

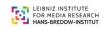


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Representation of Gender in ten countries

Work Package 4 – Analysing the Europeanisation and Platformization of Media Representations



























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Author(s):	Jim Ingebretsen Carlson (FUOC) Thomas Niemejer (FUOC) Valentina Latronico (FUOC) Francisco Lupíañez-Villanueva (FUOC) Sofie van Bauwel (UGent) Babette Lagrange (UGent) Authors of national reports (see each national report)
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Introduction

The goal of this work package is to provide an in-depth analysis of media narratives, aiming at detecting to what degree platformization has been changing the representation of gender in Europe. The specific focus will be on how platformization affects the process of Europeanisation and how Europe is represented through gender. To perform this analysis, a number of steps were taken that are displayed in Figure 1.

Figure 1. Overview of the steps to analyse how gender is represented across 10 European countries.



First, relevant social media content in 10 European countries was downloaded from Facebook and Twitter using different Application Programming Interfaces (API) and search queries consisting of a set of keywords related to gender. The countries studied are Belgium, Bulgaria, Czech Republic, Germany, Greece, Italy, Portugal, Spain, Sweden, and Turkey and the period was restricted to between September 2021 to November 2021. In addition, a theoretical framework of media representations is developed for the topic of gender. The theoretical framework comprises several dimensions, or themes, which are commonly encountered in relation to how Europe is represented through gender. It has close connections with the work on Europeanity and Europeanisation by Carpentier et al. (2023). Partners in each of the 10 countries manually coded a subset of the downloaded posts to assess if the content was represented by any of the dimensions of representation, the sentiment, if it was related to gender, and whether it is about Europe. Thereafter, Machine learning models were trained using the manually coded data to automatically code the full data set on the dimensions of representations, sentiment, whether it was related to gender and if it were about Europe. In this way, we generated a fully coded data set of all tweets and posts on the topic of gender, as captured by our keywords, from the period of study. The data set is analysed using quantitative techniques and comparisons of how frequent the dimensions are in social media posts will constitute the main unit of analysis. The ethical committee at Catalonia Open University (UOC) has approved the proposed research and methods (See Appendix).

The starting point for framing this task is the Europeanisation and Europeanity (E&E) dimension of the Public Sphere. The European public sphere (EPS) approach to E&E focuses on the practices of European citizens, engaging in (allegedly rational) decision-making, providing them with an opportunity to be politically active at a European level. The EPS is also seen as constituted by public discussions on EU (or European) issues in the national media of EU member states (Walter, 2017).

Through this lens, we aim at answering the following research question: (RQ1) Are there similar debates about gender across Europe - can we find hints of a 'European public sphere' - or is coverage dominated by the non-European perspective?

To further deepen the analysis of Europeanisation and representation of Gender, we distinguish between debates with and without a European focus. This provides a baseline comparison (the non-European debates) that allows us to assess to which extent there exists an EPS at a European level by controlling for differences in average national levels of representations. By comparing representations of gender between posts concerned with Europe and posts not concerned with Europe we can answer the following research question: (RQ2) Are there similar debates about gender across Europe when the perspective is European compared to when it is not?

To investigate whether platformization changes how Europe is represented through the topics of gender, we compare how representations differ between institutional media and user-generated content namely non-institutional media. We aim at answering the following research question: (RQ3) Are there similar debates about gender when the content is published by media compared to when it is not?

It is common to conduct sentiment analysis when analysing social media conversations (see, e.g., Drus et al. (2019) and Matamoros-Fernández & Farkas (2020)). While representations describe the content of the debates, sentiments provide a sense of the persons' attitude towards the content. Sentiment analysis can thereby give a deeper understanding of how Europe is represented through the topics of gender. Since the topics of gender is a sensitive topics in general (see, e.g., Malmqvist (2015), Nguyen et al. (2020), Park & Kim (2021), and Öztürk & Ayvaz (2018)), we could expect diverging sentiments regarding the topic. We aim to conduct sentiment analysis to answer the following research question: (RQ4) Are sentiments towards gender similar across Europe?

Importantly, by also analyzing sentiments between debates concerning Europe and debates not concerning Europe, it is possible to assess whether European debates generate more sentiments than other debates. To address this, we will answer the subsequent research question: (RQ5) Are sentiments different depending on whether debates are European or non-European?

It is likely that the change in media- production and consumption has been accompanied by a change in the expression of sentiments in debates, specifically when comparing traditional media to user-generated content. Some evidence for this has been provided when investigating other topics (see, e.g., Godbole et al. (2007), Huang et. al (2020), and Kim et. al (2016)). We aim to study this change for the topics of gender by answering: (RQ6) Are sentiments related to gender different depending on whether the content is published by media or not?

The research questions will be analysed for all countries jointly in a between country analysis. Additionally, a national report was written for each of the 10 European countries by consortium partners from the countries to give an in-depth analysis as well as national perspectives and context to the topic of gender and the observed results.

Overview of European gender legislation

Whilst gender can be seen as a social construct, an open idea produced and maintained by culture and politics one can affiliate with, this does not mean it does not have real consequences (Butler, 1999 [1990], p. 6). People identify themselves as having a certain gender and both these feelings of identification and the injustices inflicted upon them depending on the gender they affiliate with, are real. Gender-related violence and gender-based discrimination is real (Perez, 2019). Because of this, it is of importance to take gender into account when combatting inequality. This is something that is

increasingly reflected in European policy. The European Union their Gender Equality Strategy is based on three types of legislation. The first types of legislations are based on equal treatment. Second, there are "specific measures for the advancement of women" (European Commission, n.d.). And third, gender mainstreaming is in place (European Commission, n.d.).

The European Union has known different kinds of policies. Some European policies, like the 1957 Treaty of Rome, were focused on equal treatment of people regardless of their gender. However, many of these existing policies also have shortcomings. First, they often take men as the standard, and 'make right' the discrimination to women by implementing legal remedies (Rees, 2005, p. 557). Moreover, Pascall and Lewis (2004, p. 374) argue that policies concerned with paid work, care, income, time and voice, should pay attention to several of these aspects rather than focussing on just one. In other words, an interconnected approach to gender-related issues is necessary (Pascall & Lewis, 2004, p. 389). For example, the transition to more paid work for women has known 'modest social support and fragmented arrangements for childcare' (Pascall & Lewis, 2004, p. 375). Next, gender equality policies are often primarily directed at individuals (Pascall & Lewis, 2004, p. 379). However, if we for example look at care work and related policies, what is necessary for true equal treatment is 'a collective approach to care' (Pascall & Lewis, 2004, p. 382). At last, gender equality is unattainable by only using these policies. This is not only because of the often individualistic approach, but also because it does not tackle the systemic level of gender-related injustices. This does not mean that the equal treatment legislation in place is not valuable, it just means that it cannot stand on its own if we strive to have gender equality (Pascall & Lewis, 2004, Rees 2005).

Other policies are designed towards women's needs by taking women's needs as the specific measurement. These policies also often have a more collective focus by concentrating on group disadvantages. However, these policies were designed to rectify wrongs from past discrimination, leaving the ongoing issues untouched (Rees, 2005, p. 558). These as well are thus insufficient on their own if we want gender equality.

In the Amsterdam Treaty of 1997 gender mainstreaming was endorsed. Gender mainstreaming addresses 'the ways in which systems and structures infringe (...) rights and cause (...) disadvantage in the first place. It is about embedding gender equality in systems, processes, policies and institutions.' (Rees, 2005, p. 558). It is focused on relational difference and aims to deconstruct power relations (Rees, 2005, p. 559). Thus, gender mainstreaming aims to support gender equality by integrating it systemically into all structures, policies, organisations etc. (Rees, 2005, p. 260) This became the official policy to combat gender-based injustices and fight for gender equality in the European Union and its member states (Rees, 2005, pp. 555, 558).

To understand gender mainstreaming's principles, we can consider Rees's (2005) identification of the three principles that underlie gender mainstreaming. First, the individual needs to be treated as a whole person, meaning differences and diversity need to be taken into account (Rees, 2005, pp. 564-565). Secondly, not only is democracy a necessity, participation also needs to be encouraged and stimulated (Rees, 2005, pp. 566-567). Thirdly, the motivation is linked to justice, fairness and equity (Rees, 2005, p. 567). However, gender mainstreaming has been proven hard to implement and its adaptation has been uneven (Rees, 2005, pp. 555, 570). Moreover, gender mainstreaming can be seen as a paradigmatic shift, which also means it takes time to embed. Both equal treatment and positive action policies are therefore still in order (Rees, 2005, p. 559).

Empirical research of gender issues on social media with focus on Europe

Gender in Society

First, to talk about gender and media, it is important to briefly explain what gender, and what sex is. Often sex is associated with biology and gender with culture. If we talk about sex, we talk about biological men, women and intersex people. Gender indeed is produced and maintained by culture and politics (Butler, 1999 [1990], p. 6). However, both are connected to culture. People's sex is assumed to be indicative of one's gender and comes with social expectations. Therefore, it is socially constructed as well (Butler, 1999 [1990], p. 10). Think for example about "gender" reveal party's and the connotations and expectations people have dependent on the sex that becomes revealed. The body comes into being as a medium and -from the birth onwards- cultural meanings are inscribed to it (Butler, 1999 [1990], p. 12). In this way one "becomes" for example a woman (de Beauvoir, 2019 [1949], p. 345). During one's lifetime, people get to know that they are differentiated from others due to their sex and assumed gender. They then become gendered (Butler, 1999 [1990]; de Beauvoir, 2019 [1949], p. 345).

As Butler (1999 [1990], p. 10) explains "if gender is the cultural meanings that the sexed body assumes, then a gender cannot be said to follow from a sex in any one way". This has an important consequence, namely that gender identity can be radically independent from sex and thus someone with for example a male body can have any possible gender identity or gender expression. Next, it is important to also take other aspects of identities into account, namely ethnicity, class, sexuality etc. Identities are not just the sum of these aspects. Gender, race, religion etc. are compounds that together create distinct identities. These compounds are entangled and we cannot see for example a black woman as being black and being a woman, she is always a black woman. Therefore, her experiences need to be studied to understand her oppression; the injustices she faces as a black woman cannot be defined by solely studying the injustices against white women (Cohen, 1997; Crenshaw, 1991). Understanding intersectionality is important to have an idea of the feminist studies we need to take on to combat gender-related discrimination and injustice. White, able-bodied, western ... feminism has often established itself as the only legitimate feminism, seeing "white", "able-bodied", "western" etc. as the norm and not something needed to be mentioned. Because of this, feminist discourse has often only been connected to the experiences of women falling under this norm. Thus, the whiteness, ablebodied, western ... focus of feminism is often invisible, making the experiences of others invisible (Amos & Parmar, 1984). If we want to fight injustice against all of those who are not cismen, our feminism must also represent them all.

When looking at research about gender and media, we see that what is often analysed and discussed is sex, framed as gender. Therefore, the distinction between sex and gender is important to keep in mind. This report aims to analyse gender, however the data does not always make a distinction between sex and gender.

Gender and Media

Mass media shapes people's opinion and beliefs, it plays a role in the shaping of people's identities (Gill, 2006; McLuhan, 1964). Thus, it has an important impact as well on the ideas and attitudes people have about and towards gender (McLuhan, 1964). It is therefore of importance to study this in order to know how to better use media platforms with regards to gender.

Studies about gender and media focus mostly on representation. These can be numeric analysis of gender representation or studies about the ideologies of gender (Krijnen & Van Bauwel, 2022, p. 21).

These last studies talk about the cultural meanings of gender and sex, they study the shared meaning we have of gender due to media representations (Hall et al. 2013, p. xvii; Krijnen & Van Bauwel, 2022, p. 21). These two different ways of studying gender representation and media are practiced by different disciplines. First, there is a psychoanalytic approach. This way of studying gender representations in media has its roots in film analysis and scholars used it to describe an important concept with regards to gender and media theory, namely the gaze theory (Krijnen & Van Bauwel, 2022, pp. 22-23; Mulvey, 1975).

Secondly, researchers with a more semiotic approach study how signs work. They study how what is said or portrayed has an arbitrary and unstable relation with the object it tries to talk about (De Saussure, 1983 [1972]; Krijnen & Van Bauwel, 2022, pp. 23-24). When talking about signs in relation to gender on media, we can understand denotations and connotations people have with media messages concerning gender (Barthes, 1994; Krijnen & Van Bauwel, 2022, p. 24). This approach was critiqued by scholars like Michel Foucault (1954-1975) who argued for a more dualistic approach with room for the subject (Hall et al., 2013, p. xxvi; Krijnen & Van Bauwel, 2022, pp. 24-25).

The third approach emerged out of the critiques on the second and it is focused on discourse analysis. Researchers using this approach investigate meanings (Krijnen & Van Bauwel, 2022, p. 25). Discourse analysis allows us to research how meanings are produced, by whom and how power can play a role in this process. Representation is then described as a process of interchange between the material world and conceptual ideas, links, impressions etc. Many scholars also argue that this interchange can result in corresponding behaviour and practices (Brouns, 1995; Krijnen & Van Bauwel, 2022, p. 25; Smelik 1999; De Clercq, 2003). It is then argued that media reinforces gender stereotypes because of the way they portray gender (Bardwick & Schumann,1967; Dasgupta, 2018; Goffman, 1979; Lundstrom & Sciglimpaglia, 1977; Ross & Carter, 2011; Ward & Grower, 2020).

Lastly, the fourth approach uses social psychology to research gender representations (Krijnen & Van Bauwel, 2022, p. 25). This approach mainly focuses on the effect social and cognitive processes can have on how "individuals perceive, influence, and relate to others" (Smith & Mackie, 2007, p. 5). In relation to gender, Alice Eagly (1987) formulated the social role theory, arguing that the social norms in place with social roles of people influence and even regulate gender behaviour (Krijnen & Van Bauwel, 2022, p. 25). However, the social role theory also knows critiques, one of which is that it is in lack of a social-historical dimension (Connell, 1987). Most scholars today who use this fourth approach with regards to studying gender representation in media, focus on advertising (Krijnen & Van Bauwel, 2022, p. 25).

Scholars have researched gender representations in different media, however -especially in earlier work- advertisement is the most commonly studied media platform (Krijnen & Van Bauwel, 2022, pp. 25-31). Later research often focuses on popular culture and quite some of the research is about the representation of gender in news (Krijnen & Van Bauwel, 2022, pp. 25-26, 31-35). Looking at these studies of gender representation in media, it is clear that there are differences between different media platforms (Krijnen & Van Bauwel, 2022, pp. 26, 37). Different media platforms (news, film, advertisement ...) portray gender roles differently (Dasgupta, 2018; Popa & Gavriliu, 2015). However, what recurs across the board is that women are underrepresented and outnumbered by men on a global scale (Krijnen & Van Bauwel, 2022, pp. 26, 37). Going in depth on the research about gender and media is beyond the scope of this report, however we'll focus more on social media in particular in the next section.

To end this section we'd briefly like to mention that even though we now only talk about gender, other aspects of one's identity can and should also be studied in relation to media. Authors like Crenshaw

(1993), Lünenborg and Fürsich (2014), Remedios and Snyder (2018), and others have also focused on intersectionality in representation, meaning for example how black women are represented in media.

Gender and social media

With regards to gender representation and social media, research focuses on who is represented, how they are represented and the impact this has on (mainly) women and girls. With the emergence of social media there has been a shift in media consumption and production. Scholars argue that social media allows for more opportunities of free and equal participation than other platforms (Demirhan & Çakır-Demirhan, 2014). Even though social media is not a truly free space and it still in its own way encourages traditional power relations, it offers a space that can challenge dominant discourses due to a more accessible participation for users (Demirhan & Çakır-Demirhan, 2014). This has led to differences in gender representation (Billard & Zhang, 2022, Dasgupta, 2018). These differences can be seen both in who is represented and how.

Online users are able to participate in online creation, leading them to having the opportunity to self-represent (Krijnen & Van Bauwel, 2022, pp. 186-187). For example, the biggest difference in transgender representation took place on social media platforms because of its accessible ability to produce user generated content. Social media allows not cismen to produce content for not cismen, which results in a shift in gender representation not only of who gets represented but also of how this happens (Billard & Zhang, 2022).

Because of social media's high possibility to self-represent, people can tell their own stories, form their own narratives. This can lead to a more accurate representation of what gender can be and creates visibility (Billard & Zhang, 2022; Krijnen & Van Bauwel, 2022, p. 187). In this visibility and selfrepresentation is power and it can create a potential for online feminist activism (Krijnen & Van Bauwel, 2022, p. 187). However, the easy accessibility of social media platforms results as well in young girls sharing content online. What people share is embedded in social conventions of what is acceptable to share. Self-representation then either bends to fit in this box of what is 'shareable' or needs power to break through. Therefore, a lot of questions about agency and consent with regards to what young girls share online are raised. However, it is striking how these girls themselves often get no voice in these debates. In other words, research on young girls and social media too often lacks the opinion of these girls themselves (Krijnen & Van Bauwel, 2022, pp. 178-179, 186-188). With regards to representation (not self-representation) on social media, researchers have started to discuss how this can lead to spreading (false) information about gender-related topics and the impact this has on public opinions and actions (Dasgupta, 2018). This is not new for mass media. Media can frame gender-related topics, such as sexual violence and its possible causes and solutions, and this results in different public responses (Kitzinger, 2012). However, social media has been seen as a space where constant engagement and discussion is possible of beliefs and opinions that are not usually enlightened in existing discourses about gender (Dasgupta, 2018).

Gender representation on social media is not only more diverse (because of the self-representation), it makes things also more visible than other media platforms. Mass media, and thus also social media, play a key role in the shaping of ideas and the forming of public opinion (Byerly & Mendes, 2015). They influence our ideas about gender roles, identity, expression ... (Kosut, 2012). This can both be in promoting and degrading feminist ideals. For example, social media has an impact on body positivity (feeling positive about one's body shape) and body neutrality (not feeling negative, but feeling neutral about one's body shape). It can lead to change and one of the fields often studied is the impact it can have on body image (Krijnen & Van Bauwel, 2022, pp. 187-188). However, the accessibility of social

media platforms has also resulted in sexism online. Aspects such as the possibility of anonymity make it easier for users to write sexist opinions and ideas on social media platforms (Fox, Cruz & Lee, 2015). However, at the same time, social media gives people also a platform to talk about sexism (Foster, 2015).

Gender, (Social) Media and Europe

Most of the research about gender and media are case studies. Moreover, these are often qualitative and not empirical or quantitative. However, the European Institute for Gender Equality (EIGE) has done research on women and media in the EU. First, the more general research done is about media production in the EU¹. This was done as part of a broader study related to women and rights and freedom. Twelve particular areas requiring "action towards the advancement of women" were studied, one of which was "Women and the Media" (European Institute for Gender Equality, 2023). We will now briefly discuss the findings, but it is important to keep two things in mind. First, this research is not specifically about social media, something that this report will focus on. Secondly, there is only data for *men* and *women*, keeping a binary perspective. Moreover, the research looks at the sex of people and does not mention gender. More specifically, we don't know whether gender identities were taken into account and if the difference between sex and gender is acknowledged. These are shortcomings often visible in empirical research on 'gender'. It is still relevant and interesting to discuss the findings of the EIGE, but these remarks need to be taken into account.

To start, the research talks about *different levels* of *decision-making* in media organisations. A decision making position is "a position from which it is possible to take or influence a decision" (European Institute for Gender Equality, 2022a; 2022b). With regards to the different levels of decision-making, four can be distinguished. Level 1 is "the highest decision-making level covering all strategic decisions related to the organisation"; level 2 is "the chief senior operational managerial position, that operates at the top decision-making level and has under her/his responsibility budgetary control, overseeing programmes and editorial policy"; level 3 is "the senior operational management positions, who operate as decision-makers and have oversight of specific programmes/media content and execution of budgets"; and level 4 is "the managerial positions that entail responsibility for one of the main operational units of the organisation — for example, television, radio, sport, entertainment, news or significant areas of responsibility, e.g. digital services, finance, HR" (European Institute for Gender Equality, 2017a). EIGE (2017) also notes that the sample size of the data from 2012 was small. Therefore most of the findings of the study must be seen as indicative (European Institute for Gender Equality; 2017a; 2017b; 2017c; 2017d).

EIGE studied "the proportion of women and men at all decision-making levels in media organisations by country, in the EU" in 2012, "The proportion of women and men at all decision-making levels in public media organisations by country, in the EU" in 2012, "The proportion of women and men at all levels of decision-making in private media organisations, in the EU" in 2012, "Selected media organisations in the EU: Percentage of women and men" in 2012, "The proportion of women and men in decision-making posts in public broadcaster organisations [from 2014]" from 2014 until 2022, and "J2b. The proportion of women and men on the boards of public broadcaster organisations [from 2014]" from 2014 until 2022 (European Institute for Gender Equality, 2017a; 2017b; 2017c; 2017d; 2022a; 2022b). With regards to media organisations in 2012, women were disproportionally less in

¹ The research was done before the United Kingdom left the EU in 2020. Therefore, 28 countries are researched.

charge in decision-making levels and with regards to the first level there are 16 countries with no women at all (European Institute for Gender Equality, 2017a). The same goes for both public and private media organisations, only here there are 21 countries with no women in charge in first level decision-making positions (European Institute for Gender Equality, 2017b; 2017c). When looking at "the proportion of women and men in decision-making posts in public broadcaster organisations", we can see that for all researched posts there are disproportionally more men in charge than women. When comparing 2014 (the earliest date of the research) with 2022, we can see women who break the glass ceiling, however there is still no equal balance (European Institute for Gender Equality, 2022a). With regards to "women and men on the boards of public broadcaster organisations", we have similar findings but with even less growth in gender equality (European Institute for Gender Equality, 2022b).

When searching for European research about social media, there mostly is a lack of general studies. However, what can be found is research on cyber violence against women. The rapid speed and the growing reach of the internet and -relatedly- the use of social media platforms, has real life consequences. One of those is cyber violence, now a growing global and gendered problem. However, as the EIGE explains, there is no agreed definition of what cyber violence is at EU level. Moreover, only some of the Member States cover cyber violence and its gendered aspects in their national legislative system. The EIGE aims to map existing policies, definitions etc. on national levels to better policymaking (European Institute for Gender Equality, 2021; 2021-2022). The research should result in "better informed, evidence-based policymaking on cyber violence" (European Institute for Gender Equality, 2021-2022).

In our research we focus on the intersection of Europe and gender on social media since Europeanisation can have a big impact on gender. The way gender is viewed and the rights and privileges people have based on their gender differs in between countries (see for example national reports' introductions in the annex). However, with the European Union, general gender legislations are in place, shifting the question of how gender needs to be approached from a national to a European perspective. Moreover, this doesn't only have legislative consequences. It for example also has an impact on debates about values like freedom and agency (think about homo- and femonationalism (Farris, 2017)). Therefore, it is of interest and importance to focus on Europe when talking about gender; to focus not only on a national but also on an overarching perspective.

Operationalisation of media represntations

Gender on social media can be represented by different subjects and modes of talking about it. We've decided to analyse seven ways of representing gender. First, social media representations Law, People, Culture and Values were chosen because of their relevance to gender and their overlapping functionality with regards to the migration reports. Talking about gender means also talking about identity, hence the choice for social media representation Identity. Finally, there are gender-related discrimination and injustices. People fight against these by organising social movements or by advocating for change in the public sphere. Therefore, we've decided to also analyse social media representations New social movements and Public sphere.

Table 1 displays the operational definitions of social media representations used in the subsequent analyses.

Table 1. Operational definitions of social media representations used.

Social media	Output in all definition
representation	Operational definition

Law	When the post deals with the legal aspects and rights of gender, and how it describes the specific rights on discrimination based on sexuality, gender, and biological sex.
People	When the post is about a person's own experience, or a general experience based on gender (women, men, non-binary and LGBTQIA+ people).
Culture	Whether the post is about gender in terms of any kind of artistic expression and cultural production; Cultural habits and practices (including daily life); Cultural institutions, including education, the media, science, and the Church; Lifestyle, when related to gender.
	Posts under this dimension could refer to Artwork/cultural production/media products related to gender issues; Daily life practices and habits connected to gender; Educational practices related to gender issues; Art/cultural centers, educational institutions, scientific institutions, Churches and religious foundations, dealing with gender issues.
Values	Whether the post is about gender in terms of ideas and beliefs related to gender in/equality, gender im/balance, neutrality/bias, non/discrimination on the basis of gender, in/tolerance, dignity, diversity, freedom (of thought, expression, information, movement, choice), related to gender.
Identity	Definition for gender, being a man, woman, non-binary, LGBTQ. Is something mentioned and then you can crossbow what is mentioned. This is in terms of gender and sexual identity.
New social movements	Self-organized citizenry including grass-roots social movements and NGOs. Movements that have targeted the structures, cultural practices, and interactional norms that sustain gender inequality. Further, movements that are not oriented specifically around gender issues are also shaped by gender as a central feature of social structure, culture, and everyday life.
Public sphere	When a post is about gender-relevant issues, raised by non-political actors. Particularly, the relationship between citizens and institutions, the involvement in Decision-making, a non-political actor who tries to influence decision-making.

Source: Authors' own elaboration

Methodological overview

Data extraction

For each of the 10 country / language pairs, data is extracted in the form of social media posts on Facebook and of tweets from Twitter. In the case of Facebook, data is gathered using Crowdtangle, while Twitter data is acquired through the use of Twitter bulk downloader API v2.

For each language, a set of keywords specific to the topic of Gender is defined. This set is roughly the same for each language, although translated or adapted to each specific language. Some languages may contain keywords that are more specific to the country in question. The sets of keywords can be found in the Appendix.

One of the axes of analysis of the final results is whether the posts and tweets are from News media or not. In the data of Facebook extracted through Crowdtangle this can be easily determined through the field "Page Category" that comes natively from the API, where the following page categories are designated to be News media: MEDIA_NEWS_COMPANY, MEDIA, NEWS_SITE, RADIO_STATION, TV_CHANNEL. However, the Twitter API does not provide such field. Therefore, for all countries a list of specific authors was compiled that represent news media, typically the major newspapers (both legacy and new/online media) and broadcasters of each country are included. In the Appendix this list is provided.

For each country / language pair, a query is constructed that includes all the keywords separated by "OR"-statements for the specific country and language. In principle it is important to specify both language and country. For instance, for Spanish, only posts from Spain are of interest, not of Spanish speaking people in South America. Similarly, for Belgium, posts in Dutch from the Netherlands should not be included, nor French-language posts from the Walloon region. However, in some cases it was found that restricting both language and country made the result set too small (usually resulting in too few posts about Europe) as the country of origin of the post is more often than not, uninformed in the source data. Therefore, in case of posts for Czechia, the restriction of the posts being from Czechia was lifted as it was presumed that the majority of Czech speakers are actually from Czechia. The same was done for Swedish, Bulgarian and Greek.

In all cases the posts to be retrieved were confined to a specific 3-months period which was from 01/09/2021 to 30/11/2021.

Due to restrictions in the size of the actual query that can be launched through Crowtangle and the Twitter API (typically 1023 characters), technically the queries had to be broken up in several smaller subqueries, but functionally the sum of result sets delivered the same output set for each language and source type (Facebook and Twitter). As alluded to earlier, between the Facebook output and Twitter output there are some differences in the fields that are generated (as in the case of the flag "newsmedia or not"), but generally the fields of interest are comparable and compatible. All data is generated as flat CSV files.

Pre-processing

The CSV files are processed separately for each country. Initially Facebook data and Twitter data are also processed separately, though similarly, before joining those sets together after the first stages of pre-processing.

After some initial basic cleaning and renaming operations on the source data, the first principal step is to apply Ontology Tagging to each post. In this step the content of the post is analysed against the Gender lexicon for the specific language. Within this step, when comparing the individual words of the post with the lexicon, these are first normalized in the sense of converting all letters to lowercase and removing diacritic characters, such as accents, cedillas and tildes. Also, lemming and stemming is applied. The output of this step is an array of coinciding words between post and lexicon. The length of this array is the number of coinciding words, and represents a first indicator of the relevance of the post. It is possible that the length of this array is zero, even if the initial selection of the post is based on the same lexicon. However, it is possible that the post is initially selected by the API based on another field than the actual contents of the post, for instance the subject line or even the author name. In a subsequent step, only posts that have actual topic-related keywords in their content field are considered, or, in other words, those that have a keyword array length greater than zero.

In the same step, not only the topic specific keywords are checked, but also the Europe-specific keywords that are in the lexicon (see Appendix). In similar fashion, another array is constructed with all Europe-related keywords.

After constructing the keyword arrays, all posts are stripped from any URLs they may have. As mentioned, posts without topic-specific keywords are removed, but also duplicate posts are removed. Especially news agencies have the tendency to repost or retweet the same post a number of times, sometimes only changing the URL, which is the principal reason for removing it when checking for duplicates. As the objective at this stage is creating a set of unique posts to be coded manually, it makes no sense providing the same post more than once.

Subsequently, for each post a sentiment score is calculated. For each language, another lexicon of words that express positive and negative sentiments is used from Chen and Skiena (2014). Here Ontology Tagging is also used to compare the post with the sentiment lexicons and arrays of positive and negative words are constructed. This sentiment score is calculated as follows: ABS(numPositive – numNegative)* (numPositive – numNegative) / (numPositive + numNegative). It gives a positive number when there are more positive than negative words and vice versa and it is weighted for the number of sentiment words found, being more positive or negative if the difference between them is larger.

Next, a OnTopic score is calculated, which represent a measure of how relevant a post is to the topic at hand. This score is largely based on the number of elements in the keywords array, where the words are weighted for relevance, as defined in the keywords lexicon. The majority of words has a weight of 1, but some may be weighted more. The OnTopic score is the sum of the weights in the keywords array, slightly adjusted by the sentiment score, in order to give a slightly higher score to more negative or positive posts. The applied formula is: $2 * (sum weighted score) * (1 + log(1 + abs(sentiment_score))$.

Also, an Interactions score is calculated to measure the virality of the post. For Twitter this score is calculated as (4*replies + 2*retweets + likes), for Facebook it is (Likes + 4*Comments + 2*Shares + Love + Wow + Haha + Sad + Angry + Care), where the latter 6 elements represent other types of reactions a user can give to a post. These formulas are chosen in such a way that the average interaction scores between Twitter and Facebook roughly even out.

The flag Europe / Not-Europe is calculated based on whether the Europe keywords array has a length of 1 or greater, or not.

The flag Newsmedia / Not-newsmedia is based on the Page Category in case of Facebook, or the specific author in case of Twitter as mentioned earlier.

Finally, the output datasets for the manual coding are created, one file for Europe, one for not-Europe. For each file, 1000 posts are selected. The first 500 posts in principle are 250 posts newsmedia and 250 non-newsmedia posts, each set selected for the highest on-topic scores, ordered by interaction score from highest to lowest. The last 500 posts are a random selection of the remaining posts.

The author of the post is anonymised in the output datasets.

Manual coding

The output datasets of the pre-processing stage a priori contain the most relevant posts for the topic. As a next phase, human annotators revise these datasets and label the posts whether indeed it is on topic or not, is about Europe or not, as well as code whether the post is relevant to the following categories of social media representations:

- Law
- People
- Culture
- Values
- Identity
- New social movements
- Public sphere

Also, they code a sentiment score for the post as being Positive (2), Neutral (1) or Negative (0). The operational definitions of each coded variable can be found in Table 4 of the appendix.

