177/1461444817707349>
- Weston, Z.** (2023). *The evolution of Instagram: a journey through its history*. Medium, 28 September 2023. <https://medium.com/@zacharywestonintech/title-the-evolution-of-Instagram-a-journey-through-its-history-cd827bc20180>
- Wolf, T., Debut, L., Sanh, V., Chaumond, J., Delangue, C., Moi, A., Cistac, P., Rault, T., Louf, R., Funtowicz, M., Davison, J., Shleifer, S., von Platen, P., Ma, C., Jernite, Y., Plu, J., Xu, C., Le Scao, T., Gugger, S., ... Rush, A.** (2020). 'Transformers: state-of-the-art natural language processing'. in Q. Liu and D. Schlangen (Eds.), *Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing: System Demonstrations* (pp. 38–45). Association for Computational Linguistics. <https://doi.org/10.18653/v1/2020.emnlp-demos.6>
- Young, L. and Soroka, S.** (2012). 'Affective news: the automated coding of sentiment in political texts'. *Political Communication*, **29**(2), 205–231. <https://doi.org/10.1080/10584609.2012.671234>
- Zuboff, S.** (2015). 'Big other: surveillance capitalism and the prospects of an information civilization'. *Journal of Information Technology*, **30**(1), 75–89. <https://doi.org/10.1057/jit.2015.5>

Cite this article: Eisele O, Heidenreich T, and Maeres P (2026). Pics or it didn't happen! EU institutions' visual communication and user engagement on Facebook and Instagram. *European Journal of Political Research*, 1–26. <https://doi.org/10.1017/S1475676526100668>