A minimum of 200 posts are required to be positively labelled as on topic, with a relevant number of off topic posts (ideally at least 20%, or 40 posts) in order to be able to contrast both categories. For each post that is positively labelled as on topic, the 7 aforementioned categories should be labelled whether they are applicable to the post or not (yes/no as 1/0). Additionally, the sentiment is also coded for the posts considered to be on topic

This should be done for both files, the Europe ones and the not-Europe ones. In case of the not-Europe files, another column was added to be labelled manually, which serves to indicate that the post actually is relevant to Europe, although the pre-processing did not mark it as such. This could be the case if certain Europe specific keywords are not present in the Europe-lexicon.

The purpose of this manual coding of the labels is to serve as an input for a predictive model that is described in the next step.

To ensure reliability and consistency in coding, 20% of the data was manually coded by two coders and a Krippendorff's alpha of at least 2/3 for each category coded was required before the whole data set could be manually coded.

Predictive modelling

The manually coded posts are used to construct Machine Learning algorithms in order to be able to automatically code previously unseen posts. Different algorithms have to be constructed for each of the following characteristics of the post:

- On topic or off topic
- Applies to Europe or not
- Whether each of the 7 subcategories mentioned apply or not
- The sentiment of the post

All indicators but the sentiment are binary 2-class predictors in the sense that the output should be a yes/no-type answer of whether it applies or not. In case of the sentiment the output in principle should be a multi-class predictor as the possible output has 3 values, Positive, Neutral or Negative. However, in the iterative development of this predictor it was found that there was too much noise in the data to have a statistically relevant 3-class predictor and therefore it was chosen to be a binary predictor as well, with output Neutral or not-Neutral.

The coded data is used as input and cleaned and normalized. Subsequently, the text of the post is normalized in the sense of converting all letters to lowercase and removing diacritic characters, such as accents, cedillas and tildes. Punctuation is removed as well and stop words specific to each language are cleared. Also, lemming and stemming is applied which is language specific as well.

All algorithms use this normalized and lemmed and stemmed text field as the principal input feature. NLP techniques are then applied to deconstruct the core text of the post, through what is known as Word Embeddings. Word Embedding are numerical representations of a text, which can be used more optimally by the Machine Learning algorithm. In this case Frequency-based Embedding are used under which umbrella various text handling methods exist of which TF-IDF Vectorization (Term Frequency, Inverse Document Frequency) was the method of choice as it takes into account not only how many times a word appears in a document but also how important that word is to the whole corpus. It should be noted that when constructing these vectors, potentially all words of the post may be used, not just the set of pre-defined keywords themselves that were used in pre-processing.

Once the feature space has been constructed, the actual training of the algorithm is done. For a twoclass or multi-class prediction, a number of different algorithms is available, of which the following commonly used algorithms are used: Random Forest, Logistic Regression, Gradient Tree Boosting and XGBoost. Each has their set of parameters and hyperparameters that are finetuned for optimal performance.

The training of the algorithms is by nature an iterative process in order to get the best performance. This performance in first instance is measured by optimizing for AUC (Area Under the Curve) of the ROC-curve (which stands for Receiver Operating Characteristic). This measure is the most commonly used way to evaluate the performance of ML algorithms. To optimize for the threshold between output classes typically the so-called F1 score is used, which is the harmonic mean of precision and recall. However, in this specific case obtaining a good precision has special interest, meaning that a positive label is actually positive.

The algorithm to predict On Topic is based on the posts of the coded data that actually have been labelled as either 1 (on topic) or 0 (off topic).

The algorithm to predict Europe is based on the posts that are labelled exclusively as on topic. The positive label of Europe is assigned either because the post originates from the Europe file or because it is coded as Europe in the not-Europe file.

The algorithms for the 7 subcategories are based on posts that are exclusively on topic and that have a label, either positive or negative, for their respective category. Not in all cases on topic posts are labelled for all subcategories.

The algorithms for the sentiments initially were based on posts that are exclusively on topic and that have a sentiments label assigned. However, basing an algorithm on the coded sentiment label proved to give unsatisfactory results. Therefore, it was chosen to base the sentiments algorithm on the sentiment score calculated in the pre-processing phase, converting the value to a binary label indicating Neutral or not-Neutral sentiments, where Neutral was defined as having a sentiment score between -3 and 3 and not-Neutral outside of that range.

These algorithms are constructed and trained for all 10 languages. However, specifically in the case of the algorithms for the subcategories, in specific instances the ratio between positive and negative labels may be too skewed in either direction (although typically towards too few positives) to train a reliable algorithm as in this case it is either prone to overfitting or the data is simply too sparse.

In the Appendix the specific results from the trained algorithms for all languages can be found.

After training the algorithms, they are deployed to be used subsequently. Only algorithms achieving an AUC score of at least 0.7, a precision of at least 0.7 and a ratio between positive and negative posts of at least 10% and maximum 90%, were considered reliable for production. A flow is created to serially apply these algorithms to unseen posts and thus obtain their characterization in terms of the trained categories.

Data and between country analysis

In this section, we start by providing a brief overview of the downloaded data and the categories of social media representations used in the analyses. Thereafter, the results from a between country analysis is presented that is related to the initial research questions.

Overview of the data

We start by providing an overview of the data. Table 2 displays information of the retrieved data by each country. The table displays the number of posts pertaining to a number of different categories and countries. Initially all posts and tweets that do not contain any gender-related keyword are removed from the data set. The results from the Machine learning models were predicted on this data set and the number of posts are shown in the ML prediction column. Europe, Not Europe, Media, Not Media, and Analysis show the number of posts pertaining to each category among the ML prediction data set. The Europe, Not Europe, Media, and Not Media groups are based on the Europe-specific keywords (not the prediction) and news media lists. Only the posts predicted to be on topic by the machine learning models are included in the Analysis data set.

Table 2. Number of posts of the retrieved data by country of social media posts containing at least one gender-related keyword

Country	ML prediction	Europe	Not Europe	Media	Not Media	Analysis
BE	2996	314	2682	482	2514	1807
BG	5658	321	5337	85	5573	623
CZ	23239	308	22931	106	23133	9207
DE	9403	2813	6590	561	8842	1793
ES	34467	2825	31642	5236	29231	15165
IT	25048	8450	16598	3279	21769	14373
GR	14663	393	14270	670	13993	8552
PT	4833	1536	3297	1109	3724	1831
SE	16610	288	16322	374	16236	8018
TR	7915	1980	5935	421	7494	1241
Sum	144 832	19228	125 604	12 323	132 509	62 610

First thing to note is that 144 832 posts containing at least one gender-related keyword were extracted in total, on which the trained machine learning models were applied for prediction. Out of these, 62 610 posts were predicted to be on topic and therefore used in the analysis. Some general patterns emerge from Table 2. As expected, posts about Europe are far less common than posts not about Europe for all countries. Moreover, there are more non-media than media posts for each country. The highest number of total posts were extracted from Spain, followed by Italy and Czech Republic. It should be noted that the relatively high number of posts retrieved from Czech Republic, Greece, and Sweden is, to a large extent, due to that the geographic restriction was not used for these countries when extracting tweets. The same pattern follows among the social media posts used in analysis. Additionally, the large majority of social media posts from Bulgaria, Germany, and Turkey were predicted to be unrelated to Gender, and therefore not used in the analysis. A higher share of posts is related to gender for the other countries.

The manually coded data and the machine learning models had to pass certain thresholds of validity to be included in the analysis as previously mentioned. Naturally, sometimes these thresholds were not met which resulted in that some categories are excluded in the subsequent analyses. Table 3 displays the categories of social media representations used in the analysis for the national reports and for the between country analysis. People, Law, and Values met the thresholds for all countries. For New social movements and Identity, some countries did not have enough variation in the category

for the machine learning models to be able to accurately predict the class. In particular, the categories were positive (coded as 1) in less than 10% of the manually coded data. Therefore, the categories were always predicted as 0 for these countries and they are included in the analysis between countries. However, Culture and Public sphere were discarded from some national reports, and the between country study, due to low reliability of the automatic coding produced by the machine learning models (see Table 5 in the appendix).

Table 3. Overview of Social media representations used in analyses.

	People	Law	Culture	Values	New Social Movements	Public Sphere	Identity
ES	1	1	0	1	1	1	0
DE	1	1	1	1	1	0	1
BE	1	1	0	1	0	1	1
BG	1	1	0	1	0	0	1
IT	1	1	1	1	1	1	1
PT	1	1	1	1	1	0	1
CZ	1	1	1	1	1	1	1
GR	1	1	1	1	1	0	0
TR	1	1	1	1	1	1	1
SE	1	1	1	1	1	1	1
Between	10	10	7	10	8	6	8

Between country analysis

A between country analysis is conducted to give an overview of how Gender is represented and the displayed sentiment across Europe in this section. Two within-country differences will consistently, and separately, be compared when analysing the data. First, we aim to assess how gender is represented when discussed in relation to Europe. To achieve this, we create a within-country difference between the representations of gender used in European discussions and the representations of gender used in non-European discussions. In this way, we get a sense of how important the European representation of gender is for each country. Moreover, as we compare European discussion with non-European discussion we control for the differences in the average levels of representations across countries. In the following, any such estimated within-country difference is referred to as a Europe estimate. Additionally, the European estimate is estimated for sentiments as well. Secondly, we compare how media represents gender with how non-media represents gender. A Media estimate is constructed by estimating the within-country difference of how media represents gender to how non-media represents gender. The media estimate is estimated for sentiments as well. When analysing the data between countries we multiply the binary variables of social media representations with the precision of the related Machine learning model (see Table 5 in the appendix for the precision of each model). In this sense, the estimated effects can be considered lower bounds of the true effects as precision is the probability that the machine learning model accurately predicts the positive class. By multiplying a social media representation variable with precision, we only display results where we are more certain that the representation actually is correctly predicted. Since precision ranges from 0 to 1, this lowers the size of the estimated effects. Thereafter, we conduct OLS regressions with the social media representations or sentiments as dependent variables using country dummies and country dummies interacted with a Europe variable indicating whether a post is talking about Europe or not, as independent variables. By estimating the country dummies interacted with

Europe, we construct the previously mentioned Europe estimate (within-country difference). Similarly for media, OLS regressions are conducted with country dummies and country dummies interacted with a Media variable indicating whether a post was posted by media or not. By estimating the country dummies interacted with Media, we construct the previously mentioned Media estimate (within-country difference). The outputs from the regression models can be found in Table 7, Table 8, Table 9, and Table 10 in the Appendix. The country dummies with the interactions displayed in the graphs that follows. Importantly, it is the estimates with COUNTRYCODE_EUR or COUNTRYCODE_MED in the regression tables that are displayed.

Results

Figure 2 displays how gender is represented across the 10 European countries for the social media representations New social movements, Law, Values, People, and Identity. The % of posts pertaining to each social media representation is shown on the Y-axis and each country on the X-axis. The exact numbers can be found in Table 6 in the Appendix. A visual inspection of Figure 2 gives the impression that there does not exist a "European public sphere" — or a common European way of representing gender across the 10 European countries from a quantitative perspective. Conducting chi-squared tests for each social media representation individually and comparing the frequencies for all countries further strengthens this picture as statistical differences are found in all cases (p < 0.0001). In addition to this, Table 2 suggested that European discussions are far less common than discussions not about Europe. While there is quite some variation between individual countries, the average levels of the country percentages, showed as dotted lines, of the social media representations are similar. However, the lowest average is for Values and Identity is the most commonly occurring social media representation closely followed by People. Finally, New social movements and Law have the third and fourth largest average levels among the social media representations.

Figure 2. Representations of gender across 10 European countries

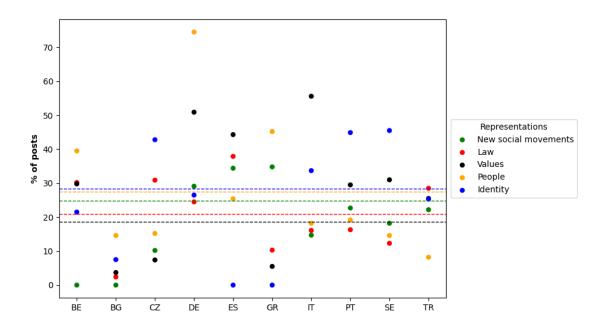
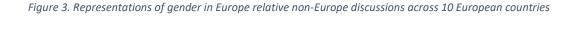
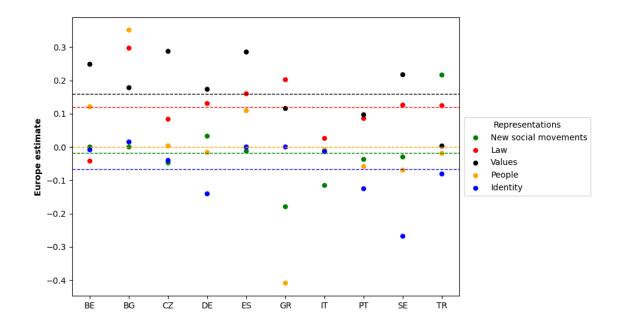


Figure 3 shows how gender is represented comparing Europe and non-Europe discussions across 10 European countries for the social media representations New social movements, Law, Values, People, and Identity. The Europe estimate is measured on the Y-axis and the countries are displayed on the X-

axis and each dot refers to the Europe estimate of that social media representation – country pair. A first thing to note is that there are always similarities and differences between some of the European countries across all social media representations. However, there seems to be some hint of "a European sphere" in representations across the countries by looking at the average estimates across the 10 countries. The averages of each social media representation are displayed by the dotted lines. The results suggest that Values and Law are the most important social media representations when Europe is discussed compared to when Europe is not discussed. Identity, with the lowest and negative Europe estimate, is clearly the least important social media representation in European discussions. Furthermore, People and New social movements are more or less equally important in European and Non-European discussions. The results from the OLS regressions can be found in Table 7 in the Appendix.

We suppose that these results are due to the fact that when talking about gender on a European level, people discuss legislations in place and laws desired based on arguments focusing on values. For example, as discussed in the section *Overview of the topic of Gender*, it became clear that only legislations based on equal treatment and specific measurements would not lead to gender equality (European Commission, n.d.). Thus, out of an attention to values, here equal treatment, people started asking legislative questions and gender mainstreaming was suggested. It might then not surprise that both values and law occur the most when talking about Europe. In contrast, then, identity is something that gets more attention when not talking about Europe. Identity is a representation discussed when people talk about individuals their lives and experiences. It might not surprise that this is more frequently done without the mentioning of something more large-scale like Europe.

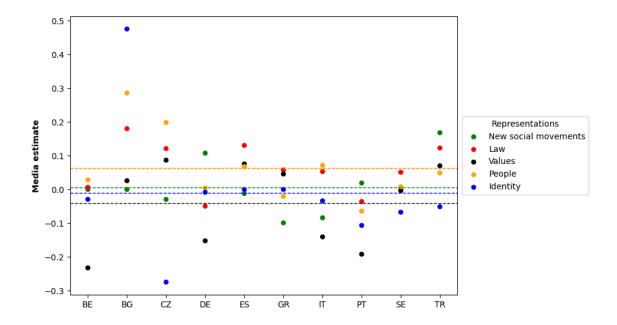




Turning to how gender is represented by Media compared with non-media, a slightly different picture emerges. While some social media representation – country pairs are quite far from the average levels, the differences in the averages are less pronounced compared to the Europe estimates. In spite

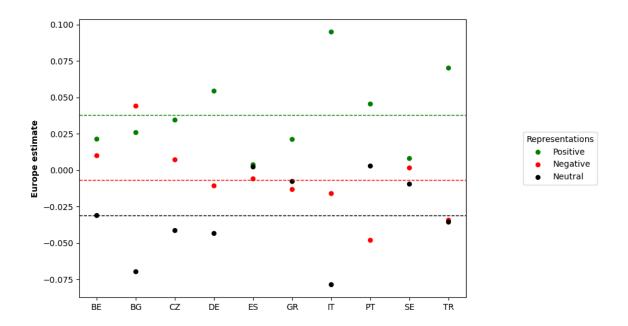
of this, Media represents gender relatively more often using People than non-media. On the contrary, gender is represented through Values to a larger extent by non-media than media. All other social media representations are equally used by Media and non-media. The results from the OLS regressions can be found in Table 8 in the Appendix.

Figure 4. Representations of gender by media relative non-media across 10 European countries



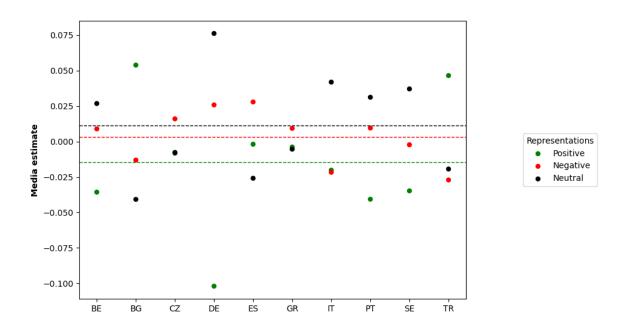
We now conduct the same exercise but analysing sentiments instead of Social Media representations. Figure 5 displays sentiments of gender in Europe relative non-Europe discussions across 10 European countries. For all countries, gender is represented more positively in European, than in non-European discussions across all countries (a Europe estimate greater than 0). A general picture emerges where the majority of countries have the largest Europe coefficient for the positive sentiment, and lowest for the neutral sentiment. For example, the Europe estimate is largest for the positive sentiments for each country except Bulgaria. On the other side of the spectrum, we find that there are on average fewer neutral sentiments in European discussions than in in non-European discussions. While there are country exceptions, on average there is no difference in the negative sentiments towards genders when European and non-European discussions are compared. Taking this together, we find that gender is more positively talked about in discussions about Europe and that this is connected to a decrease in neutral sentiments regarding gender in Europe discussions. The results from the OLS regressions can be found in Table 9 in the Appendix.

Figure 5. Sentiments of gender in Europe relative non-Europe discussions across 10 European countries



Finally, we investigate the sentiments towards gender between Media and non-media users. As expected perhaps, media uses more neutral sentiment on average than non-media users. However, this is not the case for all countries, such as Bulgaria, Czech Republic, Spain and Greece. Moreover, Media is less positive towards gender than non-media and there is virtually no difference in negative sentiments on average. Compared to the patterns of Figure 5, there is more variation across countries in which sentiments are more commonly used by media within each country. The results from the OLS regressions can be found in Table 10 in the Appendix.

Figure 6. Sentiments of gender by media relative non-media across 10 European countries



National reports

A national report was written for each of the 10 European countries by consortium partners from the countries to give an in-depth analysis as well as national perspectives and context to the topic of gender and the observed results. All national reports follow the same structure and present the same type of results. However, the result for each national report was generated using the data extracted from the country only.

Belgium

Authors: Babette Lagrange, Sofie Van Bauwel & Daniel Biltereyst

Institution: University of Gent

Introduction

Background

To start, we briefly mention some important ideas to keep in mind when talking about gender and social media. Technology does not exist in a vacuum, it is socially shaped. Because of this, some actions can occur and others cannot. For example, online gender identification infrastructures are mostly constructed in a binary way. This then allows gender-based discrimination and marginalisation (Bivens & Haimson, 2016, p. 12; Krijnen & Van Bauwel, 2022, pp. 125-127). Next, the target group of users of social media platforms is often gendered. For example the image-based social media Instagram was considered a platform that would mainly market to women. Indeed, there was a gender divide visible until 2018, but recently this divide has disappeared (Caldeira, De Ridder, & Van Bauwel, 2020; Krijnen & Van Bauwel, 2022, p. 127). When looking at influencers (amateur content creators who become famous due to having a large audience of followers), we see that they often don't comply to the white cismen norm held throughout the history of media technologies (Krijnen & Van Bauwel, 2022, p. 128). However, even though minority groups can have a platform for their voice, 'platform labour is still structured on inequalities' and the -often female- creators are still in precarious positions because of this (Duffy, 2017; Krijnen & Van Bauwel, 2022, p. 129; Van Doorn, 2017). Moving on, social media makes space for online activism by allowing ideas and movements to reach many people by making online content and through for example the usage of hashtags (Krijnen & Van Bauwel, 2022, pp. 184-185, 187). This can be called hashtag feminism (Krijnen & Van Bauwel, 2022, p. 186).

When zooming in on Belgium, we see that a lot of these topics have not been studied in relation to the country specifically. There is no general study on the representation of gender in social media. However, the construction of gender identities on and by social media has been examined, often with a focus on youngsters. More specifically these articles are for example about the self-representation of (young) women on Instagram (Caldeira, De Ridder, & Van Bauwel, 2020; Caldeira, Van Bauwel, & De Ridder, 2021). Aside from this, there are some relevant case studies. For example, the political participation on social media by Belgian youth has been analysed (Waeterloos, 2022), *intimacy* and *inclusion* are researched in relation to youngsters on social media (De Ridder & Van Bauwel, 2013; De Ridder & Van Bauwel, 2015), and coming out videos by the Dutch-speaking part of Belgium are studied. Finally, where a general study of Belgium and gender with regards to social media is absent, scholars like Alexander Dhoest (2004) have studied the construct of a national identity through television.

Legislation

Belgium has multiple regulations in place regarding gender and LGBTQIA+ issues. Focusing on gender, there are laws about the prevention of gender discrimination, the enforcement of gender equality and the prevention of gender-based violence. In Belgium we have an antidiscrimination legislation, consisting of three laws -the Gender Act, the Antiracism Act, and the Antidiscrimination Act. All three cover different criteria on the grounds of which discrimination is punishable. The Gender Act specifically covers pregnancy, gender identity, gender expression and more (Unia, n.d.-a). Next, the Law on Gender mainstreaming considers the equal treatment for men and women (IGVM, n.d.-a). Different institutes were set up to manage these equality and antidiscrimination laws. The Institute for the Equality of Women and Men and the Genderkamer² are responsible for promoting gender equality and combating gender-based discrimination (IGVM, n.d.-a; Unia, n.d.-b; Vlaanderen, n.d.). Unia works around most criteria of the antidiscrimination legislation (except for gender, language and migration). Thus, criteria like sexuality also fall under Unia's responsibility (Unia, n.d.-a). Considering gender-based violence, there are laws in place to both prevent this and to help victims. To give one important example, Belgium ratified the Istanbul Convention (14/03/2016) and accepted a National Action Plan to combat all forms of gender-related violence (CETS, 2011; IGVM, n.d.-b.; Koninkrijk België, 2022).

With regards to LGBTQIA+ issues, we focus on same sex marriage, same sex adoption and transgender rights. Same sex marriage is legal in Belgium since 2003 (belgium.be, n.d.-a). There is no legal distinction between same sex and other marriages, meaning that they share the same legislations regarding inheritance, co-parenting ... (belgium.be, n.d.-b). Next, it is also legal for same sex couples to adopt (FPS Justice, n.d.). Moving on, to ensure transgender rights are recognised, different legislations are in place. Transgender people are protected under the antidiscrimination legislation mentioned before (Unia, n.d.-a). With regards to gender and/or name registration there has been a legislative change. Since 1/01/2018 it is no longer required to satisfy certain medical conditions to officially change one's gender/first name. This also applies to dependent minors, however, they need other requirements, such as a psychiatrist's certificate (FPS Justice, 2020). The remaining question is why people can only register as 'male' or 'female'. Non-binary people are legally being left out (Motmans, Wyverkens, & Defreyne, 2017).

National context 1/09-30/11/2021

The past few years Belgian public debate has often been about harassment and sexual violence. The autumn of 2021 was no different due to various events. Firstly, the process of the accusations and trials against artist Jan Fabre and television maker Bart De Pauw were on-going during this period. The trial date of artist Jan Fabre, who was accused of sexual violence and harassment, was announced during September 2021 (Verstraete, 2021). At the end of November Bart de Pauw got his verdict from the criminal court of Antwerp. He got a six month prison sentence with suspension over three years (Grommen, 2021). Even though not all testimonies against Bart De Pauw were found sufficient enough to prove him guilty, he was found guilty of several charges. Remarkably, the Flemish Ombudsman

² In March 2023 the Genderkamer stops operating but will be incorporated into the Flemish Human Rights Institute (Vlaams Parlement, 2022).

Gender testified how after the trial the amount of submitted complaints of sexual violence increased (Decré, 2021).

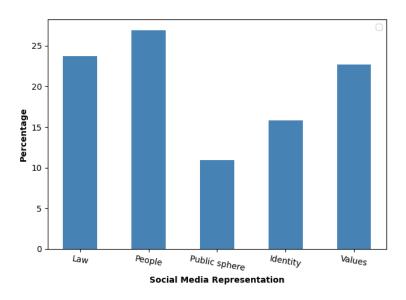
Secondly, in September there was a reportage on Flemish TV about violence against women with a focus on partner violence. This was as a result of the murder on politician Ilse Uyttersprot in 2020 and many other reports of partner violence. This reportage was widely discussed and a topic of conversation (VRT NWS, 2021). Thirdly, people not only talked about sexual violence in relation to for example the reportage, they also protested about the many reported cases of gender-based violence (Verstraete, 2021). Fourthly, new organisations and legislations came to place during this time period. On 10 November 2021 the Care Centre after Sexual Violence opened in Antwerp, following in the footsteps of Brussels, Ghent and Liège (UZA, 2021). And on 26 November 2021 the national action plan to combat gender-based violence that was proposed by State Secretary Sarah Schlitz was accepted by the Council of Ministers. This action plan was the most ambitious and extensive plan yet (IGVM, n.d.-b). Finally, also in Belgium the link between the covid-19 pandemic and the increase in gender-based violence was visible (AI, n.d.).

Finally, the LGBTQIA+ community, women's day and the hijab also got attention due to public events. In 2021 an action plan to strengthen the support of LGBTQIA+ organisations was accepted. And the TV show Roomies, talking about two lesbian roommates, was released (premier.be, 2022; Lepage, 2021). On 11 November 2021 it was the 50th anniversary of National Women's Day in Belgium (RoSa, 2021). And finally, the discussions about the hijab and freedom of choice were again prominent in public debate (see e.g. De Standaard, n.d.).

Quantitative analysis

Descriptive overview

Figure 1. Social Media Representations – Distribution among Social Media Representations

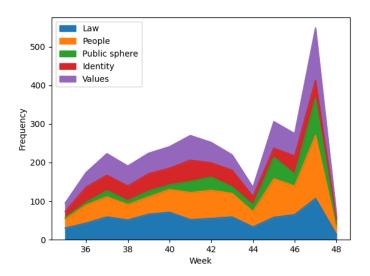


Notes: Created with data from Table 3 presented in Appendix A. N = 3223.

Figure 1 shows us that Law, People and Values are the most frequent Social Media Representations among all 3223 posts, People being the most frequent with a 26.9% occurrence. Next, Identity was talked about 15.8% of the time in comparison to the other Social Media Representations. Finally, Public sphere was discussed only 10.9% of the time.

During the researched period gender-related violence got a lot of attention in Belgium. Jan Fabre his trial date was announced and Belgians finally learned the verdict of Bart De Pauw. Next to this, the Care Center after Sexual Violence in Antwerp opened and the National Action Plan to combat sexual violence of Sarah Schiltz got accepted. These three events are clearly about legislative aspects in relation to gender-related violence. It might then not surprise that Law was one of the three most frequent Social Media Representation. Next, during the autumn of 2021 there was a VRT-reportage on partner violence, resulting in people discussing this topic on television and social media. People also organised protests against sexual violence and more people submitted complains of sexual violence than before. These topics are covered under Social Media Representation People, therefore, it might not surprise that People was highly represented among all posts as well. More generally, people thus talked about safety and how people should feel free and safe at home, at work, on the streets etc. This is notable in relation to the fact that Values is also one of the most occurring Social Media Representations. Finally, a lot of the posts covered Social Media Representation Identity. During the researched period also a lot of Identity-related events happened. An action plan to strengthen LGBTQIA+ organisations got accepted and the TV show Roomies, about two lesbian roommates, was released

Figure 2. Social Media Representations – Relative importance over time

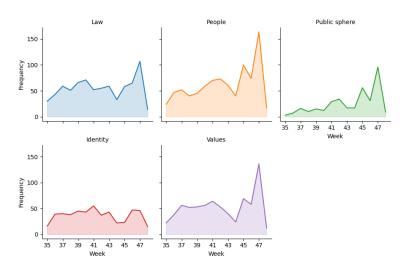


Notes: Created with data from Table 4 presented in Appendix A. N = 3223.

We see a peak in Social Media Representations during week 47, which is near the end of November 2021. During this peak, Social Media Representation People was the most frequent and Identity occurred the least. When looking at the total amount of the analysed period, People was the most frequent, followed by first Law and then Values. Public sphere occurred in general the least.

The peak in week 47 correlates with a week near the end of November. This does not surprise since a lot of gender-related events happened during this month. The 50th anniversary of Women's day was on 11 November 2021, this was a day that people talked about values like freedom, safety etc. and talked about their own and other's experiences as women. Next, the Care Center after Sexual Violence opened in Antwerp, following in the footsteps of Brussels, Ghent and Liège. This is an event not only related to Social Media Representation People, but importantly also to Law. It is an event about the opening of an institute for the care of people who are the victim of gender-related violence. Finally, during the exact week 47 the National Action Plan to combat sexual violence was accepted. This is an event that can also be related to both People and Law. Thus, the first event is covered under Social Media Representations People and Values, and the last two under People and Law. Therefore, the fact that these three -with People at the head- are the most frequent Social Media Representations should not surprise.

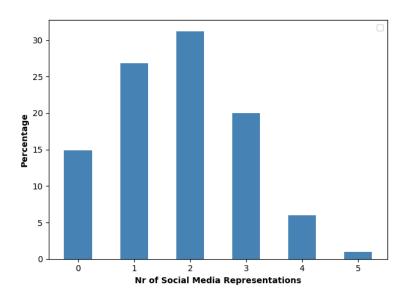
Figure 3. Social Media Representations – Evolution over time



Notes: Created with data from Table 4 presented in Appendix A. N = 3223.

Figure 3 shows us that the peak in week 47 (near the end of November) mentioned in Figure 2 occurs with regards to all Social Media Representations, except for Identity. The frequency of Social Media Representation Identity among the posts is the highest during week 41 (the middle of October). The frequency of almost all Social Media Representations is at its lowest during week 48. Only Public sphere occurs the least during another week, namely week 35 (the beginning of September). The trends of all Social Media Representations know multiple peaks and drops, but the general peak in week 47 is the highest.

Figure 4. Number of Social Media Representations – Distribution among all posts

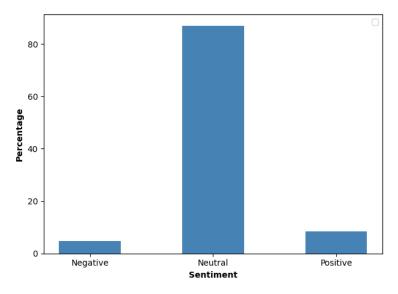


Notes: Created with data from Table 5 presented in Appendix A. N = 1807.

We can conclude from Figure 4 that most posts contain two Social Media Representations. Most other posts cover only one Social Media Representation. A smaller but still significant amount of the posts contain either 3 (20%) or no (14.9%) Social Media Representations. Finally, only 6% of the posts

contain 4 Social Media Representations and only 1% of the posts talk about all 5 Social Media Representations.

Figure 5. Sentiments – distribution among all posts

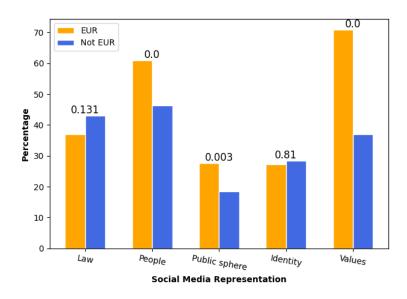


Notes: Created with data from Table 6 presented in Appendix A. N = 1807.

Figure 5 shows us that the vast majority of the posts (86.9%) have a neutral sentiment. There are more positive posts than negative ones, but the analysed sample does not contain many of either.

Comparison between Europe and Not Europe

Figure 6. Social Media Representations - % occurrence among Europe and Not Europe posts respectively

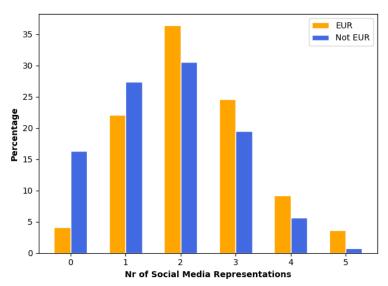


Notes: Created with data from Table 7 and Table 8 presented in Appendix B. P value from chi-squared test of equal proportions between Europe and Not Europe in variable above each pair of bars. N = 1807 in each pair of comparison.

Firstly, Chi-squared tests show us that there are no statistically significant differences between Europe and Not Europe posts about Law and Identity ($p \ge 0.05$ in both cases). Next, we can conclude from

Figure 6 that the other three Social Media Representations (People, Public sphere and Values) occur more often in posts about Europe than in those not about Europe. Especially when talking about Values, we see that its proportion is almost twice as big among Europe posts than among Not Europe posts.

Figure 7. Number of Social Media Representations - % occurrence among Europe and Not Europe posts respectively



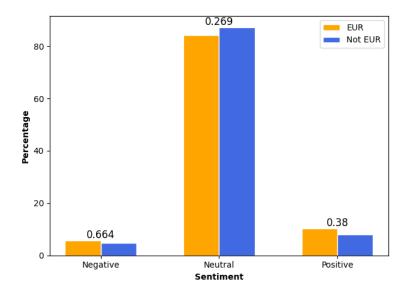
Notes: Created with data from Table 9 and Table 10 presented in Appendix B. N = 1807.

Table 1. Number of Social Media Representations by Europe and Not Europe – Mean, standard deviation (SD) and results from t-test of difference in means

	Europe	Not Europe	Significance	P value
Mean	2.2359	1.7289	****	0
SD	(1.129)	(1.155)		

As presented in Table 1, there are on average more Social Media Representations in Europe posts than in Not Europe posts. A t-test confirms that this difference is statistically significant (p = 0.0). This does not surprise when looking at Figure 7. This figure shows us that, even though there are more Not Europe posts than Europe posts with one Social Media Representation, there are more Europe posts than Not Europe posts with two or more Social Media Representations.

Figure 8. Sentiment - % occurrence among Europe and Not Europe posts respectively

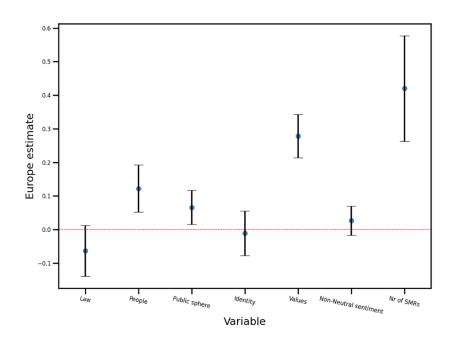


Notes: Created with data from Table 11 and Table 12 presented in Appendix B. P value from chi-squared test of equal proportions between Europe and Not Europe in variable above pair of bars. N = 1807.

The chi-squared tests belonging to Figure 8 show us that there are no statistically significant differences between the sentiments of Europe and Not Europe posts (p = 0.66 for Negative, p = 0.27 for Neutral, and p = 0.38 for Positive).

We assume that most of the posts -no matter their opinion on gender- were not written with an expressively pronounced sentiment about gender.

Figure 9. Coefficient estimates Europe

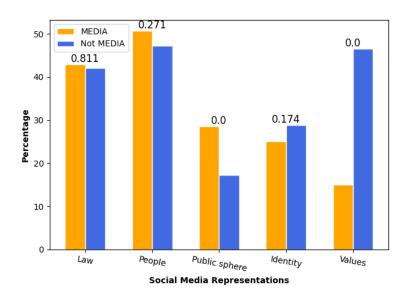


Notes: Coefficient estimates and their 95 % confidence intervals of Europe variable from Model 3 of Table 13, Table 14, Table 15, Table 16, Table 17, Table 18, Table 19 presented in Appendix B. N = 1870 in each estimation.

Figure 9 shows us that there are no statistically significant differences between the occurrence of Law and Identity in Europe and Not Europe posts. There is also no statistically significant difference with regards to the occurrence of Non-Neutral sentiments (Positive and Negative Sentiments taken together) in Europe and Not Europe posts. However, the coefficient estimates in Figure 9 show us that there are more Europe posts than Not Europe posts about the other Social Media Representations (People, Public sphere and values). They also show us that there are more Social Media Representations in general in posts about Europe than in posts not about Europe.

Comparison between Media and Not Media

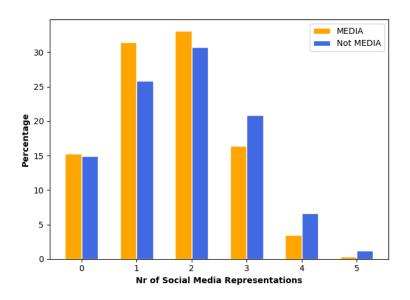
Figure 10. Social Media Representations - % occurrence among Media and Not Media posts respectively



Notes: Created with data from Table 20 and Table 21 presented in Appendix C. P value from chi-squared test of equal proportions between Media and Not Media in variable above each pair of bars. N = 1807 in each pair of comparison.

There are more than four times as much Not Media posts than Media posts (see Table 20 and Table 21). Chi-squared tests show us that there are only statistically significant differences in the proportions of Social Media Variables Public sphere and Values when comparing Media and Not Media posts (the others have a $p \ge 0.05$). Public sphere occurs more often in Media posts, but Values occurs more than three times as much in Not Media posts than in Media posts.

Figure 11. Number of Social Media Representations - % occurrence among Media and Not Media posts respectively



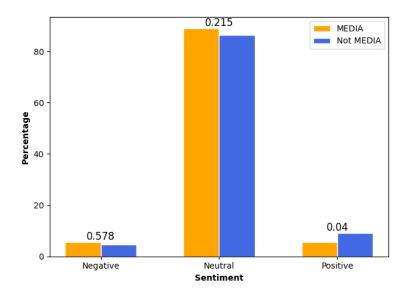
Notes: Created with data from Table 22 and Table 23 presented in Appendix C. N = 1807.

Table 2. Number of Social Media Representations by Media and Not Media – Mean, standard deviation (SD) and results from t-test of difference in means

		Media	Not Media	Significance	P value
Me	ean	1.6225	1.8219	***	0.004
SD		(1.056)	(1.184)		

There are on average more posts not about Media than posts about Media. We can see this by analysing the mean values (1.82 and 1.62 respectively) presented in Table 2. A t-test also confirms the statistical significance of this difference (p < 0.01). This difference in mean values does not need to surprise when considering Figure 11. This figure shows that there are more Media posts than Not Media posts with no, one or two social Media Representation(s). However, importantly, there are more Not Media posts than Media posts with three or more Social Media Representations.

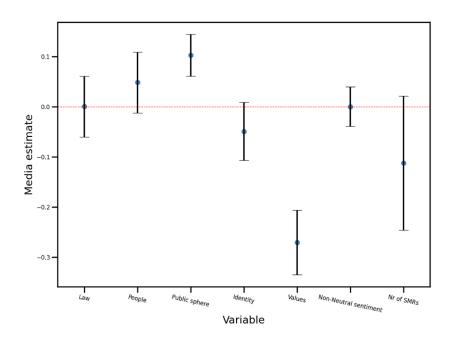
Figure 12. Sentiment - % occurrence among Media and Not Media posts respectively



Notes: Created with data from Table 24 and Table 25 presented in Appendix C. P value from chi-squared test of equal proportions between Media and Not Media in variable above pair of bars. N = 1807.

We can conclude from the chi-squared tests belonging to Figure 12 that there is only a statistically significant difference between the Media and Not Media posts containing a Positive sentiment ($p \ge 0.05$ for Negative and Neutral and p < 0.05 for Positive). There are more Not Media posts than Media posts with a Positive sentiment.

Figure 13. Coefficient estimates Media



Notes: Coefficient estimates and their 95 % confidence intervals of Media variable from Model 3 of Table 26, Table 27, Table 28, Table 30, Table 31, Table 32 presented in Appendix C. N = 1807 in each estimation.

We can conclude from Figure 13 that Social Media Representation Public sphere occurs more often in Media posts than in Not Media posts. Figure 13 also shows that Values occurs more often in Not Media posts than in Media posts. However, the coefficient estimates show no statistically significant differences in the occurrence of the other three Social Media Representations (Law, People and Identity), nor in the occurrence of Non-Neutral Sentiments. Finally, there is also no statistically significant difference between the amount of Social Media Representations in Media and in Not Media posts.

Illustrative examples

Figure 14. Illustrative example for Figure 9 - Values



Flemish green party) comments on Facebook on the naming of a street in Brussel. The street was named in remembrance of sex worker Eunice Osayande. Van den Brandt is grateful for this decision of Brussels because in her opinion the story of Eunice Osayande confronts us with questions about equality, safety and humanity. Van den Brandt argues that everyone should feel safe and be safe on the streets. Van den Brandt's expression of values in this post is an example of the posts represented by the Social Media Representation with the largest coefficient estimate of Europe: Values.

Figure 15. Illustrative example for Figure 9 - Public sphere



radio and television news website VRT NWS posts on Twitter about the 450 people in Brussels who fought against sexual violence by boycotting the catering industry. This is an example of a gender-relevant issue raised by non-political actors trying to influence decision-making. Therefore, this post is an example of the posts represented by the Social Media Representation with the smallest coefficient estimate of Europe: Public Sphere.

service

Figure 16. Illustrative example for Figure 13 - Public sphere



cafes. This is an example of a gender-relevant issue raised by the public sphere. The post has a link to a news article and is from the news outlet itself, De Standaard. Thus, this is an example of the posts

represented by the Social Media Representation with the largest coefficient estimate of Media: Public sphere.

Figure 17. Illustrative example for Figure 13 - Values



right-wing party) comments on Facebook on an advertisement of the AP University portraying a person wearing a hijab. In his opinion this portrayal goes against the European values of enlightenment and equality. This is an example of the posts represented by the Social Media Representation with the smallest coefficient estimate of Media: Values.

Conclusion

We can conclude from Figure 1 that Law, People and Values are the most frequent Social Media Representations among all posts. Interestingly, during the autumn of 2021 gender-related violence was a widely talked about topic in Belgium. As talked about in the National Context section, this topic was talked about in relation to legislations (Jan Fabre, Bart De Pauw, UZA, the National Action Plan of November 26 etc.), personal stories (the reportage, the protests etc.) and ideas of freedom and safety. These themes are covered under the three Social Media Representations Law, People and Values. Therefore, the fact that they were the most frequent among all posts might not surprise. Next, Identity also occurred a lot among the posts. This is notable in relation to the action plan to strengthen LGBTQIA+ organisations and the discussions about the TV show Roomies. Figure 2 shows us that there is a peak in Social Media Representations during week 47, which is the end of November. Social Media Representation People occurred the most in this week, followed by Law, Values and Public sphere. Remarkably, both the 50th anniversary of Women's day and the opening of the Care Center after Sexual Violence in Antwerp happened during November. Even more notable is that the National Action Plan to combat sexual violence was accepted during this exact week 47. Continuing, Figure 5 teaches us that the vast majority of the posts has a neutral sentiment. Next, we can conclude from both Figure 6 and Figure 9 that People, Public sphere and Values occur more often in Europe posts than in posts not about Europe. Finally, Figure 10 and Figure 13 clearly show us that Public sphere is mostly talked about in Media posts and Values is most present in Not Media posts.

List of abbreviations

In the report in-text citations use abbreviated versions of the names of certain organisations, institutions ... This list covers all these abbreviations and full names. In the list of references the full names are enclosed.

Full name in Dutch /	Full name in English Amnesty International	Abbreviation Al
/	European Committee for Surface Treatment	CETS
Federale Overheidsdienst Justitie	Federal Public Service Justice	FPS Justice
Instituut voor de Gelijkheid van Vrouwen en Mannen	Institute for the Equality of Women and Men	IGVM
Universitair Ziekenhuis Antwerpen	Antwerp University Hospital	UZA
Vlaamse Radio en Televisie Nieuwsdienst	Flemish Radio and Television News Service	VRT NWS

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Appendices

Appendix A. Tables supporting the section on Descriptive overview

Table 3. Social Media Representations - Frequency and % occurrence among all posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
Law	763	23.7	42.2
People	866	26.9	47.9
Public sphere	352	10.9	19.5
Identity	509	15.8	28.2
Values	733	22.7	40.6
Total	3223	100.0	178.4

Table 4. Social Media Representations - Frequency by week

Unnamed: 0	Law	People	Public sphere	Identity	Values
35	30	24	3	16	22
36	43	47	7	39	38
37	59	52	16	40	56
38	51	40	10	38	52
39	66	45	15	45	53
40	71	59	12	43	56
41	52	70	29	55	64
42	55	73	34	37	53
43	59	61	17	43	40
44	33	40	17	22	24
45	58	100	56	23	69
46	65	74	31	47	58
47	107	164	96	46	136
48	14	17	9	15	12
Total	763	866	352	509	733

Table 5. Number of Social Media Representations in posts - Frequency and % occurrence among all posts

Nr of Social Media Representations	Count	% of Posts
0	270	14.9
1	485	26.8
2	563	31.2
3	362	20.0
4	109	6.0
5	18	1.0
Total	1807	100.0

Table 6. Sentiment - Frequency and % occurrence among all posts

Sentiment	Count	% of Posts
Negative	86	4.8
Neutral	1570	86.9
Positive	151	8.4
Total	1807	100.0

Appendix B. Tables supporting the section on Comparisons - Europe and Not Europe

Table 7. Social Media Representations Europe - Frequency and % occurrence among Europe posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
Law	72	16.5	36.9
People	119	27.3	61.0
Public sphere	54	12.4	27.7
Identity	53	12.2	27.2
Values	138	31.7	70.8
Total	436	100.0	223.6

Table 8. Social Media Representations Not Europe - Frequency and % occurrence among Not Europe posts

Social Media	Count	% of Social Media	% of Posts
Representation		Representations	

Law	691	24.8	42.9
People	747	26.8	46.3
Public sphere	298	10.7	18.5
Identity	456	16.4	28.3
Values	595	21.3	36.9
Total	2787	100.0	172.9

Table 9. Number of Social Media Representations Europe - Frequency and % occurrence among Europe posts

Nr of Social Media Representations	Count	% of Posts
0	8	4.1
1	43	22.1
2	71	36.4
3	48	24.6
4	18	9.2
5	7	3.6
Total	195	100.0

Table 10. Number of Social Media Representations Not Europe - Frequency and % occurrence among Not Europe posts

Nr of Social Media Representations	Count	% of Posts
0	262	16.3
1	442	27.4
2	492	30.5
3	314	19.5
4	91	5.6
5	11	0.7
Total	1612	100.0

Table 11. Sentiment Europe - Frequency and % occurrence among Europe posts

Sentiment Count % of Posts

Negative	11	5.6
Neutral	164	84.1
Positive	20	10.3
Total	195	100.0

Table 12. Sentiment Not Europe - Frequency and % occurrence among Not Europe posts

Sentiment Count % of Posts

Sentiment	Count	% OF POSTS
Negative	75	4.7
Neutral	1406	87.2
Positive	131	8.1
Total	1612	100.0

Table 13. Marginal effects of Logistic regressions with Law as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	-0.0605	-0.0628	-0.0634*
	(0.038)	(0.038)	(0.038)
Twitter		0.0037	0.0066
		(0.031)	(0.031)
Interactions		3.728e-05*	3.742e-05*
		(0.0)	(0.0)
Followers		2.753e-08	2.714e-08
		(0.0)	(0.0)
Sentiment Score		-0.0110	-0.0109
		(0.007)	(0.007)
October			-0.0623
			(0.05)
November			-0.0862
			(0.091)
week			0.0077
			(0.01)
N	1807	1807	1807

Pseudo R- 0.00 0.01 0.01 squared

Table 14. Marginal effects of Logistic regressions with People as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.1473****	0.1364****	0.1223***
	(0.038)	(0.037)	(0.036)
Twitter		-0.0768**	-0.0680**
		(0.031)	(0.031)
Interactions		-6.488e-06	-5.813e-06
		(0.0)	(0.0)
Followers		2.977e-08	2.505e-08
		(0.0)	(0.0)
Sentiment Score		-0.0486****	-0.0458****
		(0.007)	(0.007)
October			-0.0153
			(0.048)
November			0.0507
			(0.088)
week			0.0176*
			(0.009)
N	1807	1807	1807
Pseudo R- squared	0.01	0.03	0.05

Table 15. Marginal effects of Logistic regressions with Public Sphere as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.0818***	0.0824***	0.0660**
	(0.027)	(0.026)	(0.026)
Twitter		0.0111	0.0222
		(0.024)	(0.023)
Interactions	5	-4.845e-05*	-4.209e-05*

		(0.0)	(0.0)
Followers		1.3e-08	5.895e-09
		(0.0)	(0.0)
Sentiment Score		-0.0286****	-0.0256****
		(0.006)	(0.006)
October			-0.0292
			(0.042)
November			-0.0173
			(0.07)
week			0.0264***
			(0.007)
N	1807	1807	1807
Pseudo R- squared	0.00	0.02	0.09

Table 16. Marginal effects of Logistic regressions with Identity as dependent variable

Variable Model 1 Model 2 Model 3

Variable	Model 1	Model 2	Model 3
Europe	-0.0112	-0.0156	-0.0113
	(0.034)	(0.034)	(0.034)
Twitter		0.0031	0.0039
		(0.028)	(0.028)
Interactions	S	5.314e-05***	5.063e-05***
		(0.0)	(0.0)
Followers		5.456e-09	6.549e-09
		(0.0)	(0.0)
Sentiment Score		-0.0104*	-0.0111*
		(0.006)	(0.006)
October			-0.0596
			(0.045)
November			-0.1791**
			(0.083)

week			0.0102
			(0.009)
N	1807	1807	1807
Pseudo R- squared	0.00	0.01	0.01

Table 17. Marginal effects of Logistic regressions with Values as dependent variable

dole 1	Variable	Model 1	Model 2	Model 3
	Europe	0.3267****	0.2840****	0.2786****
		(0.035)	(0.033)	(0.033)
	Twitter		-0.4692****	-0.4623****
			(0.041)	(0.041)
	Interactions		-1.738e-06	-1.402e-06
			(0.0)	(0.0)
	Followers		-2.544e-08	-2.676e-08
			(0.0)	(0.0)
	Sentiment Score		-0.0116*	-0.0108*
			(0.006)	(0.006)
	October			-0.0755
				(0.046)
	November			-0.0578
				(0.084)
	week			0.0115
				(0.009)
	N	1807	1807	1807
	Pseudo R- squared	0.03	0.11	0.11

Table 18. Marginal effects of Logistic regressions with Non-neutral Sentiment as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.0290	0.0264	0.0263
	(0.024)	(0.022)	(0.022)

Twitter		-0.0583**	-0.0580**
		(0.025)	(0.025)
Interactions		-1.509e-05	-1.533e-05
		(0.0)	(0.0)
Followers		-9.814e-09	-9.879e-09
		(0.0)	(0.0)
Sentiment Score		0.0359***	0.0359****
		(0.007)	(0.007)
October			0.0002
			(0.028)
November			-0.0160
			(0.054)
week			0.0020
			(0.006)
N	1807	1807	1807
Pseudo R- squared	0.00	0.06	0.06

Table 19. Coefficient estimates of OLS regressions with Number of Social Media Representations as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.5070***	0.4518***	0.4200***
	(0.0856)	(0.0821)	(0.0801)
Twitter		-0.4282***	-0.3984***
		(0.0637)	(0.0636)
Interactions		0.0001*	0.0001*
		(0.000)	(0.0000)
Followers		0.0000***	0.0000***
		(0.0000)	(0.0000)
Sentiment		-0.1074***	-0.1019***
Score			
		(0.0148)	(0.0146)

October			-0.2590**
			(0.1127)
November			-0.2704
			(0.2037)
week			0.0721***
			(0.0212)
Intercept	1.7289***	1.8206***	-0.9993
nan	(0.0288)	(0.0338)	(0.7846)
R-squared	0.0183	0.0608	0.0878
R-squared Adj.	0.0178	0.0582	0.0837
N	1807	1807	1807

Appendix C. Tables supporting the section on Comparisons - Media and Not Media

Table 20. Social Media Representations Media - Frequency and % occurrence among Media posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
Law	149	26.5	42.9
People	176	31.3	50.7
Public sphere	99	17.6	28.5
Identity	87	15.5	25.1
Values	52	9.2	15.0
Total	563	100.0	162.2

Table 21. Social Media Representations Not Media - Frequency and % occurrence among Not Media posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
Law	614	23.1	42.1
People	690	25.9	47.3
Public sphere	253	9.5	17.3
Identity	422	15.9	28.9
Values	681	25.6	46.6

Total 2660 100.0 182.2

Table 22. Number of Social Media Representations Media - Frequency and % occurrence among Media posts

Nr of Social Media Representations	Count	% of Posts
0	53	15.3
1	109	31.4
2	115	33.1
3	57	16.4
4	12	3.5
5	1	0.3
Total	347	100.0

Table 23. Number of Social Media Representations Not Media - Frequency and % occurrence among Not Media posts

Nr of Social Media Representations	Count	% of Posts
0	217	14.9
1	376	25.8
2	448	30.7
3	305	20.9
4	97	6.6
5	17	1.2
Total	1460	100.0

Table 24. Sentiment Media - Frequency and % occurrence among Media posts

Sentiment	Count	% of Posts
Negative	19	5.5
Neutral	309	89.0
Positive	19	5.5
Total	347	100.0

Table 25. Sentiment Not Media - Frequency and % occurrence among Not Media posts

Sentiment	Count	% of Posts
Negative	67	4.6
Neutral	1261	86.4
Positive	132	9.0
Total	1460	100.0

Table 26. Marginal effects of Logistic regressions with Law as dependent variable

Varia	_	Model 1	Model 2	Model 3
Med	ia	0.0088	-0.0007	0.0007
		(0.029)	(0.031)	(0.031)
Twit	ter		0.0081	0.0104
			(0.032)	(0.032)
Inter	actions		3.665e-05*	3.671e-05*
			(0.0)	(0.0)
Follo	wers		2.84e-08	2.797e-08
			(0.0)	(0.0)
Sent Score	iment e		-0.0107	-0.0106
			(0.007)	(0.007)
Octo	ber			-0.0607
				(0.05)
Nove	ember			-0.0842
				(0.091)
weel	<			0.0072
				(0.01)
N		1807	1807	1807
Pseu squa	do R- red	0.00	0.00	0.00

Table 27. Marginal effects of Logistic regressions with People as dependent variable

Variable	Model 1	Model 2	Model 3	
Media	0.0345	0.0490	0.0485	

	(0.03)	(0.031)	(0.031)
Twitter		-0.1011***	-0.0905***
		(0.032)	(0.032)
Interactions		-6.321e-06	-5.858e-06
		(0.0)	(0.0)
Followers		2.351e-08	1.845e-08
		(0.0)	(0.0)
Sentiment Score		-0.0492***	-0.0461****
		(0.007)	(0.007)
October			-0.0205
			(0.048)
November			0.0444
			(0.088)
week			0.0186**
			(0.009)
N	1807	1807	1807
Pseudo R- squared	0.00	0.02	0.05

Table 28. Marginal effects of Logistic regressions with Public Sphere as dependent variable Variable Model 1 Model 2 Model 3

Variable	Model 1	Model 2	Model 3
Media	0.0998****	0.1017****	0.1029****
	(0.021)	(0.021)	(0.021)
Twitter		-0.0293	-0.0191
		(0.024)	(0.024)
Interactions		-5.233e-05*	-4.596e-05*
		(0.0)	(0.0)
Followers		8.604e-09	1.744e-09
		(0.0)	(0.0)
Sentiment		-0.0287****	-0.0254***
Score			
		(0.006)	(0.006)

October			-0.0381
			(0.042)
November			-0.0255
			(0.07)
week			0.0274****
			(0.007)
N	1807	1807	1807
Pseudo R- squared	0.01	0.03	0.10

Table 29. Marginal effects of Logistic regressions with Identity as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.0394	-0.0493*	-0.0491*
	(0.028)	(0.029)	(0.029)
Twitter		0.0188	0.0190
		(0.03)	(0.03)
Interactions		5.395e-05***	5.148e-05***
		(0.0)	(0.0)
Followers		7.731e-09	8.767e-09
		(0.0)	(0.0)
Sentiment Score		-0.0106*	-0.0113*
		(0.006)	(0.006)
October			-0.0570
			(0.045)
November			-0.1772**
			(0.083)
week			0.0100
			(0.009)
N	1807	1807	1807
Pseudo R- squared	0.00	0.01	0.02

Table 30. Marginal effects of Logistic regressions with Values as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.3612****	-0.2746****	-0.2706****
	(0.032)	(0.033)	(0.033)
Twitter		-0.4244***	-0.4163****
		(0.041)	(0.041)
Interactions		7.408e-06	7.572e-06
		(0.0)	(0.0)
Followers		-1.537e-08	-1.747e-08
		(0.0)	(0.0)
Sentiment Score		-0.0142**	-0.0133**
		(0.006)	(0.006)
October			-0.0697
			(0.046)
November			-0.0551
			(0.083)
week			0.0122
			(0.009)
N	1807	1807	1807
Pseudo R- squared	0.05	0.11	0.11

Table 31. Marginal effects of Logistic regressions with Non-neutral Sentiment as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.0284	0.0006	0.0003
	(0.021)	(0.02)	(0.02)
Twitter		-0.0604**	-0.0600**
		(0.026)	(0.026)
Interactions		-1.456e-05	-1.479e-05
		(0.0)	(0.0)
Followers		-1.038e-08	-1.04e-08

		(0.0)	(0.0)
Sentiment Score		0.0359****	0.0359****
		(0.007)	(0.007)
October			-0.0011
			(0.028)
November			-0.0180
			(0.054)
week			0.0023
			(0.006)
N	1807	1807	1807
Pseudo R- squared	0.00	0.06	0.06

Table 32. Coefficient estimates of OLS regressions with Number of Dimensions as dependent variable

Model 2

Model 3

Variable

Model 1

Media	-0.1994***	-0.1162*	-0.1123
	(0.0645)	(0.0689)	(0.0684)
Twitter		-0.4236***	-0.3918***
		(0.0679)	(0.0678)
Interactions		0.0001**	0.0001*
		(0.0000)	(0.0000)
Followers		0.0000***	0.0000***
		(0.0000)	(0.0000)
Sentiment		-0.1101***	-0.1042***
Score			
		(0.0150)	(0.0147)
October			-0.2647**
			(0.1136)
November			-0.2807
			(0.2048)
week			0.0748***

			(0.0212)
Intercept	1.8219***	1.8900***	-1.0424
nan	(0.0310)	(0.0337)	(0.7861)
R-squared	0.0046	0.0477	0.0767
R-squared Adj.	0.0040	0.0451	0.0725
N	1807	1807	1807

Bulgaria

Authors: New Bulgarian University team

Institution: New Bulgarian University

Introduction

The present report presents the results of a research activity on how the gender topic is presented on Bulgarian Facebook and Twitter area over the period September-November 2021 based on the number of representations and the type of sentiments predominating in the overall content of the relevant posts. A maximum of 623 posts was analyzed.

The analysis being implemented adopts a quantitative and qualitative approach with the aim of justifying to the best possible way the major trends being emerged as to the ways the topic of gender is placed under discussion among social media users.

The analysis draws on the theoretical framework of media representations and is based on the manual coding being conducted on individual posts, following the parameters set by a codebook, a process then supplemented by the automatic coding of new posts by means of machine learning techniques.

The investigation of how social media texts frame the topic of gender was based on the frequency of occurrence of a number of predefined media representations dimensions, considered important in the case of gender topic: Law, People, Culture, Values, New Social Movements. These dimensions, combined with the assessment of sentiments (negative, neutral, positive) governing social media posts, gave rise to fundamental narratives appearing online with regard to gender, operating as the basis for understanding how Europe is represented on platformed settings of communication.

Background

Issues related to gender thematic are considered in a number of scientific works in the Bulgarian language and by Bulgarian authors. While the academic community is well aware that the term gender was introduced in 1958 by the American psychoanalyst Robert Stoller to distinguish the biological nature of the differences between men and women from the specific set of social and cultural characteristics that determine their behavior, i.e. to highlight the difference between

biological and social gender (Popova, 2015), a large share of scientific research on the topic refers to the media linguistic use of the term gender, which in Bulgaria is used together with the concepts of gender (belonging to a certain gender) and sex . The term gender itself began to be used more widely in the country after 2001, after a brief annotation by Vanya Nikolova regarding the "Gender – Language – Communication – Culture" Conference in Jena, Germany in the Journal Bulgarian Ethnology, regarding the second Slavic conference on gender, in which "male-female relations" are considered (Nikolova, 2001). Dineva-Karabadzhakova 2018 presents a theoretical analysis of the term "gender", taken from the perspective of the gender theory. The inaccuracies in the meaning of the terms "gender" and "sex", caused by the translation in Bulgarian, are assessed based on the complexity of their semiosis. The need to introduce the term is justified based on the legal neologism in the Bulgarian terminological legal system, in view of the possible future ratification of Istanbul Convention. Nencheva (Nencheva 2022) presents how sex and gender characteristics are "fixed" in the Bulgarian language by legitimizing them in the official literary discourse and codifying their everyday use. The problematic of the linguistic use of the term is dealt with by Kornelia Slavova in Lost in Translation: Gender Heteroglossia in Bulgarian (Slavova, 2018), as well as by Ilieva (2014) in The linguo-cultural concept of gender in Modern Bulgarian.

Some of the scientific works refer to gender stereotypes in Europe and a comparative plan of these stereotypes in Bulgaria (Popova, 2015; Strahilova, 2017). Uzeneva (Uzeneva, 2005) analyzed over 5,000 Bulgarian proverbs, revealing cultural stereotypes and ideas about men and women and the dominant trends and assessments in relation to gender fixed in the language. The majority of proverbs belong to the meta-gender level, the gender-social factor is not of leading importance, but in the studied material androcentricity is clearly expressed, i.e. the reflection of the male perspective, and the female view of the world.

One article covers gender aspects of the Bulgarian street obituary, discussing the questions how and why in some cultures attitudes towards men and towards women continue to be different even after their death. For the purposes of the research, various types of obituaries are analyzed in a comparative perspective, the focus being on the phenomenon Bulgarian street obituary. (Kaboeva, 2009)

Kirova (Kirova, 2014) analyzed family status of the academics; gender inclinations for child care; conditions for reconciling of scientific career with family engagements and parenthood; estimation of the influence of the analyzed relation over the trajectories and gender differences in academic career. The conclusions come out from the analysis of the European gender reports in the field of "parenthood and/or research career". As a result the place of Bulgaria among EU-countries with a view to the relevant indicators is estimated.

The main problems that can be found in the media publications on the subject of gender are the anti-LBGT rhetoric of politicians, scandals surrounding the holding of Pride in Sofia and very strongly highlighted speaking on the subject of the Istanbul Convention. Stanoeva (Stanoeva, 2018) analyzes anti-gender discourses in Bulgaria which emerged in the last year triggered by the Council of Europe Convention on Preventing and Combatting Violence against Women and Domestic Violence (also known as the Istanbul Convention). Treating these discourses as nationalist (and not just conservative), the article traces their intersection with existing anti-refugee discourses.

Only one article is found regarding gender issues and social networks by Petrova (2017). There is also an article on Young people, gender stereotypes and advertisements (Kotzeva, 2012). Bostndjiev (2012) discusses the topic of public speaking on topics, linked with sexuality and intimate relations. He notices an absence of appropriate vocabulary for expression and communication in this field.

Gender propaganda today. Secret impact on perceptions of gender roles through online media: VESTI.BG / NETINFO (Inchovski-Tarnin, 2014) presents results from eight month monitoring of the posts of one of the top online media in Bulgaria-Vesti.Bg. The findings and the analysis are based on 80 articles related to gender roles and relations, published in the period. By sorting empirical material in thematic groups and arranging titles in a thematic lines, the author concludes that the broadcast media deliberately and consistently send out messages that approved a new social status of women and men for Bulgaria.

There are three main conclusions from the literature review, and they are extremely interesting. First of all, the fact that there are practically no publications related to gender issues or gender rhetoric in the Bulgarian-language online space of social networks stands out. The second is that much more is written about the issue of the female gender and its place in relation to the male gender than about LGBT issues. Third, the exclusively female authorship of these studies cannot fail to make an impression. These conclusions clearly indicate that there is a serious need for such research, and that the results we present in this report will have to be analyzed on their own, without the possibility of comparative analysis.

Legislation

The legal guarantees for equality and equal treatment of women and men are contained in the current Bulgarian legislation - Constitution of the Republic of Bulgaria, Labor Code, Social Security Code, Law on Protection from Discrimination, Law on Equality of Women and Men, Law on Social Assistance, Employment Promotion Act, Domestic Violence Protection Act, Civil Servant Act and a number of other special and sectoral laws. (Ministry of Labor and Social Policy, 2022)

Regulation at the European level

Article 21 of the Charter of Fundamental Rights of the European Union prohibits any form of discrimination based on different grounds, including sex and sexual orientation. Pursuant to Art. 7 of the Charter, "Everyone has the right to respect for his private and family life, his home and the secrecy of his communications". This is only part of the European legal regulation that protects the integrity of family life and prohibits discrimination based on sexual orientation.

As for same-sex marriages, it is the Member States who are competent to decide whether to allow or recognize them, not the EU itself. In this sense, a person who wishes to settle from one country (regardless of whether it is a member of the EU or not) to another can do so together with his spouse. However, same-sex couples do not always enjoy this right, even in cases where they have entered into a registered partnership or marriage. If the couple is married in the country of origin and the host country recognizes the validity of same-sex marriages, under the Free Movement Directive, the person has the right to be joined by his or her spouse.

The "Istanbul Convention"

Bulgaria has stated its "categorical position against the Istanbul Convention" at the General Affairs Council in Brussels, according to Bulgaria's permanent representation in the Belgian capital.

As early as 2020, Bulgaria was called by the European Parliament to do the necessary to ratify this document. The Istanbul Convention is the first international document that brings together in one place the various measures that countries around the world can take to reduce or prevent violence against women.

Five years ago, Bulgaria refused to ratify the Istanbul Convention, after the parliamentary parties VMRO and BSP presented the text as a conduit for promoting gay marriage and the "third sex". The Convention actually only mentions "men" and "women", and has nothing to do with issues of same-sex cohabitation. These were not contested by the then ruling political party GERB.

Legal regulation in Bulgaria about same sex marriage

According to Art. 46, para. 1 of the Constitution of the Republic of Bulgaria (KRB), "Marriage is a voluntary union between a man and a woman". Pursuant to Art. 5 of the Family Code (SC), "Marriage is concluded by mutual, free and express consent of a man and a woman...". In this sense, one of the characteristic features regarding the legal framework of marriage in Bulgaria is that it can only be concluded between a man and a woman, and not by persons of the same sex. The form of the marriage is governed by the law of the state before whose authority it is concluded. A marriage concluded abroad is recognized in the Republic of Bulgaria if the form established in Bulgarian law is observed (Article 75 of the Civil Code).

The question arises: Are same-sex marriages concluded abroad recognized in Bulgaria?

The judicial practice up to now is categorical on this matter in the sense that same sex marriages do not give rise to legal action on the territory of the Republic of Bulgaria (in this sense: Decision No. 7582 of 15.06.2017 in Adm. Case No. 7370/2016 - SAC).

An interesting case was examined by the Administrative Court of Sofia - city under AD No. 3654/2020. The case is related to the recognition of two female persons (who have a civil marriage) as mothers of a child, a Bulgarian citizen. The child was born in Spain, one mother being a Bulgarian citizen and the other a citizen of the United Kingdom of Great Britain.

The proceedings were initiated against a refusal to issue a Bulgarian birth certificate for the child. The preparation of a Bulgarian birth certificate was refused due to the lack of sufficient data on the origin of the child in relation to his biological mother. In addition, according to Bulgarian legislation, the registration of two female parents is inadmissible, since same-sex marriages are currently unregulated in the Republic of Bulgaria and such registration would be contrary to public order. According to the practice of the European Court of Human Rights, it is important that at least one of the parents listed in the birth certificate issued abroad is the biological parent of the child. In the present case, however, no information has been provided as to who the child's biological mother is.

The court notes that the minor child is a Bulgarian citizen pursuant to Art. 25, para. 1 of the KRB, regardless of the fact that there is no Bulgarian birth certificate. Failure to issue such a birth certificate

would, however, make it difficult for him to exercise his rights as a Bulgarian citizen, respectively an EU citizen, as he would not be able to issue an identity document.

In the factual situation presented in this way, the Administrative Court of Sofia-city considers that in order to resolve the dispute pending before it, it should send a preliminary inquiry to the Court of the EU. To date, the case is pending and a ruling is pending on the preliminary inquiry as to whether and when EU law requires the competent authorities to deviate from the template for drawing up a birth certificate as part of the applicable national law.

Right of residence of same-sex spouses

The lack of legal regulation of same-sex marriages in Bulgaria poses the question of the right of residence of the members of such families.

Any person with whom the EU citizen is married or has a de facto cohabitation, certified by an official document issued by another EU member state, is considered a member of the family of a citizen of the European Union. According to the Decision of 05 June 2018, Coman, C-673/16 C, item 36 (in relation to Directive 2004/38), the concept of "husband/wife" is gender-neutral and can therefore cover a spouse from the same gender as the Union citizen concerned. Given this, an EU member state cannot refer to its domestic law and refuse to recognize on its territory the right of EU citizens of the same sex, who have married each other, to reside legally for a long time in the territory of another country - member of the Community. There is already a practice of the Bulgarian courts in a positive direction, which allows the issuance of residence permits for members of such families (Decision of the Supreme Administrative Court under AD No. 11558/2018). It does not change the legal order established in Bulgaria by not recognizing same-sex marriages, but respects the right of free movement of EU citizens.

National context

The attempt to ratify the Istanbul Convention has been used as an opportunity for mass propaganda with fake news for years, and at the beginning of 2023 the topic was brought up again by BSP, GERB and "Vazrazhdane". Against the background of a series of protests against domestic violence and increased cases of murder of women, the National Assembly rejected two proposals for legal changes that aimed to better protect victims of domestic violence. During the spring of 2023 active pre-election campaign, in which the topics of the Convention and the gender, third gender and similar topics associated with it in Bulgaria once again being discussed widely by party leaders and candidates for parliamentary representatives. (SvobodnaEvropa.bg, 2023).

The annual march in support of human rights and the rights of people of different sexual orientation - Sofia Pride is used to create fake news related to the "Istanbul Convention" and for political propaganda by opponents of the event and the convention. The event itself is being held under heavy security measures after threats of physical aggression against those present appeared. The area is usually fenced off in a wide perimeter by the police, several hundred police officers guard the Prince's Garden and the procession, the route of which is kept secret every year, from all sides.

The organizers state that "the mission of Pride is to raise the visibility of this community, to maintain public debate about their acceptance, and to show non-heterosexuals in Bulgaria that they are not alone." In 2022, as in other previous years, hours before the pride, a counter-parade was held under the title "For the protection of the traditional Bulgarian Christian family". Its organizers are the "ROD International" association and the VMRO party, the Christian Reformist Party, the Bulgarian Union for Direct Democracy (BSDD) and the "Honor" party. "ROD International" defines Sofia Pride as a violation of the Constitution, because "they destroy the mental and physical health of the youth, by instilling behavioral patterns leading to hindering the reproduction of the nation." (SvobodnaEvropa.bg, 2023)

According to the organizers of the counter-parade, the event is in defense of the traditional Christian family. From there they state that the family is increasingly discriminated against and this is evident from the "anti-family laws" that are being imposed. (SvobodnaEvropa.bg, 2023)

According to Plamena Yancheva (Yancheva, 2021) The legislation and the practice of the Bulgarian courts are for the moment categorical on the issues regarding same-sex marriages. Although concluded in countries where the legal system allows this, same-sex marriages are not recognized on Bulgarian territory. However, the existing ban on same-sex marriage should not lead any form of discrimination based on sexual orientation.

The refusal to recognize the quality of marriage partners and/or parents of persons of the same sex raises a number of problems related to the exercise of parental rights and the right of inheritance. This could endanger the interests of the child in the event that the person recognized by law as a parent dies. A surviving spouse who is not recognized as such in a country where same-sex marriage is prohibited will not have the status of legal heir of their deceased partner. On the other hand, the child will not be the legal heir of the person whom the legal system does not recognize as his parent. Next, upon the death of the legally recognized parent, the child would be left without a legal representative, because formally his other parent has no legal relationship with him - he is neither a parent nor a guardian. This is an obstacle to the expression of his will and his participation in public life. There is no quick and easy answer to the question of who should take care of the child, who will represent him/her, make decisions about his/her education and maintenance.

Whether in the coming years a clear legal regulation will be created and same-sex marriages will be equal to those concluded by heterosexual couples in all countries of the world - the question remains open.

Quantitative analysis

Descriptive overview

In the case of Bulgaria the analysis of data incorporate the observation of 233 social media representations in total. Among the five categories of social media representations the most prominent ones in frequency of occurrence are people and identity, followed by values and law. By contrast, culture and new social movements represent the type of representations with the lowest incidence.

It is important to underline the small amount of posts to be analyzed as it was really difficult to find them. First of all the machine search had difficulties in sorting out posts in Bulgarian language and was offering a huge amount of posts in Macedonian, Russian and probably Ukrainian and*or Belarusian.

Several topics dominated the media in the reviewed period, reflecting on the posts on Facebook and Twitter.

On October 31, 2021, Sofia City Council member Boyan Rasate, together with like-minded people, attacked an office of an NGO that deals with the rights of LGBT citizens. He was arrested and than released under court bond.

(e.g. https://www.facebook.com/1981170655300801/posts/4517539244997250)

Another issue that was widely covered was the so called Istanbul convention that Bulgaria did not sign. The topic was used in political agitation of diverse nature (e.g. https://twitter.com/Ntheangrycat/status/1456947475508600835).

There are many different posts related to domestic violence and, in particular, violence against women, both in the context of changes in the Criminal Code of Bulgaria and globally. (e.g. https://www.facebook.com/228424597184104/posts/5069896469703535).

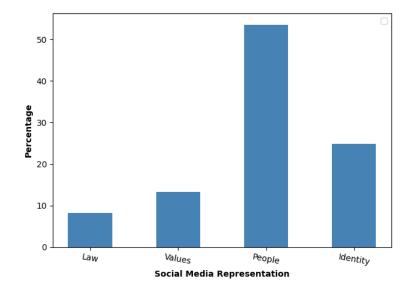


Figure 1. Social Media Representations - Distribution among Social Media Representations

Notes: Created with data from Table 3 presented in Appendix A. N = 233.

The data reveal various peaks in the appearance of representations occurring mainly in week 42 (October), in week 37 (September) as well as in week 47 (November). Among them the most intense peak takes place during the week 42 when all thematic categories of representations show their most dynamic appearance on social media platforms. Identity and

people are the most frequently occurring representations both during 42nd week and over all the other weeks, followed by the dimension focusing on people.

The peak of the posts around week 42-44 corresponds with the attack of the office of the LGBT NGO in Sofia, but also with a decision of the court that in Bulgaria there are only two sexes — male and female - in Bulgaria, gender is only biological. This was decided by the Constitutional Court with a decisive 11 votes "for" and only 1 "against". The magistrates pointed out that the state has no obligation to legally respect people's self-determination to a gender other than their biological one. Legalizing same-sex marriages in our country will only be possible if the Constitution is changed (e.g. https://www.facebook.com/428319334015731/posts/1979703085544007)

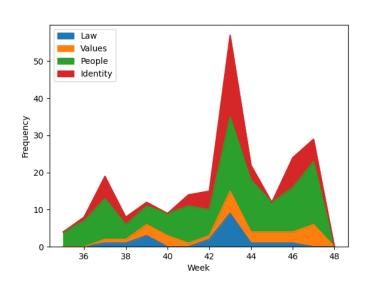
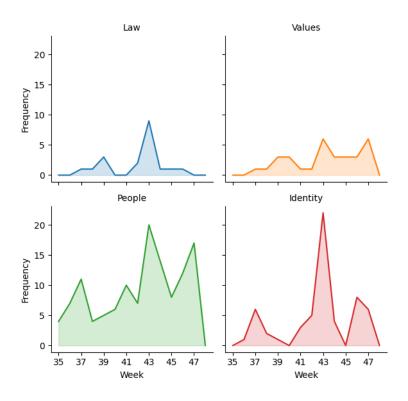


Figure 2. Social Media Representations - Relative importance over time

Notes: Created with data from Table 4 presented in Appendix A. N = 233.

Figure 3. Social Media Representations - Evolution over time

The peak in Law is strongly connected to the Constitutional Court decision, but also bounded to the attack in the office in regard with the adequate measure that could or should be taken against such attitude. The fluctuations in People cover a wide range of topics about male or female health, historical stories about brave men or women and even the semi-final and finals of a popular TV show called The Fam. (e.g. https://www.facebook.com/372139999640057/posts/1791323214388388)



Notes: Created with data from Table 4 presented in Appendix A. N = 233.

Most of the social media posts (around 69 %) do not incorporate in their contents any representations, whereas the posts with one representation are around 25%. The posts with two representations are limited (under 10%). There are also few exceptional cases of posts (around 2%) in which there are three representations.

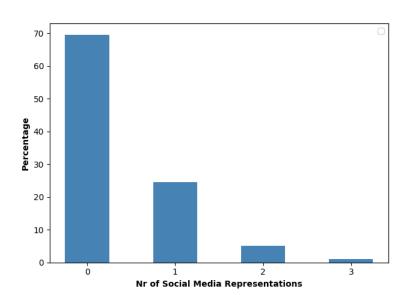
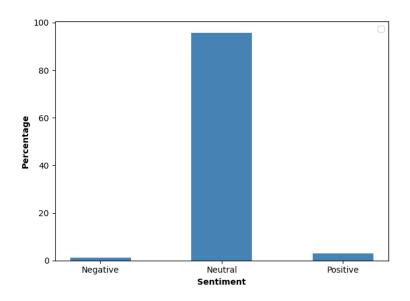


Figure 4. Number of Social Media Representations - Distribution among all posts

Notes: Created with data from Table 5 presented in Appendix A. N = 623.

Figure 5. Sentiments - Distribution among all posts

In terms of the type of sentiment related to the posts, the data reveal that the vast majority of cases (exceeding 90%) bear a neutral tone. Posts with negative or positive tonalities in terms of sentiments are extremely few in number with positive posts slightly prevailing. Although the period of data collection represents a period of tree major gender scandals – the Istanbul convention, the decision of the Constitutional Court and the NGO office attack, the tone of the social media conversation is kept neutral.



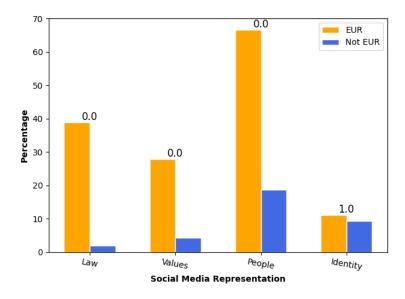
Notes: Created with data from Table 6 presented in Appendix A. N = 623.

Comparisons between Europe and Not Europe

According to the research data, the social media representations relating to Europe have a much less frequent presence) compared to those which are unrelated to Europe.

Four out of the five types of representations (people, values, law and identity) show a more dynamic presence in those posts concerning Europe compared to those lacking the European dimension with people, law and values showing a significant difference, while identity is relatively equal. On the other hand, the dimensions related to new social movements and culture lack data. This is a logical lack of similarity, as both European and non-European categories of social media posts either refer to gender-related topics, or the few common topics are guided by different perspectives and orientations in terms of meanings and perceptions.

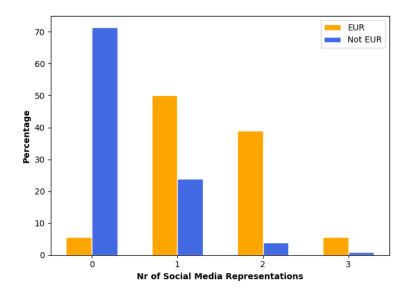
 $\textit{Figure 6. Social Media Representations - \% occurrence among Europe and Not Europe posts \textit{ respectively} \\$



Notes: Created with data from Table 7 and Table 8 presented in Appendix B. P value from chi-squared test of equal proportions between Europe and Not Europe in variable above each pair of bars. N = 623 in each pair of comparison.

Undoubtedly, the dominant Europe-related content of the statements could be partially attributed to the fact that these publications include comparative references between EU countries in relation to a framework of initiatives undertaken by the European institutions in order to make progress on the themes of institutional protection of the rights of women or the LGBTQ+ community and the fight against gender-based discrimination.

Figure 7. Number of Social Media Representations - % occurrence among Europe and Not Europe posts respectively



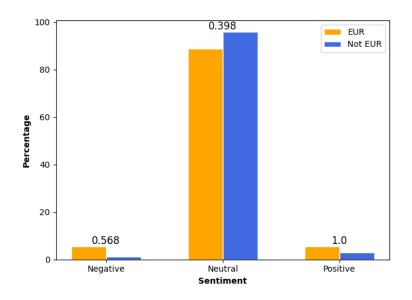
Notes: Created with data from Table 9 and Table 10 presented in Appendix B. N = 623.

Neutral sentiment maintains its leading position in both Europe- and non-Europe-related posts. However, a certain diversification of sentiment is observed in posts related to Europe, where posts with positive and negative sentiment are almost equally distributed. This could be due to the strong passions regarding the European belonging of our country, which have been maintained over the years, fueled by parties that rely on anti-European rhetoric.

Table 1. Number of Social Media Representations by Europe and Not Europe - Mean, standard deviation (SD) and results from t-test of difference in means

	Europe	Not Europe	Significance	P value
Mean	1.4444	0.3421	****	0
SD	(0.705)	(0.595)		

Figure 8. Sentiment - % occurrence among Europe and Not Europe posts respectively

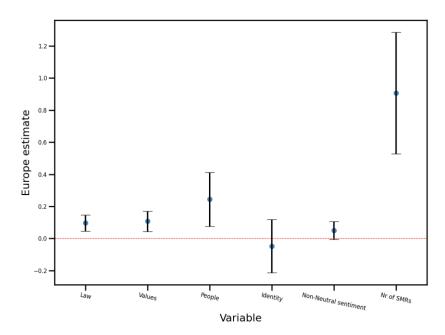


Notes: Created with data from Table 11 and Table 12 presented in Appendix B. P value from chisquared test of equal proportions between Europe and Not Europe in variable above pair of bars. N = 623.

Figure 9. Coefficient estimates Europe

According to the coefficient estimates, there are notable differences between Europe-related and non-Europe-related posts. The results derived from Logit regressions confirm that all representations are more likely to appear on Europe-related posts than on non-Europe-related posts with the effects sizes varying between 3 and 7 percentage points. Only the identity representation are likely to be found both on Europe and non-Europe-related social media posts with effect size being around 72 percentage points.

The majority of the non-Europe related posts refer to daily life issues like health, personal stories of historical people and TV shows, since the Europe related posts are about the legislation, gender rights and other sensitive topics, related to the current political narrative. One part of the posts are jokes and pranks based on the gender theme in all its palette, which are difficult to judge whether they have a negative or positive sentiment, but which certainly belong to the non-European posts, since the humor is highly local in its specificity (e.g. https://twitter.com/twitter/status/1442501949673414657)



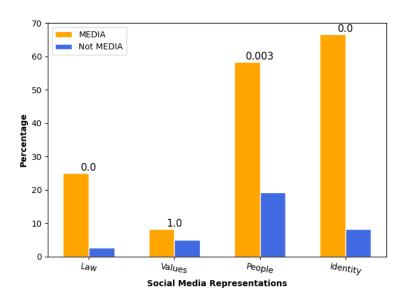
Notes: Coefficient estimates and their 95 % confidence intervals of Europe variable from Model 3 of Table 13, Table 14, Table 15, Table 16, Table 17, Table 18 presented in Appendix B. N = 623 in each estimation.

Comparisons between Media and Not Media

The data reveal that social media posts derived from media have a much higher incidence compared to posts coming from non-media. Chi-squared tests indicate that in most types of representations (i.e. law, people and identity) there are statistically significant differences in terms of their incidence proportions when comparing posts coming from media with those derived from non-media (p= 0.0 and p= 0.003). Values representation is the only exception (p= 1.00) to the finding. All of the representations (i.e. law, people values and identity) show a more frequent presence on media posts. Media posts tend to cover more diverse topics within the gender thematic, moreover the publications are longer and deeper in detail.

Figure 10. Social Media Representations - % occurrence among Media and Not Media posts

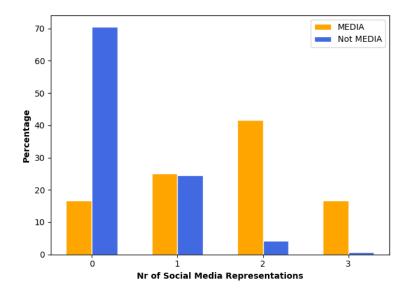
respectively



Notes: Created with data from Table 19 and Table 20 presented in Appendix C. P value from chi-squared test of equal proportions between Media and Not Media in variable above each pair of bars. N = 623 in each pair of comparison.

According to data, the social media posts released from media accounts embrace on average more representations than the posts coming from non-media (the mean values are 1.58 and 0.35 respectively) with the t-test confirming that the difference in means is statistically significant (p= 0.0). The content which incorporate two or three representations has a higher incidence in the case of media posts, whereas the content framed by only one or no representation prevails in frequency of occurrence in those posts coming from non-media. Posts coming from the media can be defined as more serious in their subject matter and often lead to articles that have in-depth content, presented data, in-depth analysis or expert opinion. They are also less often evaluative in nature. Conversely, non-media posts from politicians or prominent public influencers, as well as individuals who may be thought to belong to troll factories or have a clear bias towards specific political players, carry an evaluative or manipulative nature. (e.g. https://twitter.com/BajMihal/status/1462320270048436224)

Figure 11. Number of Social Media Representations - % occurrence among Media and Not Media posts respectively



Notes: Created with data from Table 21 and Table 22 presented in Appendix C. N = 623.

Table 2. Number of Social Media Representations by Media and not Media - Mean, standard deviation (SD) and results from t-test of difference in means

	Media	Not Media	Significance	P value
Mean	1.5833	0.3502	****	0
SD	(0.996)	(0.594)		

The chi-squared tests reveal that with regard to the incidence frequency of sentiments (negative, neutral, and positive) there are statistically significant differences between media posts and non-media posts (p= 1, p= 0.82 respectively). The supremacy of neutral sentiment on posts originating in no-media organizations' accounts could be attributed to the tendency of these sources to provide the followers with information and argumentation in favor of certain media owners or groups of interest. This is confusing about what could be the possible explanation to the more positive sentiments in media posts. In any case, it can be argued that most of the posts have a neutral sentiment, as national cultural characteristics lead to a peculiar tolerance at first glance. Different people in Bulgaria, as well as differences based on gender, can be subjected to jokes and teasing, which at first glance are discriminatory, but in the end most often do not lead to real negative consequences, and people are often helped, because of their difference. Of course, there are desperate exceptions to highly unacceptable discrimination, but in society as a whole there is an attitude that could ultimately be defined as relatively neutral. Logically, the sentiments of public speaking posts on social media carry over into this online narrative.

Begative

1.0

1.0

MEDIA

Not MEDIA

Not MEDIA

Not Media

Not Media

Negative

Negative

Negative

Neutral

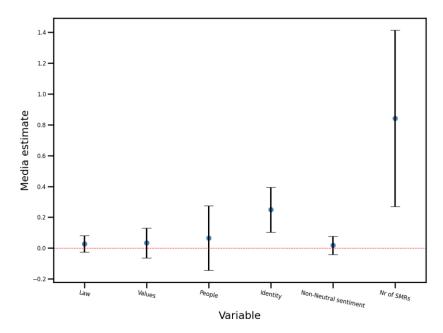
Sentiment

Figure 12. Sentiment - % occurrence among Media and Not Media posts respectively

Notes: Created with data from Table 23 and Table 24 presented in Appendix C. P value from chi-squared test of equal proportions between Media and Not Media in variable above pair of bars. N = 623.

According to coefficient estimates, there are few differences between media and non-media posts. The results derived from Logit regressions confirm that the number of social media representations and identity are likely to have higher frequency of incidence among posts derived from media with effects sizes being around 3,5 and 1.5 respectively. On the other hand, when it comes to representations such as law, values, people and non-neutral sentiment there are no statistically significant differences in frequency of presence between media and non-media posts.

Figure 13. Coefficient estimates Media

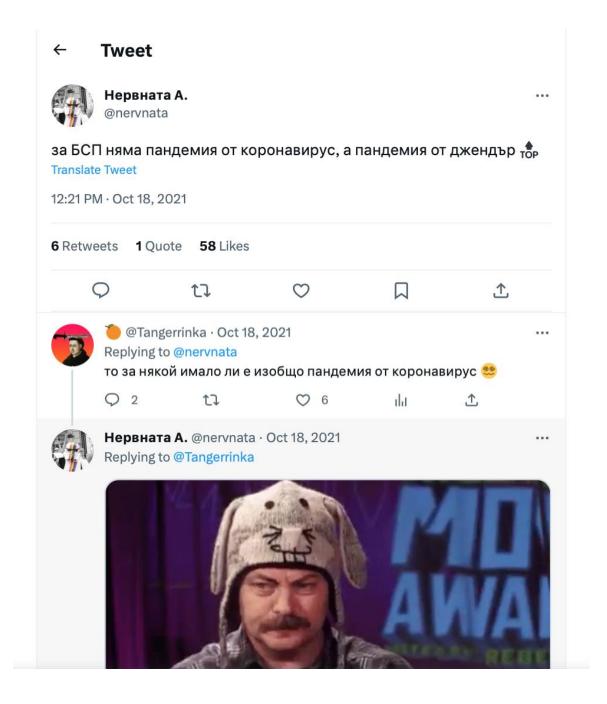


Notes: Coefficient estimates and their 95 % confidence intervals of Media variable from Model 3 of Table 25, Table 26, Table 27, Table 28, Table 29, Table 30. presented in Appendix C. N = 623 in each estimation.

Illustrative examples

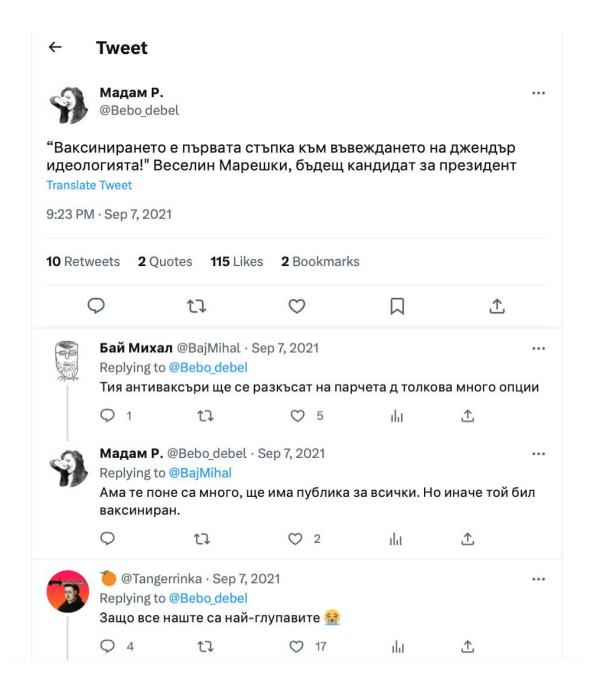
The proposal for Bulgaria's accession to the Istanbul Convention not only heated up the passions on gender issues in Bulgaria, but also provided a field for the expression and affirmation of a number of politicians. Various anti-European movements took up the talking points after the topic for and against Covid-19 vaccinations ran out of steam. "I will fight to the end against gender ideology. PES and the Socialist International want us to go beyond the Constitution and our laws and accept the third gender. As a woman and a mother, I will never agree to this." (Epicenter, 2022)

This was stated by the leader of the BSP, Cornelia Ninova, in a leading television show on national air. She was commenting on the recently concluded Socialist International Congress, where her candidacy for vice president was suspended due to her stance against the Istanbul Convention. In the previous mandate of SI Ninova was vice president of the world left organization.



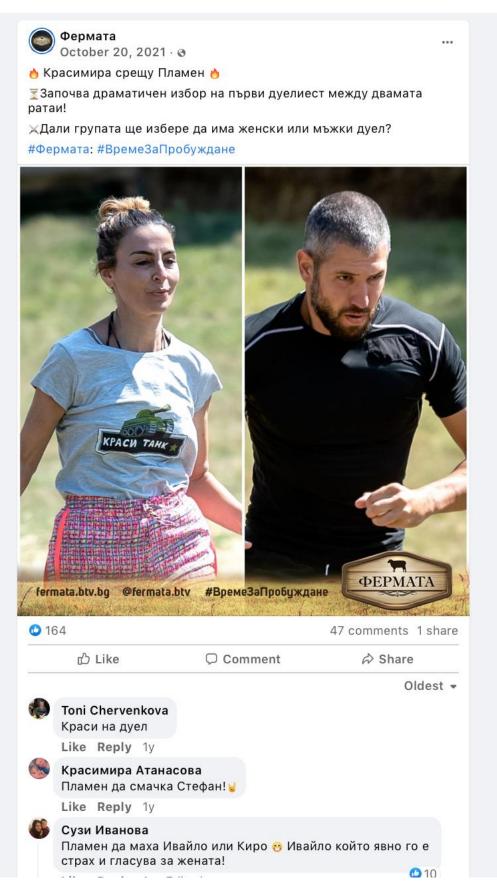
Ninova's predecessor in the leadership position in the BSP, Sergey Stanishev, was the head of PES. And Stanishev, as the current leader of PES, supported the Istanbul Convention. However, in order to avoid a direct confrontation with Ninova, Stanishev did not rebuke the party for its position on the document that protects women's rights. However, his successor immediately reacted.

"Vaccination is the first step towards gender ideology," said another politician, Veselin Mareshki, as quoted in the post below. Indeed, the two topics have merged with some spillover into political talk, clearly aimed at a more confused and factually uncertain electorate.



It is not very stimulating to find that a large frequency narrative of gender issues in practice consists of trivial everyday matters clarifying the role and relations between the sexes. However, it is worth noting that if a man pushing a baby carriage or doing housework was until recently an absolute exception and object of ridicule, in recent years it is an increasingly common role that continues to cause laughter and pointing finger, but it is not so rare and so much ridiculed. In this sense, the clarification and establishment of gender roles is a constant process that finds its place in posts on social networks. In the context of this clarification of roles, there is also the explanation for the serious presence of posts referring to current and final battles in the reality format The Farm, which is running in Bulgaria during

the period of the data collection for the present study. "Men's duel", "women's duel", male or female will win before the respective events and news announcing the results in the style of "male victory" and "female victory" are the usual posts entered into the selection of the software.



Also noted are the number of posts related to humor based on gender or sexual orientation. This humor is much more widespread in Bulgaria than in other countries, and a joke or a prank that is taken lightly

and really amusing here can be taken as a serious insult or discrimination in other societies. The specific example seen below is about the man's subservient role in the family and translates as "Every man feels strong until he hears his wife call him by his full name" (knowing that he will be scolded).



Conclusion

The topic of gender issues is relevant in the Bulgarian media space, but this does not automatically transfer it to social networks. Several main lines of discussion remain - women's rights, prevention of gender-based violence, rights of gay and LBGT people, prevention of gender-based violence and sexual orientation. Traditionally, topics related to serious gender issues are discussed, as well as stories of

successful and/or famous personalities who stand out due to their belonging to the male or female part of society.

The European theme is rarely touched upon, mainly in two lines - one is when pan-European policies and normative documents are discussed, and the other is when European examples are invoked to defend the writer's own thesis.

The data analysis reveal that people, identity and values constitute the types of representations dominating social media posts. The posts are mainly governed by neutrality in terms of their emotional weight

Comparing posts originating in non-media sources with those derived from media organizations' accounts, there seems to exist some common themes being disseminated, mainly related to European institutions' recommendations or resolutions based on which member states are asked to act effectively towards equality for same-sex couples or towards the removal of obstacles for LGBTQ+ people in exercising their rights. These policy initiatives are usually presented more extensively by non-media posts, where more representations emerge, particularly those related to identity, values and law.

Many of the posts included in the selection also refer to trivial household or health issues, related to traditional and sentimentally neutral roles of both sexes, as well as to specific health problems inherent in either of them.

There is also a serious set of posts relating to an ongoing reality TV show.

The relatively low number of posts included in the research sample can serve as a serious limitation and cast doubt on some results, or rather - the conclusions from them.

The subjective research feeling is that the topic in all its aspects - about traditional gender roles, about the new identity movements, about the social roles of gender, about LGBT topics, about protection from violence; common European policies, world trends and local changes and implementations, the topic is deliberately more current, hot and on the agenda than it appears in the sample of posts. Of course, it can be assumed that public media speaking has not found its place in social networks by the media, and non-media posts are not as bold and open about this socially ticklish topic as the spoken obi-eyes and in more personal situations.

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Appendices

Appendix A. Tables supporting the section on Descriptive overview

Table 3. Social Media Representations - Frequency and % occurrence among all posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
Law	19	8.2	3.0
Values	31	13.3	5.0

People	125	53.6	20.1
Identity	58	24.9	9.3
Total	233	100.0	37.4

Table 4. Social Media Representations - Frequency by week

Unnamed:	Law	Values	People	Identity
35	0	0	4	0
36	0	0	7	1
37	1	1	11	6
38	1	1	4	2
39	3	3	5	1
40	0	3	6	0
41	0	1	10	3
42	2	1	7	5
43	9	6	20	22
44	1	3	14	4
45	1	3	8	0
46	1	3	12	8
47	0	6	17	6
48	0	0	0	0
Total	19	31	125	58

Table 5. Number of Social Media Representations in posts-Frequency and % occurrence among all posts

Nr of Social Media Representations	Count	% of Posts
0	433	69.5
1	153	24.6
2	31	5.0
3	6	1.0
Total	623	100.0

Table 6. Sentiment - Frequency and % occurrence among all posts

Sentiment Count

% of Posts

Negative	8	1.3
Neutral	596	95.7
Positive	19	3.0
Total	623	100.0

Appendix B. Tables supporting the section on Comparisons - Europe and Not Europe

Table 7. Social Media Representations Europe - Frequency and % occurrence among Europe posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
Law	7	26.9	38.9
Values	5	19.2	27.8
People	12	46.2	66.7
Identity	2	7.7	11.1
Total	26	100.0	144.4

Table 8. Social Media Representations Not Europe - Frequency and % occurrence among Not Europe posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
Law	12	5.8	2.0
Values	26	12.6	4.3
People	113	54.6	18.7
Identity	56	27.1	9.3
Total	207	100.0	34.2

Table 9. Number of Social Media Representations Europe - Frequency and % occurrence among Europe posts

Nr of Social Media Representations	Count	% of Posts
0	1	5.6
1	9	50.0
2	7	38.9
3	1	5.6
Total	18	100.0

Table 10. Number of Social Media Representations Not Europe - Frequency and % occurrence among Not Europe posts

Nr of Social Media Representations	Count	% of Posts
0	432	71.4
1	144	23.8
2	24	4.0
3	5	0.8
Total	605	100.0

Table 11. Sentiment Europe - Frequency and % occurrence among Europe posts

Sentiment	Count	% of Posts
Negative	1	5.6
Neutral	16	88.9
Positive	1	5.6
Total	18	100.0

Table 12. Sentiment Not Europe - Frequency and % occurrence among Not Europe posts

Sentiment	Count	% of Posts
Negative	7	1.2
Neutral	580	95.9
Positive	18	3.0
Total	605	100.0

Table 13. Marginal effects of Logistic regressions with Law as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.0888***	0.0818****	0.0963****
	(0.018)	(0.022)	(0.026)
Twitter		-0.0204	-0.0158
		(0.024)	(0.031)
Interactions		1.245e-06	5.162e-06
		(0.0)	(0.0)
Followers		-4.183e-08	-3.075e-08
		(0.0)	(0.0)
Sentiment Score		0.0092	0.0094

		(0.006)	(0.006)
October			-0.0202
			(0.04)
November			-0.1071
			(0.073)
week			0.0089
			(0.007)
N	623	623	623
Pseudo R- squared	0.17	0.19	0.27

Table 14. Marginal effects of Logistic regressions with Values as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.0982****	0.1122****	0.1070***
	(0.028)	(0.032)	(0.033)
Twitter		0.0124	0.0058
		(0.038)	(0.042)
Interactions		1.925e-05	1.817e-05
		(0.0)	(0.0)
Followers		-2.913e-07	-2.415e-07
		(0.0)	(0.0)
Sentiment Score		0.0073	0.0053
		(0.01)	(0.01)
October			0.1079*
			(0.057)
November			0.1357*
			(0.078)
week			-0.0094
			(800.0)
N	623	623	623
Pseudo R- squared	0.04	0.05	0.08

Table 15. Marginal effects of Logistic regressions with People as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.3331****	0.2418***	0.2443***
	(0.075)	(0.085)	(0.086)
Twitter		-0.2308****	-0.2242***
		(0.063)	(0.065)
Interactions		3.549e-05	3.812e-05
		(0.0)	(0.0)
Followers		-1.822e-07	-1.861e-07
		(0.0)	(0.0)
Sentiment Score		-0.0128	-0.0145
		(0.018)	(0.018)
October			0.0968
			(0.069)
November			0.1857*
			(0.107)
week			-0.0231*
			(0.012)
N	623	623	623
Pseudo R- squared	0.03	0.07	0.07

Table 16. Marginal effects of Logistic regressions with Identity as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.0172	-0.0492	-0.0476
	(0.064)	(0.077)	(0.084)
Twitter		-0.1359***	-0.1429****
		(0.042)	(0.04)
Interactions		-0.0003	-0.0003
		(0.0)	(0.0)
Followers		6.213e-08	6.554e-08

		(0.0)	(0.0)
Sentiment Score		-0.0201*	-0.0200*
		(0.01)	(0.011)
October			-0.0628
			(0.047)
November			-0.2134**
			(0.085)
week			0.0257***
			(0.009)
N	623	623	623
Pseudo R- squared	0.00	0.04	0.08

 $\textit{Table 17. Marginal effects of Logistic regressions with \textit{Non-neutral Sentiment as dependent variable} \\$

Variable	Model 1	Model 2	Model 3
Europe	0.0440	0.0509*	0.0504*
	(0.033)	(0.028)	(0.028)
Twitter		-0.0284	-0.0242
		(0.033)	(0.033)
Interactions		-0.0001	-0.0001
		(0.0)	(0.0)
Followers		-2.734e-07	-2.893e-07
		(0.0)	(0.0)
		(5.5)	(0.0)
Sentiment Score		0.0350****	0.0350****
		0.0350****	0.0350****
Score		0.0350****	0.0350**** (0.008)
Score		0.0350****	0.0350**** (0.008) -0.0148
Score October		0.0350****	0.0350**** (0.008) -0.0148 (0.025)
Score October		0.0350****	0.0350**** (0.008) -0.0148 (0.025) 0.0045

N	623	623	623
Pseudo R-	0.01	0.18	0.18
squared			

Table 18. Coefficient estimates of OLS regressions with Number of Social Media Representations as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	1.1023***	0.8901***	0.9061***
	(0.1632)	(0.1937)	(0.1933)
Twitter		-0.5077***	-0.5050***
		(0.1623)	(0.1616)
Interactions		-0.0000	-0.0000
		(0.0001)	(0.0001)
Followers		-0.0000	-0.0000
		(0.0000)	(0.0000)
Sentiment Score		-0.0139	-0.0185
		(0.0241)	(0.0240)
October			0.1251
			(0.1047)
November			0.0259
			(0.1681)
week			-0.0017
			(0.0187)
Intercept	0.3421***	0.8213***	0.8312
nan	(0.0242)	(0.1628)	(0.6871)
R-squared	0.0871	0.1245	0.1317
R-squared Adj.	0.0856	0.1174	0.1203
N	623	623	623

Appendix C. Tables supporting the section on Comparisons - Media and Not Media

Table 19. Social Media Representations Media - Frequency and % occurrence among Media posts

Social Media	Count	% of Social Media	% of Posts
Representation		Representations	

Law	3	15.8	25.0
Values	1	5.3	8.3
People	7	36.8	58.3
Identity	8	42.1	66.7
Total	19	100.0	158.3

Table 20. Social Media Representations Not Media - Frequency and % occurrence among Not Media posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
Law	16	7.5	2.6
Values	30	14.0	4.9
People	118	55.1	19.3
Identity	50	23.4	8.2
Total	214	100.0	35.0

Table 21. Number of Social Media Representations Media - Frequency and % occurrence among Media posts

Nr of Social Media Representation	Count	% of Posts
0	2	16.7
1	3	25.0
2	5	41.7
3	2	16.7
Total	12	100.0

Table 22. Number of Social Media Representations Not Media - Frequency and % occurrence among Not Media posts

Nr of Social Media Representations	Count	% of Posts
0	431	70.5
1	150	24.5
2	26	4.3
3	4	0.7
Total	611	100.0

Table 23. Sentiment Media - Frequency and % occurrence among Media posts

Sentiment Count % of Posts

Neutral	11	91.7
Positive	1	8.3
Total	12	100.0

Table 24. Sentiment Not Media - Frequency and % occurrence among Not Media posts

Sentiment	Count	% of Posts
Negative	8	1.3
Neutral	585	95.7
Positive	18	2.9
Total	611	100.0

Table 25. Marginal effects of Logistic regressions with Law as dependent variable

Variable	Model 1	Model 2	Model 3
Media	0.0720***	0.0369	0.0272
	(0.023)	(0.028)	(0.028)
Twitter		-0.0499**	-0.0535**
		(0.025)	(0.027)
Interactions		-3.876e-06	-2.558e-06
		(0.0)	(0.0)
Followers		-1.259e-07	-9.952e-08
		(0.0)	(0.0)
Sentiment Score		0.0069	0.0083
		(0.006)	(0.006)
October			-0.0327
			(0.037)
November			-0.1141
			(0.073)
week			0.0111
			(0.007)
N	623	623	623
Pseudo R- squared	0.05	0.08	0.13

 $Table\ 26.\ Marginal\ effects\ of\ Logistic\ regressions\ with\ Values\ as\ dependent\ variable$

Variable	Model 1	Model 2	Model 3
Media	0.0267	0.0343	0.0331
	(0.05)	(0.052)	(0.05)
Twitter		-0.0291	-0.0361
		(0.054)	(0.055)
Interactions		1.327e-05	1.472e-05
		(0.0)	(0.0)
Followers		-3.806e-07	-4.059e-07
		(0.0)	(0.0)
Sentiment		0.0048	0.0026
Score			
		(0.01)	(0.01)
October			0.1100**
			(0.055)
November			0.1444*
			(0.076)
week			-0.0092
			(0.007)
N	623	623	623
Pseudo R- squared	0.00	0.01	0.04

Table 27. Marginal effects of Logistic regressions with People as dependent variable

Variable	Model 1	Model 2	Model 3
Media	0.2782***	0.0577	0.0652
	(0.091)	(0.101)	(0.107)
Twitter		-0.2682****	-0.2627****
		(0.065)	(0.066)
Interactions		3.133e-05	3.34e-05
		(0.0)	(0.0)
Followers		-2.698e-07	-2.763e-07
		(0.0)	(0.0)

Sentiment		-0.0156	-0.0172
Score			
		(0.018)	(0.018)
October			0.0926
			(0.07)
November			0.1912*
			(0.109)
week			-0.0224*
			(0.012)
N	623	623	623
Pseudo R- squared	0.01	0.05	0.06

 $Table\ 28.\ Marginal\ effects\ of\ Logistic\ regressions\ with\ Identity\ as\ dependent\ variable$

Variable	Model 1	Model 2	Model 3
Media	0.2426****	0.2633****	0.2491***
	(0.048)	(0.074)	(0.074)
Twitter		-0.0135	-0.0220
		(0.058)	(0.06)
Interactions		-0.0003*	-0.0003
		(0.0)	(0.0)
Followers		1.438e-07	1.527e-07
		(0.0)	(0.0)
Sentiment Score		-0.0225**	-0.0223**
		(0.01)	(0.01)
October			-0.0621
			(0.043)
November			-0.1967**
			(0.08)
week			0.0233***
			(0.009)
N	623	623	623

Pseudo R- 0.06 0.09 0.11 squared

Table 29. Marginal effects of Logistic regressions with Non-neutral Sentiment as dependent variable

Variable	Model 1	Model 2	Model 3
Media	0.0296	0.0120	0.0182
	(0.044)	(0.032)	(0.03)
Twitter		-0.0371	-0.0323
		(0.039)	(0.039)
Interactions		-0.0001	-9.54e-05
		(0.0)	(0.0)
Followers		-2.262e-07	-2.536e-07
		(0.0)	(0.0)
Sentiment Score		0.0346****	0.0345****
		(800.0)	(800.0)
October			-0.0140
			(0.025)
November			0.0086
			(0.039)
week			-0.0024
			(0.005)
N	623	623	623
Pseudo R- squared	0.00	0.17	0.18

Table 30. Coefficient estimates of OLS regressions with Number of Dimensions as dependent variable

Variable	Model 1	Model 2	Model 3
Media	1.2331***	0.8647***	0.8415***
	(0.2764)	(0.2895)	(0.2923)
Twitter		-0.4845***	-0.4962***
		(0.1329)	(0.1326)
Interactions		0.0000	0.0000
		(0.0001)	(0.0001)

Followers		-0.0000	-0.0000
		(0.000)	(0.0000)
Sentiment Score		-0.0257	-0.0293
		(0.0237)	(0.0238)
October			0.1070
			(0.1036)
November			0.0439
			(0.1663)
week			-0.0005
			(0.0185)
Intercept	0.3502***	0.8141***	0.7869
nan	(0.0240)	(0.1317)	(0.7015)
R-squared	0.0734	0.1003	0.1044
R-squared Adj.	0.0719	0.0930	0.0928
N	623	623	623

Czech Republic

Authors: Vaia Doudaki and Miloš Hroch

Institution: Charles University

Introduction

Background

The Czech Republic is among the European countries where sexism and gender-related discrimination and violence are commonplace. Czechs also use gender stereotypes the most among Europeans, which is typical for the post-socialist countries of the Central and Eastern Europe (CEE) region (European Commission, 2017, in Vochocová 2021). The country was among the last ones to sign the 'Council of Europe Convention on Preventing and Combating Violence Against Women and Domestic Violence', launched in 2011, known as the Istanbul Convention (Council of Europe, 2011). However,

the Czech government has not yet ratified the convention (Vochocová, 2021), which might be indicative of the relationship of the Czech society with issues of gender equality or gendered violence.

In 2017, the Czech Republic was the first Central European country to adopt its National Action Plan guided by the UN policy framework on Women, Peace and Security, which strives for gender-inclusive societies. In their analysis of the first National Action Plan (NAP) from 2017, O'Sullivan & Krulišová (2020) explore what kind of policies can be enforced in an environment where the pursuit of gender equality is frequently ridiculed. Their findings show that due to the glocalised backlash against gender-related issues, the Czech NAP is constituted by "femocrats" who focus on "small victories":

The document is more of a declaratory pledge than an actual action plan. It contains many problematic gender essentializations, as these seems to be the "easy" representations, more likely to be accepted by sceptics. Women's agency is discussed mainly with the use of the politically preferred term "equality of opportunity," and measured in the numbers of women recruited for overseas missions or diplomatic positions. The binary of victim/empowered woman is visible in the choice of images used in the key documents. (p. 543).

In the public sphere and discourses, there is a tendency to frame and ridicule gender-related agendas as "dangerous ideology", "Neo-Marxist ideology", and generally as a threat to the conservative order. Some authors (Svatoňová, 2021) argue that gender and feminist activists play the role of the modern folk devils.

One of the topics that can be illustrative of Czech society's stance towards the issue is the discussion about abortions that was further accelerated after the Polish government banned legal abortion in most cases. Beláňová (2020) studied the changing strategies of anti-abortion activists in the secularised and more liberal Czech Republic and clerical Slovakia. The issue has provoked intense discussions about morality, values, and sexuality around the globe, and the discussion in Europe was no less emotive. Beláňová (2020) situates anti-abortion activism in recent years' broader global context of conservative mobilisation. Moreover, abortion can be viewed as part of a struggle to define European identity (p. 395). Some authors see the ban on legal abortion as a case of "legitimizing national identity after the fall of Communism" (Mishtal, 2015 in Beláňová, 2020, p. 395).

Albeit research and analysis of online discourses on gender-related issues in the Czech Republic is not prolific, there are still a handful of studies on the topic (Heřmanová, 2022; Svatoňová, 2021; Vochocová, 2018, 2021; Vochocová & Rosenfeldová, 2019). Heřmanová (2022) focuses on gendered authenticity among Instagram influencers: "While men rely on their professional identity and authority and are less pressured to constantly engage with the audience, women are required to be intimate and vulnerable with their followers in order to stay authentic, relatable and thus capable of monetizing their content" (Heřmanová, 2022, p. 241).

According to Vochocová's (2018) study, women in the Czech Republic are more often exposed to sexualised hate speech in online debates than men. In another study, Vochocová (2021) analysed comments related to mainstream online news articles on gender aspects of immigration and studied how xenophobia and Islamophobia intersect with sexism in public discourses on Muslims and Europe. Her findings show that "[t]he anti-immigration discussion environment is also significantly sexist" (p. 345).

Svatoňová (2021) analysed how social media helped the 'anti-gender' discourses³ to spread and further accelerate online moral panic. For her analysis, she focused on the online discussions in one of the most popular Facebook pages for anti-gender campaigning, 'Anti-feminist Strike', run by the far-right organisation Angry Mothers. Social media were used for the further spread of anti-gender activism, but also as a site of entertainment, "a place where people could go to laugh at folk devils, who are presented as a freak show with identities that are regarded as public property" (Svatoňová, 2021, p. 150). Svatoňová also explains how post-communist sentiments were used to support an anti-gender agenda: "The anti-communist sentiment specific to the post-communist countries in Central and Eastern Europe helped to equate those two as the ultimate scapegoats: 'neo-Marxist gender activists'" (p. 151).

Legislation

According to the Gender Equality Index 2022 (European Institute for Gender Equality, 2022), the Czech Republic belongs to the group of EU countries (Poland, Hungary, Slovakia, Bulgaria, Romania, Lithuania and Greece) which improved their Gender Equality Index Scores, but are consistently lower than the EU average (Czechia scored 57.2, in 2022, while the EU average score stood at 68.6 out of 100 points). The index is calculated according to the domains of income and work (pay and employment gender gaps), education, health and violence.

The discussion about same-sex couples' rights has been ongoing in the Czech Republic. At the moment of writing this report, in March 2023, same-sex couples could only enter into registered partnerships, but not marriage. This implies, among other things, that same-sex couples cannot legally become coparents. According to Kříčková (2023), the country constitutes a suitable case for

observing possible impacts of the EU regarding rainbow families' rights as, unlike in the more liberal Member States, there is still enough room for change in the national law, but at the same time, the country shares similarities with the other, mostly conservative, Member States in the CEE region (p. 3).

Kříčková (2023) analysed the compatibility of the national law in the Czech Republic with the EU law, concluding that,

[a]s the Czech example suggests, if the EU wants to truly enhance rainbow families' rights, it will probably need to be more explicit about that (in legislation or the ECJ's [European Court of Justice] case-law) because the Member States, particularly their national courts, may not find or pave the way to utilise EU law themselves (p. 4).

Gender-based violence includes all acts of physical, sexual, psychological, economic, or other violence explicitly targeted at a person based on his/her sex. This definition is based on international legal documents like the UN Convention on the Elimination of All Forms of Discrimination against Women (UN General Assembly, 1979). Under this definition, sexual violence, rape, sexual coercion, and stalking are regarded as forms of gender-based violence in addition to domestic and partner violence. In the Czech Republic's Criminal Code, gender-based violence falls under the criminal acts against human dignity concerning sexual activity and distinguishes two main forms of sexual violence, the

³ For the rise of 'anti-gender' campaigns and discourse in Europe, see, e.g., Kováts, 2017; Kuhar & Paternotte, 2017; Sosa, 2021.

offence of rape (Section 185 of the Criminal Code) and the offence of sexual coercion (Section 186 of the Criminal Code) (European Institute for Gender Equality, 2023). Some of these crimes can be defined as criminal acts against personal freedom or as criminal acts against the protection of the individual.

NGOs such as Konsent (2021) criticise the Czech legislation as the current law states that sexual assault must include psychological or physical pressure to be legally considered rape: "We say that sex without consent is always rape". The consent-based law has already been passed in Belgium, Croatia, Cyprus, Denmark, Germany, Greece, Iceland, Ireland, Luxembourg, Sweden and the UK. Konsent (2021) further states that "[i]f the law about consent is enacted, it sends a clear message to rapists, victims, and society in general that sexual violence must be taken seriously and under no circumstances should it be tolerated". Apart from the non-explicit reference to consent in the Czech legal definition of rape, another problem is the low level of education about domestic and gender-based violence on the side of judges, trainee judges and public prosecutors. According to the Action Plan for the Prevention of Domestic and Gender based Violence, for the period 2019 – 2022, issued by the Office of the Government of Czech Republic (2019), the actors engaged in the distribution of justice do not take these criminal acts seriously enough.

The Czech Republic is bound by the European Convention on Human Rights (Council of Europe, 1950), which is supervised by the European Court of Human Rights. As mentioned earlier, the Czech Republic signed the Istanbul Convention, which lays down general standards for the prevention of gendered violence and helps affected persons, on 2 May 2016, being among the last countries that signed it "after a significant political and symbolic struggle" (Vochocová, 2021, p. 335), but its ratification by the Czech Republic is still pending.

The Czech Government Resolution no. 114 of 8 February 2016, mandated the Minister of Justice to submit to the government draft legislative measures for implementing the Istanbul Convention, setting a deadline for the submission of these measures the 30th June 2017. These measures were incorporated into the amendment of the Criminal Code promulgated under Act No. 287/2018 Coll., effective since 1 February 2019. While the Ministry of Justice is preparing documents for the draft ratification of the Istanbul Convention, the Action Plan does not anticipate the possible ratification of the Istanbul Convention by the Czech Republic. Some authors (Cooper, 2021) call this reluctance a "gender scare", which is not uncommon in the Central and Eastern European region. The Istanbul Convention was used as a topic by anti-gender campaigners to create mass hysteria and mobilise anti-EU sentiments. As Svatoňová (2021) argued, the convention's transnational nature, was used to framed it a

[...] foreign, unwelcome influence – as proved by the usage of the foreign word 'gender', which does not have any equivalent in the Czech language. It also opened the opportunity to blame the European elites and transnational bodies for being detached from the needs of real people (p. 139).

The Czech Republic has developed public policies to support gender equality. The Government Council for Gender Equality⁴ is a permanent governmental advisory body for creating equal opportunities for women and men. It was established on 10 October 2001. According to the Gender Equality Strategy 2021-2030 document, the Czech state's goals for the future are "to eliminate all gender-based inequality between women and men and to achieve a state where each person can develop their

⁴ https://www.tojerovnost.cz/en/gender-equality-department/

potential freely and without disadvantage due to their sex or gender and fully realise themselves in all spheres of social life" (Office of the Government of the Czech Republic, 2021).

On 17 June 2009, the Czech Republic adopted an anti-discrimination legislation⁵ (Anti-discrimination Act, no. 198/2009, Coll.) which guarantees the right to equal treatment and bans discrimination in areas including access to employment, business, education, healthcare and social security on the grounds of sex, sexual orientation, age, disability, race, ethnic origin, nationality, religious affiliation and faith or worldview. The passing of the Anti-Discrimination Act by the Czech Chamber of Deputies was a necessary step to avoid legal action by the European Commission against the Czech Republic for failing to implement the obligations contained in the EU Race Equality Directive (Council Directive 2000/43/EC) and the Employment Equality Directive (Council Directive 2000/78/EC).

The legal recognition of transsexuality rights came in the Czech Republic in the 1980s (Havelková, 2015, p. 2), but the social and legal understanding of transgender identity and transgender people's rights is still limited (Havelková, 2015). While transsexuality is connected to gender reassignment surgery and consequent legal provisions, transgender is a more complex concept connected to identity (where the individual desires to live in the role of a gender that is not the one designated at birth) (Havelková, 2015, p. 1). The law acknowledging transsexuality is based on the heteronormative, biological, and dualistic understanding of sex (ibid.) Moreover, sex/gender confirmation surgery, which forms the basis for the legal recognition of transexual people, relates to the outdated Act on Specific Health Services. The obligation for surgery is sterilisation⁶ (the disablement of the reproductive function), which Havelková (2015) finds to be "a serious intrusion into the bodily integrity of those seeking sex/gender confirmation surgery" (p. 4).

National context

The context of the research period (September–November 2021) was dominated by the national parliamentary elections held in the Czech Republic on 8-9 October 2021. Populist rhetorics and increased polarisation centred around the handling of the COVID-19 pandemic, migration, corruption, and the economy, monopolised the public discourse, also on social media.

Both prime minister Andrej Babiš's populist party ANO (Action of Dissatisfied Citizens) and the extreme right-wing populist party, SPD (Freedom and Direct Democracy), led by Tomio Okamura, engaged, either mildly or strongly in a Eurosceptic discourse. SPD accelerated its anti-EU rhetoric, raising 'Czechxit' as one of the main items of the political party's campaign agenda. SPD's anti-EU rhetoric, was related also to the party's opposition to what they call EU's new "neo-Marxist" ideology, which promotes inclusive gender politics and policies, including same-sex marriage.

Among the gender-related topics that were sometimes discussed during the pre-election and postelection periods were the gender pay gap in the EU countries, Poland's 'LGBT-free' zones, the EU representatives' critique against the anti-abortion law in Poland (for instance, from the President of the European Commission, Ursula von der Leyen), and the mass pro-choice (pro-abortion) demonstrations across the country in Poland. The discussion escalated after a thirty-year-old Polish woman who was 22 weeks pregnant died after Polish doctors refused to perform an abortion, despite

⁵ https://www.zakonyprolidi.cz/cs/2009-198

Tittps.//www.zakonypronal.cz/cs/2005 150

⁶ This obligation may be lifted soon (see Košlerová, 2023), but was still in force at the time of writing the report, in March 2023.

the pregnancy complications (severe foetal deformities). On 22 October 2021, the previous year, Poland's constitutional court ruled that abortions in the cases of foetal defects were unconstitutional and that terminations would be allowed only in cases of rape, incest, or if the mother's health was at risk. As quoted in the Guardian (AP in Warsaw, 2021), reproductive rights activists claim that this was the first casualty caused by the restrictions of Poland's abortion law. Also, European Parliament members from the Pirate Party supported the call for allowing safe abortions for Polish women in other EU countries.

Poland was not the only case of discriminatory politics among the Central-European countries. The European Parliament criticised the so-called Hungarian anti-LGBT law, approved in June 2021, prohibiting the exposure of homosexuality in media and education. The European Commission initiated legal actions against Poland (for establishing anti-LGBT zones in some of the country's municipalities) (Neuman, 2021) and against Hungary for violating the core values of the EU concerning equality and respect for dignity and human rights (BBC, 2021), which are enshrined in Article 2 of the Treaty of the European Union. In September 2021, the European Parliament published a non-binding call for a common approach to LGBTIQ rights, the recognition of same-sex marriage and the appeal to all EU countries to introduce relevant legislations (European Parliament, 2021). These issues and events provoked some responses on Czech social media.

When it comes to the Czech media landscape, the public broadcaster's Czech Radio and Czech Television continue to be the most trusted media in the country (Endowment Fund for Independent Journalism, 2022). Among the highly trusted news media are also the online news media Aktuálně.cz, Seznam Zprávy, iRozhlas.cz and printed dailies like Deník N and Hospodářské noviny (Endowment Fund for Independent Journalism, 2022).

Online news media in general, continued to grow in the Czech Republic in 2021, and one of the possible explanations is the increased internet traffic during the COVID-19 pandemic. The Reuters 2022 Digital News Report (Reuters Institute for the Study of Journalism, 2022) revealed that news consumption through online channels is the most popular in countries like the Czech Republic, Poland, Hungary and Slovakia. Data shows that online platforms gradually stabilise their dominant role in news media consumption trends. Still, only 3% of online users are willing to pay for content on digital news media platforms (Czech Statistical Office, 2021).

The Czech Statistical Office report published in November 2021 showed that there were 4,94 million social media users older than 16 years in the Czech Republic at that time. The number equals 56,3 % of the Czech population in the respective demographic group. YouTube and Facebook continued to top the list of the most used social networks and are also among the longest-serving, reaching the oldest user base on average. Instagram occupied the third place (AMI Digital, 2021). TikTok and Snapchat were among the social media platforms mostly used by younger users and among the most dynamically growing, even though the latter-mentioned platform "was catching its second breath" (Media Guru, 2021). The most active people on Facebook were users of ages between 30 and 44. According to the 'Digital 2022 Czechia report' (Kemp, 2022), there were 4,85 million Facebook users and 786.3 thousand Twitter users in the Czech Republic in early 2022.

Quantitative analysis

This section presents the main findings of the quantitative analysis of the gender-related Facebook and Twitter posts that were collected and analysed for the Czech Republic, covering a three-month period (September 2021 – November 2021). In total, 9207 gender-related posts (9030 tweets and

177 Facebook posts) were extracted and analysed. A detailed description of the methods of data collection, analysis and reporting of the findings can be found in Ingebretsen Carlson et al. (2022, 2023).

For the purposes of the research, four main post categories were identified and analysed: Europerelated posts, posts that do not address Europe, posts that were published by professional news organisations and posts published by regular users (not news media organisations). The analysis focused on seven main dimensions (referred to as social media representations, in the data, figures and tables of this report) pertinent to issues of gender: identity, culture, values, people, public sphere, new social movements and law (see Ingebretsen Carlson et al. (2022) for the operational definitions of these dimensions).

The reporting of the findings was conducted by the research team based in Charles University. The research team based in UOC (Open University of Catalonia) processed the data and provided the figures, tables and results from the statistical tests and regression analyses.

2.1 Descriptive overview

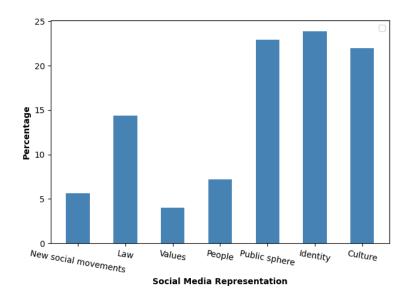


Figure 1. Social Media Representations - Distribution among Social Media Representations

Notes: Created with data from Table 3 presented in Appendix A. N = 22305.

In gender-related social media content, analysed during the research period of September-November 2021, in the Czech Republic, identity, public sphere and culture are the most frequently occurring dimensions with 22-24% of the observations pertaining to each of these dimensions (see Figure 1). The dimension of law appears with a lower frequency (14%), whereas those of people, new social movements and values appear infrequently (7%-4%).

Non-surprisingly, issues that pertain to aspects of gender identity are frequently mentioned, in the analysed social media posts, referring, e.g., to homosexuality or to gender roles. Similarly, the need for public deliberation on gender issues, exceeding formal or institutional politics, is frequently addressed, given Czech Republic's rather conservative stance towards gender equality, inclusion and

anti-discrimination, which are often seen as formal obligations, pushed also through the EU legislation, and less as social necessity. Interestingly, while posts pertaining to gender-related cultural issues and dimensions, concerning e.g., daily life practices and habits connected to gender, or artistic production addressing gender, appear frequently, posts explicitly addressing people's gender-based experiences are considerably less. This might be connected to the fact that social media users tend to be careful in sharing personal gender-related experiences in open online spaces, while, as literature suggests (see e.g., Abidin, 2021), are more comfortable sharing personal experiences in more protected spaces, e.g., in private Facebook groups, which are not included in this study.

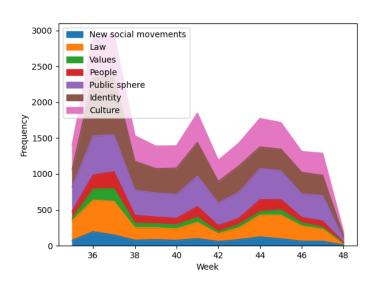


Figure 2. Social Media Representations - Relative importance over time

Notes: Created with data from Table 4 presented in Appendix A. N = 22305.

Examining the presence of gender-related content in social media over time, it appears that there is a spike in gender-related content in weeks 36-37 (early-mid September 2021) (see Figures 2 and 3). Identity, culture and public sphere are the most frequently occurring dimensions during these weeks, as well as during most of the other weeks of the analysed period. Also, law appears with a high frequency in weeks 36-37 (early-mid September) and weeks 44-45 (early-mid November).

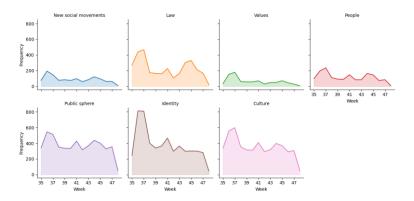


Figure 3. Social Media Representations - Evolution over time

Notes: Created with data from Table 4 presented in Appendix A. N = 22305.

Figure 3 shows more clearly that there is a spike in all gender-related dimensions in weeks 36-37 (early-mid September 2021). The trends of each dimension are fairly stable over time when considering the other weeks, with the exception in the case of law where there are some fluctuations, with an increased frequency reappearing in weeks 44-45 (early-mid November). The September spike is likely related to the European Parliament's call to create a common action plan against discrimination of LGBTQIA+ groups as a response to the events in Poland and Hungary, which ignited reactions from Czech far-right parties such as SPD or Trikolora. The second spike in November was likely caused by the death of a thirty-year-old Polish woman in the 22nd week of her pregnancy, seen as the result of the Polish anti-abortion legislation (as described in section 1.3).

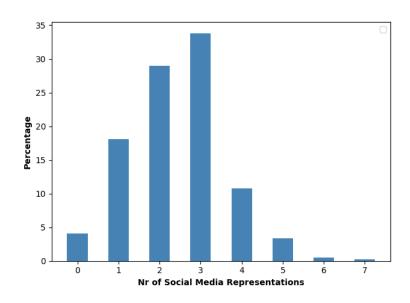


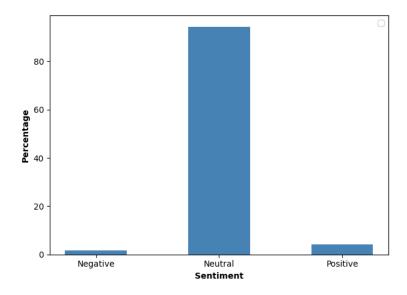
Figure 4. Number of Social Media Representations - Distribution among all posts

Notes: Created with data from Table 5 presented in Appendix A. N = 9207.

As we can see in Figure 4, the vast majority of the analysed posts address at least one gender-related dimension. More than one third of the posts (34%) include three different dimensions, and in close to one third (29%) of the posts appear two different gender-related dimensions. Posts addressing one type of dimension are regular (18%), while posts with four or more dimension types add to approximately 15% of the analysed posts. In a small number of posts (4%) there is none of the seven examined gender-related dimensions, present.

The findings show that uni-thematic or unidimensional posts on gender-related issues are not rare, which is not surprising considering among others, Twitter's preference for short-length communication (in total, 9030 tweets and 177 Facebook gender-related posts were identified and analysed). Still, a considerable number of the analysed Facebook and Twitter posts bring in diverse aspects and dimensions of the gender-related issues they address, likely connecting them with broader social issues of e.g., identity, culture and legal rights, and the need for public deliberation on these issues.

Figure 5. Sentiments - Distribution among all posts



Notes: Created with data from Table 6 presented in Appendix A. N = 9207.

The vast majority of the posts (94%) communicate a neutral sentiment. Posts with a positive sentiment appear infrequently (4%), and posts with a negative sentiment appear rarely (2%).

2.2 Comparisons between Europe and Not Europe

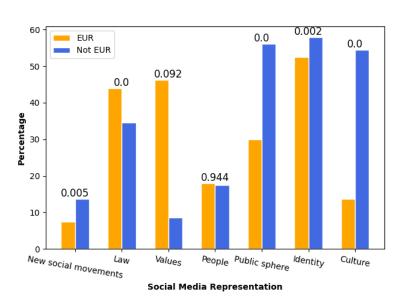


Figure 6. Social Media Representations - % occurrence among Europe and Not Europe posts respectively

Notes: Created with data from Table 7 and Table 8 presented in Appendix B. P value from chisquared test of equal proportions between Europe and Not Europe in variable above each pair of bars. N = 9207 in each pair of comparison.

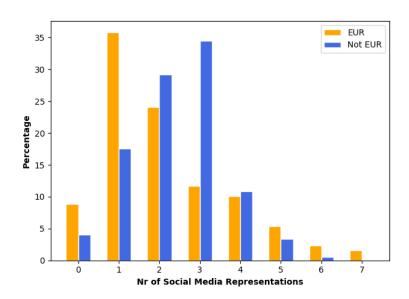
Gender-related posts concerning Europe (257) are considerably less compared to posts not focussing on Europe (8950), which seem to dominate the public discussion on social media, during the research period (see Tables 9 Table 10 in Appendix B for the total numbers of posts). Chi-squared tests show that there are statistically significant differences in the proportions of most gender-related dimension types, when comparing posts focussing on Europe and posts not related to Europe. For the dimensions of new social movements, law, public sphere, identity and culture, where statistically significant differences are observed, the p-values range from 0 to 0.005. On the other hand, there are no statistically significant differences in the dimensions of values (p = 0.092) and people (p = 0.944).

Given that overall, the number of Europe-related posts is significantly lower than that of the posts that do not concern Europe, the overall frequency of appearance of all registered dimensions is considerably higher in the latter category (see Tables 7 and 8 in Appendix B). When examined proportionally within each category, the dimensions of public sphere, identity, culture and new social movements appear more often in posts that do not focus on Europe, than in posts that address Europe, while the dimensions of law and values appear more frequently in posts about Europe. There is no significant difference when it comes to the frequency of appearance of the dimension of people.

The overall considerably higher numbers of posts that address issues of gender at the national and not at the European level is not surprising, given that all main societal issues tend to be addressed primarily in national contexts (see, e.g., Baisnée, 2007). The pre- and post-election period of study in which the political parties' campaigns and agendas dominated the public discussion, likely strengthened the tendency to address the main issues of the Czech society within a nation-centred prism, a hypothesis which would still require further research, to explore.

The differences in the trends concerning the frequency of appearance of the different dimension types, in Europe and non-Europe related posts might be reflecting the trend to address on the one hand, issues of gender and/or sexual roles and identities, daily life practices and habits connected to gender, but also the need for public deliberation and organised societal action for gender equality, anti-discrimination and inclusion, in the Czech societal, cultural and political context. On the other hand, gender issues might be appearing within a European value-oriented or legal framework, appealing to the need to adhere to the European values of gender equality, gender balance, neutrality, non-discrimination on the basis of gender, and to the need, or failure, of the Czech society or legislation, to comply with the European standards, policies and directives, on gender. In both cases, further research would be required to explore such claims.

Figure 7. Number of Social Media Representations - % occurrence among Europe and Not Europe posts respectively



Notes: Created with data from Table 9 and Table 10 presented in Appendix B. N = 9207.

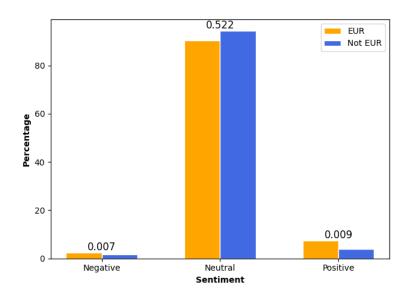
Table 1. Number of Social Media Representations by Europe and Not Europe - Mean, standard deviation (SD) and results from t-test of difference in means

	Europe	Not Europe	Significance	P value
Mea n	2.1167	2.4314	***	0
SD	(1.577)	(1.155)		

From the information in Table 1, we can infer that there are on average more gender-related types of dimensions present among posts that do not concern Europe than among Europe-related posts. The mean values for the posts of these two categories are 2.43 and 2.12 respectively and a t-test confirms that the difference in means is statistically significant (p = 0.0). More in detail, as can be seen in Figure 7, there are on average more non-Europe-related posts with 2-4 types of dimensions, and more Europe-related posts with 0-1 dimension types. At the same time, Europe-related posts tend to have higher average numbers of dimension types (5-7), than non-Europe-related posts. Still, given that the total number of non-Europe-related posts is significantly higher, the numbers of non-Europe-related posts with 0-7 dimensions are also higher in each of the 0-7 categories, compared to the numbers of posts appearing in each of these same categories, in Europe-related posts (see Tables 9 and 10 in Appendix B).

The findings likely reflect the overall trend in the Czech social media examined during the research period to address gender-related issues mainly through a Czech-minded prism. At the same time, the few existing posts that bring a European perspective tend to address more gender-related dimensions.

Figure 8. Sentiment - % occurrence among Europe and Not Europe posts respectively



Notes: Created with data from Table 11 and Table 12 presented in Appendix B. P value from chisquared test of equal proportions between Europe and Not Europe in variable above pair of bars. N = 9207.

Chi-squared tests show that there are statistically significant differences in the proportions of the negative and positive sentiments when comparing posts about Europe and posts not addressing Europe (p = 0.007 for negative sentiment posts, and p = 0.009 for positive sentiment posts), but no statistically significant differences are observed in the proportions of the great majority of the posts that communicate a neutral sentiment (p = 0.522).

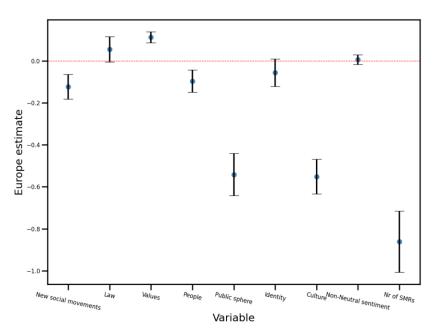


Figure 9. Coefficient estimates Europe

Notes: Coefficient estimates and their 95 % confidence intervals of Europe variable from Model 3 of Table 13, Table 14, Table 15, Table 16, Table 17, Table 18, Table 19, Table 20, Table 21 presented in Appendix B. N = 9207 in each estimation.

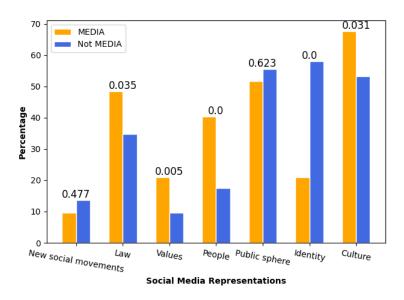
The coefficient estimates in Figure 9 show that there are several differences between Europe-related and non-Europe-related posts also when controlling for additional variables (media platform type, interactions and followers, sentiment and publication date). Results from logit regressions confirm that the dimensions of values are more likely to appear among Europe-related posts than among non-Europe-related posts, with an effect size of 11 percentage points. At the same time, the dimensions of new social movements, people, public sphere and culture, are more likely to be observed in non-Europe-related posts (with effect sizes of approximately 12, 10, 54 and 55 percentage points respectively). However, there are no statistically significant differences in the occurrence of the law and identity dimensions, and of non-neutral sentiments (positive and negative sentiments together) between Europe-related and non-Europe-related posts. Finally, results from an OLS regression show that there are more dimensions present in the non-Europe-related posts than in the Europe-related posts.

While media platform type (Facebook or Twitter) tends to confirm the statistically significant differences on a consistent basis, interactions/followers, sentiment and publication period do not support in all cases the statistically significant differences between Europe-related and non-Europe-related posts. Still, the regression analyses findings seem to align, with some variations, with the

general findings of addressing gender-related issues mainly through a Czech-minded prism, with the exception of the cases where a value-focussed framework is used.

2.3 Comparisons between Media and Not Media

Figure 10. Social Media Representations - % occurrence among Media and Not Media posts respectively



Notes: Created with data from Table 22 and Table 23 presented in Appendix C. P value from chisquared test of equal proportions between Media and Not Media in variable above each pair of bars. N = 9207 in each pair of comparison.

Gender-related posts published on Facebook and Twitter by Czech professional media organisations (62) are significantly less than posts not published by professional media organisations⁷ (9145) (See Tables 24 and 25 in Appendix C), which at first sight seem to dominate the social media discussion on gender, during the research period. Still, as professional news content is shared by social media users through reposting and commenting, to a high extent (see, e.g., Tenenboim, 2022), it is likely that these numbers (significantly) under-represent the extent to which news content about gender issues circulates through Czech social media.

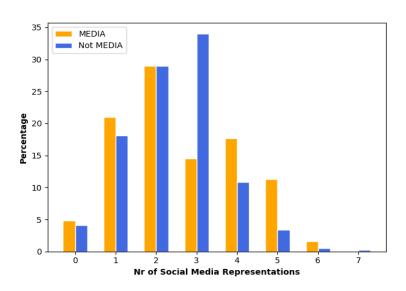
Proportionally, the dimensions of law, values, people and culture appear more frequently in media posts, while the new social movements, public sphere and identity dimensions appear more frequently in non-media posts. These findings could reflect the trend of professional media to address more dimensions of the issues they present, connecting them also to cultural, legal or regulatory aspects and frameworks, in comparison to how ordinary social media users (not news media organisations) address such issues. Ordinary social media users might be focussing more on the need for public deliberation and organised action, concerning gender issues, exceeding formal or institutional politics, given Czech Republic's rather conservative stance towards gender equality,

⁷ For simplicity purposes, they will be referred to, from now on, as 'media posts' and 'non-media posts'.

inclusion and anti-discrimination. Still, further qualitative analysis would be required to substantiate the claims for possible higher level of complexity, in addressing gender issues by professional media, and orientation of the public towards deliberation and organised action for gender issues, in the Czech society.

Chi-squared tests show that there are statistically significant differences in the proportions of the dimensions of law, values, people, identity and culture (p-values ranging from 0.035 to 0) when comparing posts published by news media and posts not published by professional media. There are no statistically significant differences in the proportions of the new social movements (p = 0.477) and public sphere (p = 0.623) dimensions, when comparing posts published by media and posts not published by professional media. Given that overall, the number of media posts is significantly lower than that of the non-media posts, the overall frequency of appearance of all registered dimensions is considerably higher in the latter category (see Tables 22 and 23 in Appendix C). At the same time, media posts address proportionally more gender-related dimensions than non-media posts, which could potentially be pointing to higher complexity and diversity by news media when addressing gender issues than by ordinary social media users.

Figure 11. Number of Social Media Representations - % occurrence among Media and Not Media posts respectively



Notes: Created with data from Table 24 and Table 25 presented in Appendix C. N = 9207.

Table 2. Number of Social Media Representations by Media and not Media - Mean, standard deviation (SD) and results from t-test of difference in means

	Media	Not Media	Significance	P value
Mea n	2.5968	2.4214		0.2395
SD	(1.487)	(1.167)		

From the information in Table 2, we can infer that there are on average more gender-related dimensions present among media posts than among posts not published by media. The mean values for the posts of these two categories are 2.60 and 2.42 respectively and a t-test shows that the difference in means is not statistically significant (p = 0.2395). While media and non-media posts appear with the same frequency addressing 2 dimension types, more non-media posts appear with 3 dimension types, and more media posts with 0, 1, 4, 5 and 6 dimension types, in comparison to the non-media posts.

These findings align with international literature that suggests that professional media tend to cover more dimensions of the social issues they address - in this case about gender- than social media content published by ordinary users (not news media organisations) (Gutsche & Hess, 2020; Katz & Mays, 2019). In the latter case, content tends to be more monothematic, addressing a limited range of issues which are of interest to the social media users who publish it, and for whom balance and diversity are not particularly relevant.

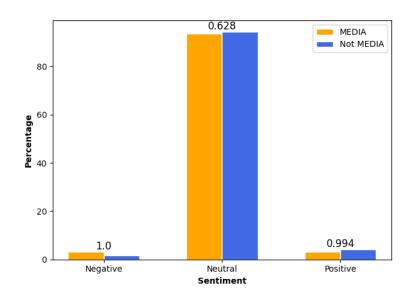
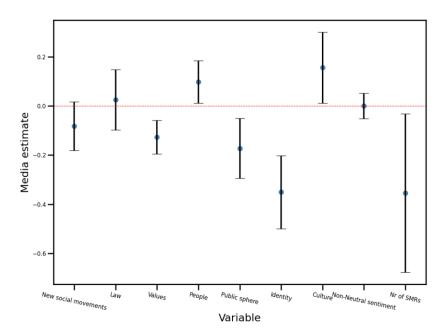


Figure 12. Sentiment - % occurrence among Media and Not Media posts respectively

Notes: Created with data from Table 26 and Table 27 presented in Appendix C. P value from chi-squared test of equal proportions between Media and Not Media in variable above pair of bars. N = 9207.

Chi-squared tests show that there are no statistically significant differences in the proportions of any of the sentiments when comparing media posts and non-media posts (p = 1.0 for negative, p = 0.628 for neutral, and p = 0.994 for positive sentiment posts).

Figure 13. Coefficient estimates Media



Notes: Coefficient estimates and their 95 % confidence intervals of Media variable from Model 3 of Table 28, Table 39, Table 31, Table 32, Table 33, Table 34, Table 35, Table 36. presented in Appendix C. N = 9207 in each estimation.

The coefficient estimates in Figure 13 show that there are several differences between media and non-media gender-related posts, also when controlling for additional variables (media platform type, interactions and followers, sentiment and publication date). Results from logit regressions confirm that the dimensions of people and culture appear more often among media posts as compared to non-media posts, with effect sizes of approximately 10 and 16 percentage points respectively. At the same time, the dimensions of values, public sphere and identity are more likely to be observed in non-media posts, with effect sizes of approximately 13, 17 and 35 percentage points respectively. There are no statistically significant differences in the occurrence of the new social movements and law dimensions and of non-neutral sentiments (positive and negative sentiments together), between media and non-media posts. Finally, results from an OLS regression show that there are more dimensions present in non-media posts than in media posts, which is not surprising given the significant differences in the overall post numbers that were extracted and analysed (62 media posts and 9145 non-media posts). Given the small number of analysed media posts, it is difficult to argue for the reasons behind the statistically significant differences observed in the regression analysis findings.

2.4 Illustrative examples

This section presents briefly some illustrative examples of gender-related posts that reflect the results from the quantitative analysis, as they were presented in the previous sections, across the four main types of posts extracted and analysed: Europe-related posts, posts that do not address Europe, posts that are published by professional news organisations and posts published by regular users (not news media organisations).

The data have shown that the dimension of values is more likely to appear among Europe-related posts than among non-Europe-related posts. The Facebook post by the Czech Green Party (Strana zelených) from 25 September 2021 (Figure 14) illustrates how values related to gender and Europe appear in the analysed posts. The Facebook post expresses support for gender balance in politics, together with women's stronger representation in the Chamber of Deputies Parliament of the Czech Republic and argues that issues such as climate change, family values, housing and other societal problems may affect women more than men. The post also mentions how quotas have helped achieve a better gender balance in various European countries.

Figure 14. Illustrative example from Facebook: Europe-related post

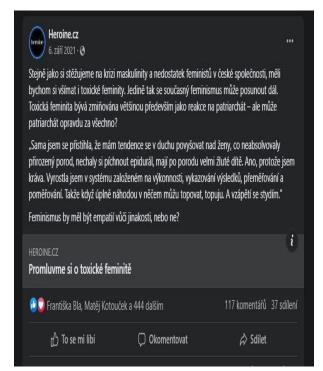


"We give the green light to women and we are a clear number one in women's representation. Because we need to address climate change, family support, housing and other problems that affect women more. That's why we need their vote in the House of Representatives. [...] In many European countries, quotas helped increase the number of women in parliament. The decision to introduce quotas was made on the basis of scientific data on discrimination against women in society. Gender data is similar to covid data or climate change data. Unless you have experienced discrimination, it is difficult to intuitively understand its effects. [...]"

On the other hand, the dimensions of people, culture and the public sphere are more likely to be observed in

non-Europe-related posts. The post from 6 September 2021 published by the feminist-oriented magazine Heroine can be used as an illustrative example (Figure 15). It promotes an essay by the Czech writer Tereza Semotamová who shares her personal story, bridging general observations about toxic femininity and cultural stereotypes or societal demands, and argues for the directions that feminism needs to move toward.

Figure 15. Illustrative example from Facebook: Non-Europe-related post



"Just as we complain about the crisis of masculinity and the lack of feminists in the Czech society, we should also notice toxic femininity. This is the only way contemporary feminism can move forward. Toxic femininity is often referred to as a response to patriarchy - but is it really the patriarchy to blame for everything?

'I found out that I tend to exalt myself in my spirit over women who did not have natural birth, had an epidural injection, have a very yellow child after birth. Yes because I am a cow. I grew up in a system based on performance, reporting results, measuring and measuring. So if I happen to be able to top in something, I top. And in return I feel ashamed.'

Feminism is supposed to be empathy towards difference, right?"

As previously mentioned, the data show that the

people and culture dimensions appear more often among media posts than among non-media posts. The post from 9 November published by the independent leftist medium Deník Referendum can be used as an example. It promotes the commentary by the DR's reporter Petra Dvořáková on the death of a Polish woman. The post and the article focus on the story of Iza, who had protested against the Polish anti-abortion legislation. The year after, she became the legislation's victim. The headline says: "Even her heart beat."

Figure 16. Illustrative example from Twitter: Post published by news media



"Last year, Iza demonstrated against the ban on abortion on the grounds of foetal harm. This September, she became a victim. She died because the doctors waited for the foetal heart to stop beating. She died because the anti-abortion movement despises human life."

Conversely, the dimensions of values, the public sphere and identity are more likely to be observed in non-media posts. The post from 13 October 2021 in figure 17 was not published by a media organisation. However, it was posted by journalist Filip Titlbach from the liberal daily newspaper Deník N. Shortly after the elections, Titlbach commented on a survey of which parties would support same-sex marriage. In the initial tweet, he connected supporting same-sex marriage with pro-Western values. One user questioned such a claim, followed by Titlbach's response: "Yes, one of the essential values of the West, among others, is equality."

Figure 17. Illustrative example from Twitter: Post not published by news media



"How will it be now with the support of same-sex marriage according to the statements of individual MPs:

[...]

So for 49, against 59, unclear opinion 92. Unequivocal orientation to the West? Sure."

- -Even though I am for same-sex marriage, you define same sex marriage as a definite orientation towards the West...?? Interesting definition
- -Yes, one of the essential values of the West, among others, is equality."

3 Conclusion

The research aimed to investigate how issues and dimensions pertinent to gender are communicated in social media platforms, in the Czech Republic. The research was developed across two main axes, namely whether there are differences in how gender is represented between content that bears a

European dimension and content that does not, and between content published by professional news media and ordinary users (not news media organisations). The research focussed on two social media platforms, Facebook and Twitter, and covered a three-month period (September – November 2021). Furthermore, seven main dimensions pertinent to issues of gender were analysed: identity, culture, values, people, public sphere, new social movements and law.

In total, 9207 gender-related posts (9030 tweets and 177 Facebook posts) were extracted and analysed. A detailed description of the methods of data collection, analysis and reporting of the findings can be found in Ingebretsen Carlson et al. (2022, 2023). Gender-related posts published on Facebook and Twitter by Czech professional media organisations (62) were significantly less than posts not published by professional media organisations (9145). Also, gender-related Facebook and Twitter posts concerning Europe (257) were considerably less compared to posts not focussing on Europe (8950).

Furthermore, differences were observed as to how gender is represented depending on whether it bears a European dimension or not, or whether the content is published by professional news media or not. Europe-related posts tend to focus on values, while the dimensions of people, culture, public sphere and new social movements are more likely to be observed in non-Europe-related posts. Moreover, the dimensions of people and culture tend to appear more in posts published by professional media, while the dimensions of identity, values, and the public sphere are more likely to be observed in posts published by ordinary users (not news media organisations).

Some plausible explanations were given for these findings in the previous sections of the report (e.g., possible trend to address daily life practices and habits connected to gender, in the Czech socio-cultural context; public deliberation and organised societal action for gender equality, anti-discrimination and inclusion, in the Czech socio-political context; gender issues appearing within a European value-oriented framework, appealing to the need to adhere to the European values of gender equality, gender balance, neutrality, non-discrimination, and to the need, or failure, of the Czech society or legislation, to comply with these European standards and values).

However, it shall be noted that not all findings were statistically significant when controlling for additional variables and in any case further analysis would be required to explore these claims. For example, the finding that posts published by professional media address more gender-related dimensions than posts published by ordinary users, that at first appeared to be statistically significant, was contradicted when this difference was controlled for additional variables; in the latter case, regression analysis showed that there are more dimensions present in posts published by ordinary users than by professional media. Such findings require additional analysis, taking also in consideration the significantly low number of identified posts published by professional media.

Also, the research findings concerning the representation of gender on social media, in the Czech Republic, as they have been presented in the previous sections, shall be considered in the light of the study's specificities and limitations.

Firstly, the specificities of the research period need to be taken into consideration, in evaluating the findings, avoiding generalisations. As mentioned, the research period was dominated by the national parliamentary elections, that led to the change of government in the Czech Republic. The high polarisation and the dominance of populist, right-wing voices shall not be considered as the norm for all periods and platforms.

Furthermore, the two social media platforms selected, on the basis of their popularity at the European level, shall not be considered representative of the conditions and practices in all social media

platforms in the Czech Republic, and elsewhere in Europe. As it concerns the Czech Republic, Twitter is not among the most popular social media platforms, since YouTube, Facebook and Instagram occupied the first three places in popularity and numbers of users, in the country, in 2021 (see AMI Digital, 2021).

Moreover, the research focused on openly accessible social media accounts. The vocality of mainstream approaches to gender, in open online spaces, as captured in this research, might have overshadowed counterhegemonic ideas, alternative or unpopular approaches to gender, which might be communicated more easily in protected spaces (see e.g., Abidin, 2021), and which this research did not study. Hence, while hegemonic ideas and discourses about gender might have been captured, the counterhegemonic positions on gender, in the Czech Republic, might be underrepresented in this study.

Finally, while the methods used to extract and analyse the posts per platform type/research axis were sophisticated (see Ingebretsen Carlson et al., 2022, 2023), they still produced very specific results. For example, the very low number of extracted posts published by professional news media (62), compared to the number of posts published by ordinary users (9145) might be misleading as it concerns the actual circulation of news about gender through the Czech social media platforms, given that professional news content is shared by social media users through reposting and commenting, to a high extend (see, e.g., Tenenboim, 2022), something that this study did not capture. Also, further research might be needed as to why a considerably higher number of Tweets was identified (9030), in comparison to the number of identified Facebook posts (177), given that overall Facebook is more popular than Twitter in the Czech Republic.

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5 Appendices

5.1 Appendix A. Tables supporting the section on Descriptive overview

Table 3. Social Media Representations - Frequency and % occurrence among all posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	1249	5.6	13.6
Law	3207	14.4	34.8
Values	889	4.0	9.7
People	1615	7.2	17.5
Public sphere	5111	22.9	55.5
Identity	5326	23.9	57.8
Culture	4908	22.0	53.3
Total	22305	100.0	242.3

Table 4. Social Media Representations - Frequency by week

Unnamed: 0	New social movements	Law	Values	People	Public sphere	Identity	Culture
35	76	271	34	97	341	245	336
36	194	440	153	196	546	813	556
37	149	467	179	236	514	809	599
38	77	173	62	111	352	401	355
39	84	166	56	92	336	339	315
40	75	159	57	89	335	365	311
41	98	227	70	148	428	466	409
42	59	107	30	84	316	298	294
43	85	164	48	84	368	365	318
44	122	303	49	164	438	298	398
45	96	330	71	146	401	301	370
46	62	211	45	74	329	300	291

47	62	168	28	85	356	281	307
48	10	21	7	9	51	45	49
Total	1249	3207	889	1615	5111	5326	4908

Table 5. Number of Social Media Representations in posts - Frequency and % occurrence among all posts

Nr of Social Media Representations	Count	% of Posts
0	377	4.1
1	1671	18.1
2	2671	29.0
3	3114	33.8
4	997	10.8
5	315	3.4
6	47	0.5
7	15	0.2
Total	9207	100.0

Table 6. Sentiment - Frequency and % occurrence among all posts

Sentiment	Count	% of Posts
Negative	151	1.6
Neutral	8683	94.3
Positive	373	4.1
Total	9207	100.0

5.2 Appendix B. Tables supporting the section on Comparisons - Europe and Not Europe

Table 7. Social Media Representations Europe - Frequency and % occurrence among Europe posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	19	3.5	7.4
Law	113	20.8	44.0

Values	119	21.9	46.3
People	46	8.5	17.9
Public sphere	77	14.2	30.0
Identity	135	24.8	52.5
Culture	35	6.4	13.6
Total	544	100.0	211.7

Table 8. Social Media Representations Not Europe - Frequency and % occurrence among Not Europe posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	1230	5.7	13.7
Law	3094	14.2	34.6
Values	770	3.5	8.6
People	1569	7.2	17.5
Public sphere	5034	23.1	56.2
Identity	5191	23.9	58.0
Culture	4873	22.4	54.4
Total	21761	100.0	243.1

Table 9. Number of Social Media Representations Europe - Frequency and % occurrence among Europe posts

Nr of Social Media Representations	Count	% of Posts
0	23	8.9
1	92	35.8
2	62	24.1
3	30	11.7
4	26	10.1
5	14	5.4
6	6	2.3
7	4	1.6
Total	257	100.0

Table 10. Number of Social Media Representations Not Europe - Frequency and % occurrence among Not Europe posts

Nr of Social Media Representations	Count	% of Posts
0	354	4.0
1	1579	17.6
2	2609	29.2
3	3084	34.5
4	971	10.8
5	301	3.4
6	41	0.5
7	11	0.1
Total	8950	100.0

Table 11. Sentiment Europe - Frequency and % occurrence among Europe posts

Sentiment	Count	% of Posts
Negative	6	2.3
Neutral	232	90.3
Positive	19	7.4
Total	257	100.0

Table 12. Sentiment Not Europe - Frequency and % occurrence among Not Europe posts

Sentiment	Count	% of Posts
Negative	145	1.6
Neutral	8451	94.4
Positive	354	4.0
Total	8950	100.0

Table 13. Marginal effects of Logistic regressions with New Social Movements as dependent variable

Variable	Model 1	Model 2	Model 3

Europe	-0.0810***	-0.1253****	-0.1229****
	(0.028)	(0.03)	(0.03)
Twitter		-0.0963****	-0.0966****
		(0.025)	(0.025)
Interactions		1.583e-05	1.584e-05
		(0.0)	(0.0)
Followers		3.578e-08**	3.592e-08**
		(0.0)	(0.0)
Sentiment Score		0.0038	0.0035
		(0.003)	(0.003)
October			0.0143
			(0.016)
November			0.0466*
			(0.028)
week			-0.0070**
			(0.003)
N	9207	9207	9207
Pseudo R- squared	0.00	0.00	0.01

Table 14. Marginal effects of Logistic regressions with Law as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.0897***	0.0479	0.0551*
	(0.029)	(0.032)	(0.031)
Twitter		-0.1223***	-0.1275***
		(0.04)	(0.04)
Interactions		-3.58e-05	-3.807e-05
		(0.0)	(0.0)
Followers		6.018e-07****	6.207e-07****
		(0.0)	(0.0)

Sentiment Score		-0.0056	-0.0059
36016		(0.005)	(0.004)
October		(*)	0.0688***
			(0.022)
November			0.3502****
			(0.037)
week			-0.0407****
			(0.004)
N	9207	9207	9207
Pseudo R- squared	0.00	0.00	0.02

 ${\it Table~15.~Marginal~effects~of~Logistic~regressions~with~Values~as~dependent~variable}$

Variable	Model 1	Model 2	Model 3
Europe	0.1847****	0.1068****	0.1129****
	(0.011)	(0.013)	(0.013)
Twitter		-0.2481****	-0.2482****
		(0.017)	(0.017)
Interactions		2.233e-05	2.363e-05
		(0.0)	(0.0)
Followers		-1.438e-07	-1.402e-07
		(0.0)	(0.0)
Sentiment Score		0.0306****	0.0293****
		0.0306**** (0.002)	0.0293**** (0.002)
Score			(0.002)
Score			(0.002)
Score			(0.002) -0.0186 (0.013)
Score			(0.002) -0.0186 (0.013) -0.0152

N	9207	9207	9207
Pseudo R- squared	0.04	0.13	0.14

Table 16. Marginal effects of Logistic regressions with People as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.0037	-0.0984***	-0.0963****
	(0.024)	(0.027)	(0.027)
Twitter		-0.2097****	-0.2109****
		(0.027)	(0.027)
Interactions		3.352e-05*	3.31e-05*
		(0.0)	(0.0)
Followers		2.371e-08	2.482e-08
		(0.0)	(0.0)
Sentiment Score		0.0127***	0.0125***
		(0.004)	(0.004)
October			0.0250
			(0.018)
November			0.0846***
			(0.03)
week			-0.0104***
			(0.003)
N	9207	9207	9207
Pseudo R- squared	0.00	0.01	0.01

Table 17. Marginal effects of Logistic regressions with Public Sphere as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	-0.2697****	-0.5353****	-0.5414***
	(0.033)	(0.051)	(0.051)
Twitter		-0.6899****	-0.6880****
		(0.064)	(0.064)
Interactions		-2.688e-05	-2.615e-05
		(0.0)	(0.0)

Followers		-4.214e-08	-4.072e-08
		(0.0)	(0.0)
Sentiment Score		-0.0129***	-0.0116***
		(0.004)	(0.004)
October			-0.0033
			(0.023)
November			-0.0475
			(0.039)
week			0.0121***
			(0.004)
N	9207	9207	9207
Pseudo R- squared	0.01	0.02	0.02

Table 18. Marginal effects of Logistic regressions with Identity as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	-0.0540*	-0.0709**	-0.0554*
	(0.031)	(0.034)	(0.033)
Twitter		-0.0612	-0.0535
		(0.046)	(0.046)
Interactions		5.75e-05*	5.666e-05*
		(0.0)	(0.0)
Followers		-1.133e-06***	-1.107e-06***
		(0.0)	(0.0)
Sentiment Score		0.0384***	0.0340****
		(0.005)	(0.004)
October			-0.1657****
			(0.023)
November			-0.3917****
			(0.039)

week			0.0220****
			(0.004)
N	9207	9207	9207
Pseudo R- squared	0.00	0.01	0.03

Table 19. Marginal effects of Logistic regressions with Culture as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	-0.4950****	-0.5523****	-0.5512****
	(0.044)	(0.042)	(0.042)
Twitter		-0.1354**	-0.1349**
		(0.054)	(0.054)
Interactions		-1.857e-05	-1.829e-05
		(0.0)	(0.0)
Followers		5.522e-07**	5.506e-07**
		(0.0)	(0.0)
Sentiment Score		0.0023	0.0020
		(0.004)	(0.004)
October			-0.0116
			(0.023)
November			-0.0300
			(0.039)
week			0.0017
			(0.004)
N	9207	9207	9207
Pseudo R- squared	0.01	0.02	0.02

Table 20. Marginal effects of Logistic regressions with Non-neutral Sentiment as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.0323***	0.0059	0.0061

	(0.012)	(0.012)	(0.012)
Twitter		-0.0177	-0.0181
		(0.013)	(0.013)
Interactions		5.675e-06	5.863e-06
		(0.0)	(0.0)
Followers		2.6e-09	3.183e-09
		(0.0)	(0.0)
Sentiment Score		0.0381****	0.0378****
		(0.002)	(0.002)
October			-0.0008
			(0.009)
November			0.0195
			(0.015)
week			-0.0024
			(0.002)
N	9207	9207	9207
Pseudo R- squared	0.00	0.15	0.15

Table 21. Coefficient estimates of OLS regressions with Number of Social Media Representations as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	-0.3147***	-0.8867***	-0.8612***
	(0.0989)	(0.0742)	(0.0743)
Twitter		-1.7560***	-1.7570***
		(0.1145)	(0.1150)
Interactions		0.0001	0.0001
		(0.0001)	(0.0001)
Followers		0.0000	0.0000
		(0.0000)	(0.0000)
Sentiment Score		0.0729***	0.0677***
		(0.0113)	(0.0112)
October			-0.0909*
			(0.0537)
November			-0.0103
			(0.0917)
week			-0.0259***
			(0.0098)
Intercept	2.4314***	4.1544***	5.2407***
nan	(0.0122)	(0.1147)	(0.3780)
R-squared	0.0020	0.0484	0.0578
R-squared Adj.	0.0019	0.0478	0.0570
N	9207	9207	9207

5.3 Appendix C. Tables supporting the section on Comparisons - Media and Not Media

Table 22. Social Media Representations Media - Frequency and % occurrence among Media posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	6	3.7	9.7
Law	30	18.6	48.4
Values	13	8.1	21.0
People	25	15.5	40.3
Public sphere	32	19.9	51.6
Identity	13	8.1	21.0
Culture	42	26.1	67.7
Total	161	100.0	259.7

Table 23. Social Media Representations Not Media - Frequency and % occurrence among Not Media posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	1243	5.6	13.6
Law	3177	14.3	34.7
Values	876	4.0	9.6
People	1590	7.2	17.4
Public sphere	5079	22.9	55.5
Identity	5313	24.0	58.1
Culture	4866	22.0	53.2
Total	22144	100.0	242.1

Table 24. Number of Social Media Representations Media - Frequency and % occurrence among Media posts

Nr of Social	Count	% of Posts
Media		
Representations		
0	3	4.8
1	13	21.0

2	18	29.0
3	9	14.5
4	11	17.7
5	7	11.3
6	1	1.6
Total	62	100.0

Table 25. Number of Social Media Representations Not Media - Frequency and % occurrence among Not Media posts

Nr of Social Media Representations	Count	% of Posts
0	374	4.1
1	1658	18.1
2	2653	29.0
3	3105	34.0
4	986	10.8
5	308	3.4
6	46	0.5
7	15	0.2
Total	9145	100.0

Table 26. Sentiment Media - Frequency and % occurrence among Media posts

Sentiment	Count	% of Posts
Negative	2	3.2
Neutral	58	93.5
Positive	2	3.2
Total	62	100.0

Table 27. Sentiment Not Media - Frequency and % occurrence among Not Media posts

Sentiment	Count	% of Posts
Negative	149	1.6
Neutral	8625	94.3
Positive	371	4.1
Total	9145	100.0

Table 28. Marginal effects of Logistic regressions with New Social Movements as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.0450	-0.0828	-0.0821
	(0.05)	(0.051)	(0.051)
Twitter		-0.0578**	-0.0594**
		(0.024)	(0.024)
Interactions		1.562e-05	1.546e-05
		(0.0)	(0.0)
Followers		4.61e-08**	4.568e-08**
		(0.0)	(0.0)
Sentiment		0.0037	0.0033
Score			
		(0.003)	(0.003)
October			0.0156
			(0.016)
November			0.0481*
			(0.028)

week			-0.0074**
			(0.003)
N	9207	9207	9207
Pseudo R- squared	0.00	0.00	0.00

Table 29. Marginal effects of Logistic regressions with Law as dependent variable

Variable	Model 1	Model 2	Model 3
Media	0.1284**	0.0157	0.0249
	(0.058)	(0.063)	(0.063)
Twitter		-0.1420****	-0.1493****
		(0.038)	(0.038)
Interactions		-3.49e-05	-3.69e-05
		(0.0)	(0.0)
Followers		5.908e-07****	6.021e-07***
		(0.0)	(0.0)
Sentiment Score		-0.0056	-0.0058
		(0.005)	(0.004)
October			0.0684***
			(0.022)
November			0.3498****
			(0.037)
week			-0.0406****
			(0.004)
N	9207	9207	9207
Pseudo R- squared	0.00	0.00	0.02

Table 30. Marginal effects of Logistic regressions with Values as dependent variable

Variable	Model 1	Model 2	Model 3
Media	0.0800***	-0.1245****	-0.1264****

	(0.027)	(0.034)	(0.035)
Twitter		-0.3064***	-0.3094****
		(0.019)	(0.019)
Interactions		2.425e-05*	2.552e-05*
		(0.0)	(0.0)
Followers		-1.252e-07	-1.245e-07
		(0.0)	(0.0)
Sentiment Score		0.0306****	0.0293****
		(0.002)	(0.002)
October			-0.0190
			(0.013)
November			-0.0144
			(0.021)
week			-0.0034
			(0.002)
N	9207	9207	9207
Pseudo R- squared	0.00	0.12	0.13

Table 31. Marginal effects of Logistic regressions with People as dependent variable

Variable	Model 1	Model 2	Model 3
Media	0.1683****	0.0971**	0.0984**
	(0.037)	(0.044)	(0.044)
Twitter		-0.1552****	-0.1572****
		(0.026)	(0.026)
Interactions		3.066e-05	3.019e-05
		(0.0)	(0.0)
Followers		2.477e-08	2.577e-08
		(0.0)	(0.0)
Sentiment Score		0.0129***	0.0127***
		(0.004)	(0.004)
October			0.0251
			(0.018)
November			0.0852***
			(0.03)
week			-0.0106***
			(0.003)
N	9207	9207	9207
Pseudo R- squared	0.00	0.01	0.01

Table 32. Marginal effects of Logistic regressions with Public Sphere as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.0390	-0.1693***	-0.1723***
	(0.063)	(0.062)	(0.062)
Twitter		-0.3845****	-0.3815****
		(0.055)	(0.055)
Interaction	S	-2.696e-05	-2.707e-05
		(0.0)	(0.0)

Followers		-7.103e-09	-5.623e-09
		(0.0)	(0.0)
Sentiment Score		-0.0131***	-0.0119***
		(0.004)	(0.004)
October			-0.0007
			(0.023)
November			-0.0438
			(0.039)
week			0.0111**
			(0.004)
N	9207	9207	9207
Pseudo R- squared	0.00	0.01	0.01

Table 33. Marginal effects of Logistic regressions with Identity as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.4017****	-0.3528****	-0.3508****
	(0.076)	(0.076)	(0.076)
Twitter		-0.0656	-0.0655
		(0.044)	(0.044)
Interactions		4.578e-05*	4.702e-05*
		(0.0)	(0.0)
Followers		-8.166e-07***	-8.088e-07***
		(0.0)	(0.0)
Sentiment Score		0.0381****	0.0336****
		(0.005)	(0.004)
October			-0.1651****
			(0.023)
November			-0.3916****
			(0.039)

week			0.0219****
			(0.004)
N	9207	9207	9207
Pseudo R- squared	0.00	0.01	0.04

Table 34. Marginal effects of Logistic regressions with Culture as dependent variable

Variable	Model 1	Model 2	Model 3
Media	0.1526**	0.1563**	0.1563**
	(0.068)	(0.074)	(0.074)
Twitter		0.1084***	0.1080**
		(0.042)	(0.042)
Interactions		-2.273e-05	-2.245e-05
		(0.0)	(0.0)
Followers		4.056e-07**	4.017e-07**
		(0.0)	(0.0)
Sentiment Score		0.0025	0.0021
		(0.004)	(0.004)
October			-0.0089
			(0.023)
November			-0.0250
			(0.04)
week			0.0005
			(0.004)
N	9207	9207	9207
Pseudo R- squared	0.00	0.00	0.00

Table 35. Marginal effects of Logistic regressions with Non-neutral Sentiment as dependent variable

Variable	Model 1	Model 2	Model 3
Media	0.0072	-0.0018	0.0003

	(0.028)	(0.027)	(0.027)
Twitter		-0.0206*	-0.0208*
		(0.012)	(0.012)
Interactions		5.706e-06	5.858e-06
		(0.0)	(0.0)
Followers		2.425e-09	2.85e-09
		(0.0)	(0.0)
Sentiment Score		0.0381****	0.0378****
		(0.002)	(0.002)
October			-0.0009
			(0.009)
November			0.0195
			(0.015)
week			-0.0024
			(0.002)
N	9207	9207	9207
Pseudo R- squared	0.00	0.15	0.15

Table 36. Coefficient estimates of OLS regressions with Number of Dimensions as dependent variable

rable 30. coej	micrem estimates of 025 regre	ssions with riamser of simens	nons as acpenaent
Variable	Model 1	Model 2	Model 3
Media	0.1753	-0.3662**	-0.3547**
	(0.1877)	(0.1652)	(0.1643)
Twitter		-1.4074***	-1.4187***
		(0.1142)	(0.1140)
Interactions		0.0001	0.0001
		(0.0001)	(0.0001)
Followers		0.0000***	0.0000**
		(0.0000)	(0.0000)
Sentiment		0.0722***	0.0668***
Score			

		(0.0114)	(0.0112)
October			-0.0846
			(0.0540)
November			-0.0015
			(0.0925)
week			-0.0282***
			(0.0099)
Intercept	2.4214***	3.7902***	4.9730***
nan	(0.0122)	(0.1140)	(0.3805)
R-squared	0.0002	0.0355	0.0457
R-squared Adj.	0.0000	0.0350	0.0449
N	9207	9207	9207

Germany

Authors: Volker Grassmuck & Barbara Thomass

Institution: Ruhr-Universitaet Bochum

Introduction

Gender and migration are the topics of passionate, heated debates everywhere in Europe. The controversies play out in particular on social media, the arena where professional communicators – journalists, politicians, lobbyists, CSOs, creators etc. – and common citizens can speak and compete for attention.

In Work Package 4, directed by the Catalan EUMEPLAT team, we looked at posts which have been published on German Facebook and Twitter in the period from September to including November 2021. Based on a jointly developed dictionary of words indicative of the topic Gender and of Europe, the Catalan team queried the APIs of the two platforms, generating two datasets: Germany—Gender—Europe which contains 867 posts of which hand-coding found 759 to be off topic and only 108 on topic (12%). In order to reach the required number of 200 on-topic posts, the missing 92 posts were coded in the second dataset: Germany—Gender—Not-Europe, giving us a total of 475 posts of which 183 were off topic and, as required, 292 on topic (61%).

The task of the German team was to manually code whether or not a post mentions one of six subtopics considered important in the case of Gender – Law, People, Culture, Values, Identity and New Social Movements – and also whether the sentiment of a post is predominantly positive, neutral or negative. After Europe-related posts were found in the Not-Europe datasets, we were instructed in Gender–Not-Europe to additionally code for the presence of a European dimension: "The post is

about Europe when it makes a reference to either the institutions of the EU, or any kind of interaction between at least two European countries" which refers to the 47 members of the Council of Europe at the end of 2021, i.e. before Russia was expelled in March 2022. We found that out of 292 Not-Europe posts, 4 are, in fact, about Europe (1.37%). Double-coding proved the necessary inter-personal robustness of the definitions of the variables (the Intercoder Reliability Test resulted in Krippendorff's Alphas between 0.797 and 0.983).

The 400 hand-coded Gender posts, 108 in the Europe and 292 non-Europe datasets, were then used by the Work Package leaders at Universitat Oberta de Catalunya to train a neural network which then coded an additional 1,393 posts, bringing the total to 1.793 Gender posts. This mixed, manually and Al-coded corpus of posts forms the basis for the tables, figures and statistical analyses of the present report.

Our analysis of the Social Media Representations of Gender focusses on two dimensions: the effects of a post being about Europe or not and the effects of the publisher of a post being a professional media actor versus a political actor, civil society organisation, common citizen or other.

Background

We have to keep in mind, that social media use itself is gendered. As Messias et al. (2017) have shown, users identified as white and male tend to attain higher positions in Twitter.

Drüeke & Zobl (2016) studied the German-language hashtag #aufschrei of 2013 – similar to but four years before #MeToo, which started in 2017 in the wake of the Weinstein scandal. They use a layered theory of the public sphere and quantitative and qualitative content analysis of #aufschrei tweets and of feminist blogs. They argue that Twitter adopts the function of a simple public, where values and norms are negotiated at an everyday level, which is increasingly infiltrated by antifeminist and sexist messages. Feminist blogs create an intermediate public, in that they generalize experiences and are oriented towards networking.

There has been progress in women's rights and gender equality in Europe, to the point where researchers find these the fundamental values to create a European polity. Galpin & Trenz (2019) argue that the 2019 European Parliament (EP) election was about the EU's fundamental values, with respect to multiculturalism and to gender equality and LGBTQ rights and therefore can be considered a 'first-order polity' election. Earlier EP elections had been described as 'second-order national elections' in which campaigns are fought by national parties on national issues. The debate in 2019 was driven in large parts by traditional news and social media platforms, which, the authors conclude, failed in fulfilling the function of holding MEPs and European party groupings adequately to account.

At the same time, the progress in gender issues has become the target of a backlash by "antigender" activists and right-wing populists across EU member states, particularly on social media. To what extent are the debates about gender equality on Twitter similar in three European countries, Germany, Italy, and Poland? Wallaschek et al. (2022) examined this question by collecting Twitter data around the 2021 International Women's Day and found that the debate remains nationally segmented. There is limited political engagement of citizens on Twitter across Europe. The authors also discuss the strengths and weaknesses of a cross-country social media comparison.

Berg (2019) has reconstructed the far-right narrative of the "gender ideology" that supposedly threatens the 'traditional family' and leads to the abolition of 'one's own people'. She finds that issues of gender and women's rights came to be linked to the topics of migration and Islam,

especially after the sexual assaults on New Year's Eve 2015/16 in Cologne, and that for pushing these linked narratives platforms such as Twitter, Facebook and Youtube have been used. "In leading this push, the AfD has demonstrated a sophisticated awareness of how to combine online tools with its offline political practices in a way that is publicly effective." Berg calls for a deconstruction of the acculturation of racist images linked to gender, "dismantling both the image of the 'oppressed woman wearing headscarves' as well as the 'migrant perpetrator of violence'."

The intersection of gender and migration is also the issue of Simpson (2020), who looks at different Islamophobic narratives employed by Identitarian East and West Germans, showing how portrayals of Muslim masculinity and femininity are used to create a sense of imminent threat to the public and private sphere and to German gender identity. She finds that mainstreaming Islamophobias "empowers local and regional politics to engage in 'moralizing borders', exacerbating anxieties about the nation, the region, and the body."

Legislation

A legally recognized union of same-sex couples was first introduced in Germany by the Civil Partnership Act (Lebenspartnerschaftsgesetz⁸), in force since 01.08.2001. At first, civil partners had the same obligations as married couples, but hardly any rights. This changed over the years, mainly due to several decisions by the Federal Constitutional Court. The registered civil partnership became equal to marriage in social law, in tax law, in the law on foreigners and citizenship and with regard to social insurance, in all areas of law, with the exception of the law of parentage and joint adoption. These last difference were removed by the "Law on the Introduction of the Right to Marriage for Persons of the Same Sex" (Marriage Opening Act, Eheöffnungsgesetz¹⁰) came into force on 01.10.2017. The law is based on a draft bill of the Bundesrat of 11.11.2015, which the Bundestag passed unchanged almost two years later on 30 June 2017. There are no referenda at the federal level in Germany.

The Act on Civil Law Protection against Acts of Violence and Stalking (Gewaltschutzgesetz¹¹) was enacted in 2001 and last revised in 2021. The Council of Europe Convention on preventing and combating violence against women and domestic violence, or Istanbul Convention for short, ¹² came into force in 2014, and in Germany in 2018. As part of its obligations, in November 2022 the independent reporting unit on gender-based violence started its work at the German Institute for Human Rights (DIMR). The reporting body is to contribute to creating a broad and reliable data basis in order to make developments and trends in relation to gender-based violence in Germany visible. In this way, gender-specific violence is to be prevented and combated in a more targeted manner. It

10 https://www.bgbl.de/xaver/bgbl/start.xav# bgbl %2F%2F*%5B%40attr id%3D%27bgbl117s2787. pdf%27%5D 1679499097505

- 11 https://www.gesetze-im-internet.de/gewschg/BJNR351310001.html
- 12 https://www.coe.int/en/web/istanbul-convention

⁸ https://www.gesetze-im-internet.de/lpartg/BJNR026610001.html

⁹ Source: LSVD, Öffnung der Ehe für gleichgeschlechtliche Paare: Fragen und Antworten, https://www.lsvd.de/de/ct/1340-Oeffnung-der-Ehe-fuer-gleichgeschlechtliche-Paare-Fragen-und-Antworten#eheoeffnungsgesetz

is to formulate recommendations to politics and administration in order to effectively design measures and programmes against gender-based violence and to improve the human rights situation of those affected. In addition, the reporting body is to inform the public and raise awareness.¹³

The Scientific Service of the German Bundestag, in 2007 compiled the most important legal measures on gender equality from 1977 to 2007, including the Parental Leave Act (2001), the General Equal Treatment Act (2006) and the Parental Benefits Act (2007). With the UN 2030 Agenda, a comprehensive goal for gender equality was agreed for the first time by the international community in 2015 as one of 17 global Sustainable Development Goals (SDGs) and as a cross-cutting issue. The Law on Equality between Women and Men in the Federal Administration and in the Federal Courts (Bundesgleichstellungsgesetz¹⁶) was passed in April 2015 and last revised in August 2021.

The Transsexual Act (Transsexuellengesetz, TSG, 1980¹⁷) introduced the right to change one's first name or also one's civil status from male to female or vice versa. Only these two gender options were provided for. The change of gender entry originally required for the person concerned to be sterilised and not married. It was not until 2011 and 2008 that the Federal Constitutional Court overturned these requirements. The procedure now has three prerequisites. Materially, it requires a sense of belonging to the other sex, whereby the TSG still assumes a purely dichotomous gender order. Secondly, this sense of belonging must have existed for at least three years and thirdly, it must be permanent. Formally, the procedure requires that these three conditions are confirmed by two independent psychiatric or sexual medical reports. Only then, a court may grant an application for change of civil status. In 2017, the Federal Constitutional Court, following the complaint of an inter*person, had ruled that in addition to leaving the gender entry open and the entries "male" and "female", there must also be another positive gender entry in Germany as long as the state obliges its citizens to register their gender. As a result, the legislator created the registration option "diverse" in an amendment of the Civil Status Act (Personenstandsgesetz, PStG18) which came into force in December 2018. The procedure under the PStG is not conducted before a court but by the registry office. Applicants only have to submit a medical certificate issued by any treating doctor stating that they have a "variant of gender development".

- http://www.gesetze-im-internet.de/bgleig 2015/BJNR064300015.html
- 17 https://www.gesetze-im-internet.de/tsg/BJNR016540980.html
- 18 § 45b, https://www.gesetze-im-internet.de/pstg/BJNR012210007.html

¹³ Deutschland setzt Verpflichtungen aus der Istanbul-Konvention um, https://www.bmfsfj.de/bmfsfj/aktuelles/alle-meldungen/deutschland-setzt-verpflichtungen-aus-der-istanbul-konvention-um-205292

Deutscher Bundestag, Wissenschaftlicher Dienst, Gleichstellung von Männern und Frauen in Deutschland, 2007, https://www.bundestag.de/resource/blob/412138/3770ffe54a7609ea3873ab824e571664/WD-9-085-07-pdf-data.pdf

^{15 &}lt;u>https://www.bundesregierung.de/breg-de/themen/nachhaltigkeitspolitik/rechtliche-gleichstellung-841120</u>

Replacing the largely defunct TSG with a Self-Determination Act (Selbstbestimmungsgesetz) was a priority project of the current German government (in office since December 2021). A draft law¹⁹ had been issued by the then-opposition Greens under the previous government in 2020. The current Federal Ministries for Family Affairs and for Justice so far have only published their Cornerstones of the Self-Determination Act²⁰ in June 2022 and an FAQ²¹ in December 2022. Passage of the Act then was expected at the end of 2022 and is currently announced for summer 2023. The decision over gender reassignment surgery is and, according to the Cornerstone paper, will remain to be taken by those affected and their doctors.

Implementing four EU Equal Treatment Directives, the General Equal Treatment Act (Allgemeine Gleichbehandlungsgesetz, AGG²²) came into force in August 2006 and was last amended in 2022. It aims to prevent or eliminate discrimination on grounds of racial or ethnic origin, gender, religion or belief, disability, age or sexual identity. Protection against discrimination in employment and occupation is the main focus of the AGG. In addition to a prohibition of discrimination under labour law and its exceptions, measures and obligations of the employer to protect against discrimination as well as rights of employees (right to complain, right to refuse performance) and their claims in the event of violations (compensation, damages) are regulated. The AGG also contains provisions on protection against discrimination in civil law transactions. In addition to a prohibition of discrimination under civil law on grounds of race or ethnic origin, a gender-specific prohibition of discrimination is also enshrined. However, in accordance with European law, this only applies to mass transactions and insurance under private law. The AGG also established the Federal Anti-Discrimination Agency as an independent contact point for people who are affected by discrimination.²³ In addition, the Act to Promote Pay Transparency between Women and Men (Entgelttransparenzgesetz, EntgTranspG, 2017, last amended in 2021²⁴) aims to address the persistent gender pay gap.

National context

Our research period pivots around the German national elections on 26 September 2021. Before, the public sphere was full of campaigning and afterwards it was dominated by the formation of the

- 22 Allgemeines Gleichbehandlungsgesetz (AGG), https://www.gesetze-iminternet.de/agg/BJNR189710006.html#BJNR189710006BJNG000100000
- 23 Antidiskriminierungsstelle des Bundes, https://www.antidiskriminierungsstelle.de/DE/startseite/startseite-node.html

¹⁹ Entwurf eines Gesetzes zur Aufhebung des Transsexuellengesetzes und Einführung des Selbstbestimmungsgesetzes (SelbstBestG), BT Drucksache 19/19755, 10.06.2020, https://dserver.bundestag.de/btd/19/197/1919755.pdf

²⁰ Eckpunkte des Bundesministeriums für Familie, Senioren, Frauen und Jugend und des Bundesministeriums der Justiz zum Selbstbestimmungsgesetz, 30.062022, https://www.bmfsfj.de/bmfsfj/aktuelles/alle-meldungen/eckpunkte-fuer-das-selbstbestimmungsgesetz-vorgestellt-199378

BMFSFJ, Fragen und Antworten zum Selbstbestimmungsgesetz, 29.12.2022, https://www.bmfsfj.de/bmfsfj/themen/gleichstellung/gleichgeschlechtliche-lebensweisengeschlechtsidentitaet/fragen-und-antworten-zum-selbstbestimmungsgesetz-199332

tripartite coalition (Social Democrats, Greens and Liberals) and negotiating the coalition treaty. Gender was an issue. All the democratic parties had formulated a positive agenda for advancing gender rights, strengthening measures against gender-based violence and for equal pay and the long-overdue replacement of the 1980 Transsexual Act by a Self-Determination Act. LGBTQ organisations checked the party programmes to give election advice to their communities. Queer Bild²⁵ showed up quite frequently in the coding process, which is a section on the Bild.de portal that was set up in 2017. The Springer press has not been known to be queer-friendly. Therefore, even though Queer Bild is as boulevardesque as Springer's main daily, Bild, it still seems counter-intuitive. It shows how mainstream the gender diversity discourse has become that Springer, of all, launched a product for this lucrative market.²⁶

For the radical right, gender and migration are the two core issues of their narratives. In WP2, we have found already that the radical right party AfD is particularly active on social media in Germany. Here we find this confirmed. Without looking for political leaning at all, the issues of gender and migration proved to be strong predictors of AfD and like-minded actors in the debate on Facebook and Twitter.

Instructions said that grammatical gender should be considered off-topic. In the German-speaking countries the debate about 'gendering', i.e. the use of gender-respecting nouns and pronouns, is at the polemical centre of the struggle for gender equality. For most, it is a way to signal sensitivity and empathy for and in language, to avoid discrimination and be more inclusive. For the right, it is an example of the "mainstream" culture imposing patronising language rules, of "political correctness", "cancel culture", "green-leftist wokeism". Framing something as "leftist", in rightist circles is damning enough, no further evidence needed (e.g. calling for people from the age of 14 to be able to decide their gender is "leftist"²⁷).

Gender "ideology" is the central theme of the radical right in Germany. They assume that gender is "natural", if not "god-given" (AfD: "Gender is a biological fact"²⁸) rather than socially constructed. They want to protect children from the encroaching influence of this "ideology" ("No gender experiments in day-care centres and schools"²⁹).

Identity politics is discussed as an issue between the generations. Die Zeit, in an interview with three Elder Statesmen from SPD, Linke and Greens: "A similar debate is taking place in all three left-wing German parties. Everywhere there is a group, mostly younger politicians, who want to emphasise identity-political demands more strongly and one, more established, who opposes this. And a third group that says: You're overdoing it with the argument."³⁰

²⁵ https://www.bild.de/lgbt/startseite/

For a critique, see "Queer" BILD und der vermeintlich tolerante Heterosexismus, Stopbildsexism, 28.03.2017, https://www.stopbildsexism.com/2017/03/28/queer-bild-und-der-vermeintlich-tolerante-heterosexismus/

²⁷ https://twitter.com/BILD/status/1450532628399075334

²⁸ https://www.facebook.com/345598788891061/posts/4230799233704311

²⁹ https://www.facebook.com/706758859393635/posts/4365338760202275

³⁰ https://twitter.com/zeitonline/status/1438919444819025922

Traditional family values and a traditional role of women is what unites nationalists, religious fundamentalists of any kind, anti-multi-culturalists, white suprematists in Germany, Russia and in Islamic nations.³¹

Quantitative analysis

Descriptive overview

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We can see in Figure 1 that People is the most frequently occurring Social Media Representation with over 30% of the observations pertaining to it. Moreover, Identity is the least occurring Social Media Representation. Values and Culture are more frequent, but far from the extent of People.

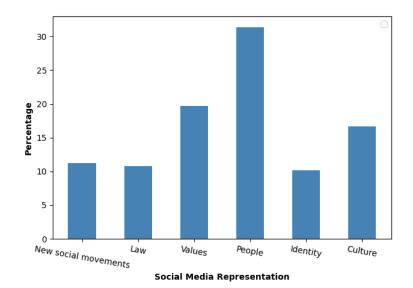


Figure 1. Social Media Representations – Distribution among Social Media Representations

Notes: Created with data from Table 3 presented in Appendix A. N = 5635.

In Figure 2 we see a spike in Social Media Representations in week 47, which is 22.-28. November 2021. People and Values are the most frequently occurring Social Media Representations during this week, as well as during any other week of the analysed period. The striking peak in week 47 in all dimensions but Identity might at least partially be explained by two events.

25 November was the International Day for the Elimination of Violence against Women,³² which was not limited to one day. UN Secretary-General Ban Ki-Moon launched the global campaign "The 16 Days of Activism Against Gender Violence" from 25 November to 10 December. The events and actions highlighted the Istanbul Convention, they involved public administrations, unions, all branches of the feminist movement, like the Soroptimist International³³ and they featured "Orange your World", a campaign to wear orange clothing and to light public buildings in that colour. City-

³¹ See ARTE Re: Der Feind ist schwul, 01.02.23, https://www.arte.tv/de/videos/107194-100-A/re-der-feind-ist-schwul/

³² https://www.un.org/en/observances/ending-violence-against-women-day

wide orange illumination was seen in Cologne³⁴ Munich,³⁵ Berlin³⁶ and in many small towns across Germany. Salzgitter additionally initiated the campaign "Real men are respectful". To this end, the Department for Equal Opportunity in the Municipal Professional Fire Department gained male allies, eight of whom showed face with the message: "what makes a 'real man' has nothing to do with violence or dominance, but with respect." Also several studies were timed to be published on the occasion. One, by the Wismar University of Applied Sciences and the University of Rostock, concluded that the portrayal of gender-based violence in fictional entertainment but also in news on German television is a problem because it sensationalises, instrumentalises or trivialises it, thus reinforcing stereotypes in our society.³⁸ On 23. November, then-Minister of Justice and Consumer Protection Christine Lambrecht presented the appalling figures from the Violence in Partnerships Survey 2020: "Every hour, an average of 13 women in Germany become victims of violence in partnerships. Every three days, a woman dies as a result of violence committed by her partner or expartner."

On 24 November 2021, the incoming government of social democrats, greens and liberals published its Coalition Treaty, ⁴⁰ before the new German government under Olaf Scholz (SPD) was sworn in on 8 December. The Treaty was intensely studied and critically appraised from all sides. Gender activists such as CSD Berlin, ⁴¹ Equal Pay Day ⁴² and Partei Mut ⁴³ were cautiously optimistic. Travestie für Deutschland wrote: "An entire generation grew up under the identity politics of a conservative prohibitionist party – and is rubbing its eyes after 16 years: What do you mean, Germany can also be queer?" ⁴⁴ At the other end of the spectrum, the AfD found all its fears confirmed. Particularly zeroing in on the concept of a "feminist foreign policy", it finds the Treaty "a purely ideological"

34 KHM says NO to violence against women!, 22.11.2021, https://www.facebook.com/100063767703263/posts/282084457260476

35 Gruppe ArbeiterInnenmacht, 29.11.2021, https://www.facebook.com/159758154114746/posts/4646925815397935

- 36 BZ, 25.11.2021, https://www.facebook.com/57187632436/posts/10161336178247437
- 37 Salzgitter Infos, 26.11.2021, https://www.facebook.com/312238148824731/posts/4561303300584840
- Zeit Online, TV: Eine tote Frau noch effektiver: eine tote vergewaltigte Frau bewegt viele Menschen zum Einschalten, 24.11.2021, https://twitter.com/zeitonline/status/1463585126798012424
- 39 Christine Lambrecht, 23.11.2021, https://www.facebook.com/176599482452270/posts/4333445206767656
- 40 Grüne Wunstorf, 24.11.2021, https://www.facebook.com/578746385902624/posts/1298750897235499
- 41 CSD Berlin, 25.11.2021, https://www.facebook.com/336189604596/posts/10159424801874597
- 42 Equal Pay Day, 26.11.2021, https://www.facebook.com/205054432839975/posts/4919109568101081
- 43 Partei Mut, 27.11.2021, https://www.facebook.com/209284042886132/posts/1265339957280530
- 44 Travestie für Deutschland, 25.11.2021, https://www.facebook.com/1088218057982118/posts/2376846592452585

pamphlet", the reading of which "makes one fearful and anxious" and which "will massively accelerate Germany's decline". ⁴⁵ In very much the same line of argument, the Federal Chairman of the German police union issued a highly sarcastic and astonishingly aggressive comment, ridiculing the government's plans on gender issues, migration and on prohibiting police surveillance. ⁴⁶ The business world expected "more bureaucracy" ⁴⁷

These two events might explain at least some of the peak in the social media debate on Gender in Germany in week 47. The plans of the incoming government involve Law projects which are based on Values. The UN Days Against Gender Violence are motivated by people's own experience and by a general experience based on gender, which is the definition of the variable People, and they are closely connected to the different branches of of the feminist Social Movement. Symbolic actions such as lighting a city orange, are cultural expressions and productions, which might cause the spike in Culture. Identity is the only of the six dimensions which does not peak in week 47. Maybe, this indicates that the gender debate is beyond the need for definitions (of man, woman, non-binary etc.) and has moved on to practically strengthening rights and ensuring their enforcement.

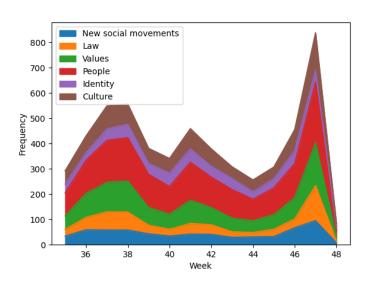


Figure 2. Social Media Representations – Relative importance over time

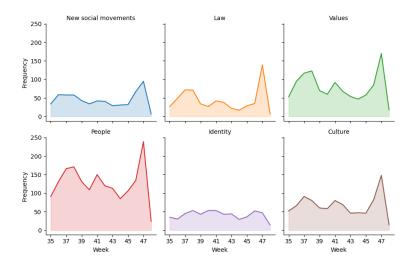
Notes: Created with data from Table 4 presented in Appendix A. N = 5635.

Figure 3 shows that there is a spike in all Social Media Representations in week 47 of 2021 except identity. The trends of each Social Media Representation are fairly stable over time when considering the other weeks.

Figure 3. Social Media Representations – Evolution over time

⁴⁵ Bernhard Zimniok, AfD MEP, 24.11.2021, https://www.facebook.com/100232087997794/posts/630662658288065

⁴⁶ DPolG Bundespolizeigewerkschaft, 25.11.2021, https://www.facebook.com/173415666027913/posts/4550256851677084



Notes: Created with data from Table 4 presented in Appendix A. N = 5635.

From Figure 4 we can see that at least one Social Media Representation occurs in all posts. Posts containing three Representations are the most common, making up more than 30% of the posts.

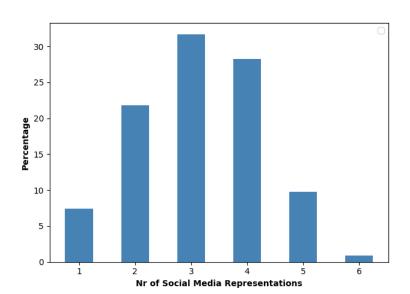
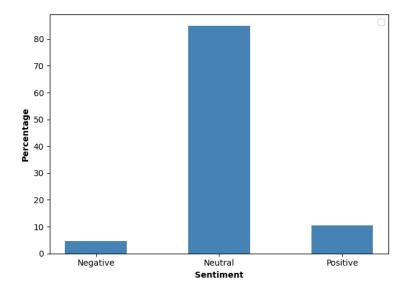


Figure 4. Number of Social Media Representations – Distribution among all posts

Notes: Created with data from Table 5 presented in Appendix A. N = 1793.

Figure 5 shows the sentiments of the posts. It should be noted that the sentiment describes the sentiment of the post, not the sentiment towards the topic Gender. More than 80% of the posts have a neutral sentiment. About 15% of them contain negative or positive sentiments. Among those, there are more positive sentiments than negative, which is the opposite from the findings in our Migration dataset.

Figure 5. Sentiments – Distribution among all posts



Notes: Created with data from Table 6 presented in Appendix A. N = 1793.

Comparisons between Europe and Not Europe

Posts not about Europe (1,427) are much more frequent than posts about Europe (366) (see Tables 9 and 10 that show total number of posts at the bottom). This is the reverse of the findings in the DE Report Migration.

The Not EUR set contains posts about metoo in the Icelandic national football team, a new antiabortion law in Texas, the state of women's rights in Afghanistan, Switzerland's Yes to marriage for all etc., but the majority of the posts are about Germany, at the national, regional or local level. For this dataset, we were asked to manually code posts which are, in fact, about Europe. These turned out to be 4 of 292 posts (1.37%).

In the EUR set, Europe and EU member states are mentioned in many of the posts, but a significant number are about Germany at the national, regional or local level. E.g., at the end of her 16-year chancellorship (i.e. at the beginning of our research period), Angela Merkel declared herself to be a feminist, in the sense "that women and men should participate equally in social life", which was quoted and commented quite a bit.⁴⁸ Or a post about the share of women in the newly elected Bundestag (one third).⁴⁹ Or several posts on the false claim of the CDU candidate for chancellor that he had supported marriage for all in 2017.⁵⁰ For this dataset, we were not asked to identify posts which actually lack a European dimension.

As shown in Figure 6, chi-squared tests conclude that there are statistically significant differences for the variables People, Identity, Culture and Values when comparing posts about Europe and not about Europe (p = 0.0). Values occurs more often in Europe posts.

⁴⁸ E.g. Très Click, 09.09.2021, https://www.facebook.com/1401721360094276/posts/2982296885370041

⁴⁹ Süddeutsche Zeitung, 26.10.2021, https://www.facebook.com/215982125159841/posts/4722033797887962

The variable Values is coded 1, when a post is about Ideas and beliefs on equality, balance, neutrality, nondiscrimination, tolerance, dignity, diversity, freedom related to gender. It has to be a typical European value and needs to be explicitly stated, e.g. equality between men and women. We find Values in law making and in civil society actions as underlying legitimising rationale of the actors. Values are mentioned in the context of international days of commemoration: International Day for Tolerance (16 November), Equality Week of the European Parliament (28 October), International Day for the Elimination of Violence against Women (25 November). They are expressed in award ceremonies for achieving steps towards more fully realising fundamental values. ⁵¹ But also the opposite brings up Values, e.g. criminal statistics showing to what degree Gender values are trampled underfoot⁵² or the ongoing Metoo movement. ⁵³ Also the continuing Gender pay gap raises calls for economic equality. ⁵⁴ In short, democratic voices in the gender debate regularly refer to fundamental values like non-discrimination, self-determination and equality. In striking contrast, when we look at far-right post, e.g. from the AfD, we will find there are no explicitly expressed values, not even general ones like 'fairness' or 'justice'.

Identity occurs more often in Not Europe posts. For the variable Identity to be coded 1, the post has to contain a definition of man, woman, non-binary, LGBTQ or (self-) identify someone as belonging to a particular gender. Here we find posts about the International Coming Out Day (11. October)⁵⁵, WorldMen'sDay (19 November), which in 2021 in Germany focussed on men in caring professions,⁵⁶ the Transgender Day of Remembrance (20 November)⁵⁷ as well as first-person accounts of a person's gender identity,⁵⁸ but also reports on state persecution of trans identities in the Near-East⁵⁹ and hundreds of trans-persons killed globally every year.⁶⁰ Here we do find far-right posts, e.g.

Quidproquo Wuppertal e.V., Die Wuppertaler Uni ist für ihre Bemühung um Gleichstellung von Männern und Frauen ausgezeichnet worden, 25.10.2021, https://www.facebook.com/1328181263934419/posts/4520279101391270

⁵² CDU Nordrhein-Westfalen, #wirgegengewalt, 22.11.2021, https://www.facebook.com/108185017409/posts/10159491394817410

^{53 37} Grad, 03.11.2021, https://www.facebook.com/119687041414803/posts/4696587803724681

[&]quot;The gender pay gap in Europe is about two months' salary." Der Spiegel, 08.11.2021, https://www.facebook.com/38246844868/posts/10160329973864869

⁵⁵ NRWSPDqueer, 11.10.2021, https://www.facebook.com/212067208907165/posts/4275362029244309

⁵⁶ Klinikum Siegen, 19.11.2021, https://www.facebook.com/180162945331889/posts/5118104414871026

⁵⁷ Queer Bild, 20.11.2021, https://www.facebook.com/611525722371273/posts/1787320438125123

Taz, Nora Eckert und ihr Leben als Transfrau, 12.10.2021, https://www.facebook.com/watch/live/?ref=watch_permalink&v=913065405967137

⁵⁹ Der Spiegel, Transsexuelle leben in Kuwait besonders gefährlich, 14.10.2021, https://twitter.com/derspiegel/status/1448648536057319424

ridiculing 'lifestyle feminsm'⁶¹ or an exhibition asking whether god is male, female or divers⁶² as well as a British professor arguing that gender is biological.⁶³

People and Culture occur roughly at the same percentage in both Europe and Not-Europe sets. Yet the chi-squared tests claim that there are statistically significant differences.

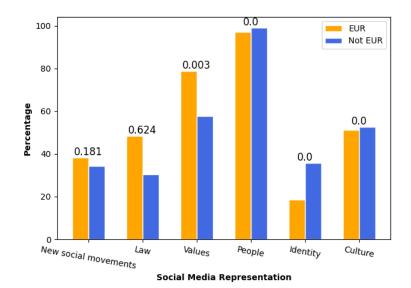


Figure 6. Social Media Representations – % occurrence among Europe and Not Europe posts respectively

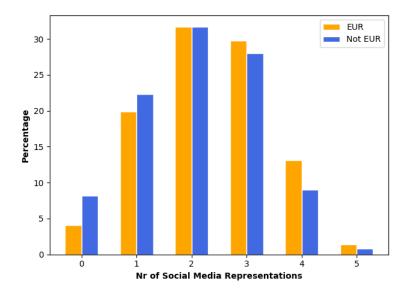
Notes: Created with data from Table 7 and Table 8 presented in Appendix B. P value from chisquared test of equal proportions between Europe and Not Europe in variable above each pair of bars. N = 1793 in each pair of comparison.

There are more Europe posts with 3 or more Social Media Representations and more Not Europe posts with 1 or less Social Media Representations. This can be seen in Figure 7.

Figure 7. Number of Social Media Representations – % occurrence among Europe and Not Europe posts respectively

Bild, "Mich widert der Lifestyle Feminismus an.", 26.10.2021, https://twitter.com/BILD/status/1453113089881149445

AfD-Fraktion im Hessischen Landtag, Gender mania is taking on ever more absurd forms, 16.10.2021, https://www.facebook.com/572530603230497/posts/1212710929212458



Notes: Created with data from Table 9 and Table 10 presented in Appendix B. N = 1793.

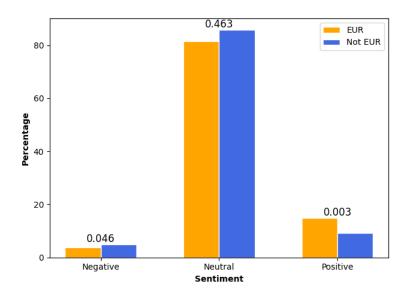
In Table 1, we can see that there are on average more Social Media Representations among Europe posts than Not Europe posts. The mean values for the Europe and Not Europe posts are 3.32 and 3.10 respectively and a t-test confirms that the difference in means is statistically significant (p = 0.0).

Table 1. Number of Social Media Representations by Europe and Not Europe – Mean, standard deviation (SD) and results from t—test of difference in means

	Europe	Not Europe	Significance	P value
Mean	3.3197	3.0974	***	0.0007
SD	(1.1)	(1.121)		

Chi-squared tests show that there are no statistically significant differences in the proportions of the Neutral Sentiment when comparing posts about Europe and not about Europe (p = 0.463), but there are significant differences for the Negative (p = 0.046) and the Positive (p = 0.003) Sentiment.

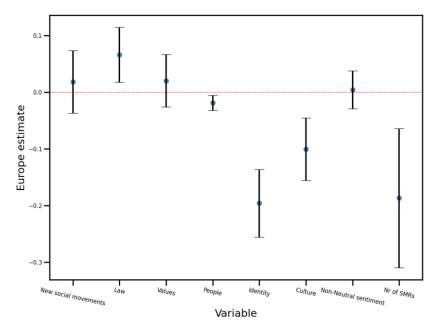
Figure 8. Sentiment – % occurrence among Europe and Not Europe posts respectively



Notes: Created with data from Table 11 and Table 12 presented in Appendix B. P value from chi–squared test of equal proportions between Europe and Not Europe in variable above pair of bars. N = 1793.

The coefficient estimates in Figure 9 show that there are several differences between Europe and Not Europe posts also when controlling for additional variables. Results from Logit regressions show that Law is more likely to occur among Europe posts than Not Europe posts. The effect is around 7 percentage points (Table 14), but based on the chi-squared test not statistically significant. At the same time, Identity, Culture and People are more likely to be observed in Not Europe posts, with effect sizes of around -20, -10 and -2 percentage points respectively (Tables 17, 18 and 16). However, there are no statistically significant differences in the occurrence of Social movements, Values (which contradicts the chi-squard test) and Non-Neutral sentiments (Positive and Negative sentiments together) between Europe and Not Europe posts. Finally, results from an OLS regression show that there are more Social Media Representations present in the Not Europe posts than in the Europe posts (Table 20).

Figure 9. Coefficient estimates Europe



Notes: Coefficient estimates and their 95 % confidence intervals of Europe variable from Model 3 of Table 13, Table 14, Table 15, Table 16, Table 17, Table 18, Table 19, Table 20 presented in Appendix $B. \ N = 1793$ in each estimation.

Comparisons between Media and Not Media

Posts by Media (246 or 14%) are less common than posts by Not-Media (1,547) (See Table 23 and Table 24). In the subset of 400 manually coded on-topic posts, 156 or 39% are by Media.

In addition to the extracted variable "is_newsmedia", the likewise extracted values of the variable "category" are also indicative of media. All the posts marked 1 in the is_newsmedia column, in the category column have Media, News Site or TV Channel.

Posts marked 0 in the is_newsmedia column, in the category column show, as we would expect, a colourful mix of blogger, NGOs, politicians, government organisation, museum, labour union, university etc. 38 posts are in the category "No-Media", among which we find many apparent common citizens. Some of whom also publish links to media content.⁶⁴ The supposed Not Media set also contains two posts categorised as "Broadcasting Media Production", including the PSM HR3,⁶⁵ one as "journalist" which is actually a regional Onlinemagazin⁶⁶, two "magazines", including the lesbian L-MAG,⁶⁷ two "Topic Newspapers", including Handelsblatt⁶⁸ and five posts marked as "TV

https://twitter.com/DrGrandMal/status/1439302769542844416

65 https://www.facebook.com/6025824653/posts/10159402699439654

66 https://www.facebook.com/100064854331435/posts/221363026702174

67 https://www.facebook.com/408025735709/posts/10165740572635710

68 https://www.facebook.com/104709558232/posts/10158653265708233

Show", four of which from two PSM stations, including the ZDF's 37 Grad.⁶⁹ It also contains a number of media which are mis-categorised, e.g. Sinsheim TV as "Activity General",⁷⁰ the right-wing alternative medium Hallo Meinung as "Person",⁷¹ the journalist Fleischhauer on Servus TV as "Author"⁷² and Queerspiegel, the LGBTI section of Tagesspiegel,⁷³ as "No Media".

In short, we are comparing a Media set in which all posts have is_newsmedia = 1, which is confirmed by category, with a Not-Media set in which, indicated by category and manually coded, 22 of 245 (9%) are, in fact, media. Therefore, we have to keep in mind that the actual differences between Media and Not-Media appear smaller than they actually are. We are under-stating the true effect of the differences.

Chi-squared tests conclude that there are statistically significant differences in the proportions of the Social Media Representations Social movements, Law, Values and Culture when comparing posts about Media and not about Media (p = 0.0 in all cases except for Law p = 0.042 and Culture p = 0.001).

Social movements and Culture occur more often in Media posts, in our hand-coded sample with a difference of 10 and 7 percentage points respectively. The variable Social movements was coded 1, when a post is about gender-related activities by the self-organised citizenry, including grass-roots social movements and NGOs, i.e. when it mentions "feminism", "Metoo" or "LGBTQ". The variable Culture is defined rather broadly, including artistic expression and cultural production with reference to gender, but also cultural habits and practices (including daily life); cultural institutions, including education, the media, science, and the Church; lifestyle, when related to gender. Here we find posts reporting on Hollywood stars protesting the new anti-abortion laws in the US, on Christian fundamentalism, on Metoo cases in sports, theatre, broadcasting, modelling, the life of a transsexual in Kuwait, a study on gender stereotypes in TV crime series, interviews with gender activists, reviews of books, both factual and fictional, cultural events on the International Day for the Elimination of Violence against Women.

Media, of course, report about social movements and cultural events, but why they would be talking about them significantly more often than Non-Media on social media in Germany is not clear.

Law and Values are more frequent among Non-Media posts, in our hand-coded sample with a difference of 27 and 30 percentage points respectively.

Civil society and certainly political actors, of course, speak about gender-related laws and their enforcement as well as their value foundations. But why they should do so significantly more than media, whose task it is to critically accompany legislation and check it against fundamental values, is unclear.

Intuitively we would expect that Social movements, People and Culture are more frequent in Not-Media posts, whereas Law and Values appear more frequently in Media posts. Also a closer analyses

- 69 https://www.facebook.com/119687041414803/posts/4696587803724681
- 70 https://www.facebook.com/329666987211525/posts/2030041210507419
- 71 https://www.facebook.com/watch/?v=2974003306156213
- 72 https://www.facebook.com/watch/?v=284611786819248
- 73 https://twitter.com/Queerspiegel/status/1450524696483610626

of individual posts in the respective sets did not reveal why in the German dataset the findings are the reverse of the expected.

Finally, there seem to be no statistically significant differences in People (p = 0.689) and in Identity (p = 0.807).

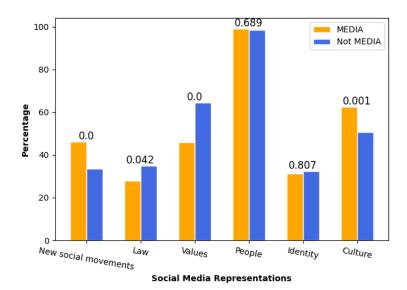


Figure 10. Social Media Representations – % occurrence among Media and Not Media posts respectively

Notes: Created with data from Table 21 and Table 22 presented in Appendix C. P value from chisquared test of equal proportions between Media and Not Media in variable above each pair of bars. N = 1793 in each pair of comparison.

There are more Media posts with 1 or 2 Social Media Representations and more Not Media posts with 3 or 4 Representations. This can be seen in Figure 11.

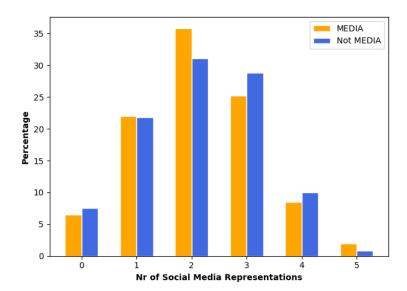


Figure 11. Number of Social Media Representations – % occurrence among Media and Not Media posts respectively

Notes: Created with data from Table 23 and Table 24 presented in Appendix C. N = 1793.

From the information in Table 2, we can see that there are on average about the same number of Social Media Representations in Media posts and in Not Media posts. The mean values for the Media and Not Media posts are 3.13 and 3.14 respectively and a t-test confirms that the difference in means is not statistically significant (p = 0.896).

Table 2. Number of Social Media Representations by Media and not Media – Mean, standard deviation (SD) and results from t–test of difference in means

	Media	Not Media	Significance	P value
Mean	3.1341	3.1441		0.8965
SD	(1.115)	(1.121)		

Chi-squared tests conclude that there are statistically significant differences in the proportions of Negative (p = 0.003) and Positive Sentiments (p = 0.0) when comparing posts about Media and not about Media, while there are no statistically significant differences between Media and Not Media with respect to Neutral Sentiments (p = 0.106).

0.106 MEDIA Not MEDIA 0.0 0.003

Figure 12. Sentiment – % occurrence among Media and Not Media posts respectively

Notes: Created with data from Table 25 and Table 26 presented in Appendix C. P value from chi–squared test of equal proportions between Media and Not Media in variable above pair of bars. N = 1793.

Neutral

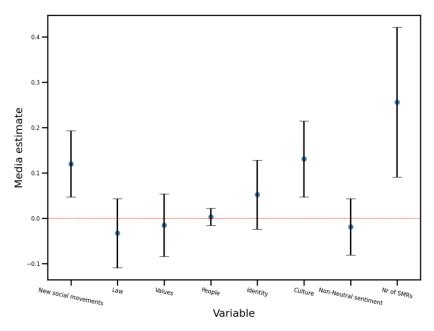
Sentiment

Positive

Negative

The coefficient estimates in Figure 13 show that there are several differences between Media and Not Media posts also when controlling for additional variables. Results from Logit regressions confirm that Social Movements and Culture occur more often among the Media posts as compared to the Not Media posts. The effects are around 12 and 13 percentage points respectively (Tables 27 and 32). There are no statistically significant differences in the occurrence of the other variables between Media and Not Media posts. Finally, results from an OLS regression show that there are more Social Media Representations present in the Europe posts than the Not Europe posts.

Figure 13. Coefficient estimates Media



Notes: Coefficient estimates and their 95 % confidence intervals of Media variable from Model 3 of Table 27, Table 28, Table 39, Table 31, Table 32, Table 33, Table 34. presented in Appendix C. N = 1793 in each estimation.

Illustrative examples

Figure 14 shows a post from the German EUR Gender dataset, which is exemplary of the posts containing the Social Media Representation with the largest coefficient estimate of Europe: Law. The post is by Katapult, a "magazine for cartography and social sciences", 74 which specialises in data visualisations, particularly in the forms of maps. In this post from 16. September 2021, 75 and thus before the national elections in Germany, the journalists show the positions of the political parties on the Transsexual Act (TSG), arguably the single most broken piece of gender-related legislation in Germany that everyone, at least in the gender movements, agrees needs urgent fixing. After a brief text summarising the legal status quo as described in the Legislation section above, the post presents three positions towards the TSG and the parties which subscribe to them: "abolishing because it is discriminatory": Greens, Liberals, Left; "reforming because it is discriminatory": Social Democrats and "keeping it as it is": the two Christian Union parties and the AfD.

Figure 14. Illustrative example from Facebook

⁷⁴ https://katapult-magazin.de/



Figure 15 shows a post from the German Not_EUR Gender dataset which is exemplary of the posts containing the Social Media Representation with the smallest coefficient estimate of Europe: Identity. While there are posts which actually define, e.g. bisexuality⁷⁶ as the Codebook requires, more 'typical' are gender representations which question gender identity. The present post by the weekly Zeit Online is about the new album by pop musician Drangsal. "Finally", writes the reviewer, "there are new love songs about queerness, sex and self torment." Almost every track is about breaking down his previous Drangal (i.e. tribulation) identity. "Everything is meant to become beautifully ambiguous: his music and his relationship states, his desire and his gender." Title of the article and one of the songs: "Girls are the most beautiful boys."⁷⁷

Figure 15. Illustrative example from Twitter

⁷⁶ Uni Hamburg: https://www.facebook.com/195350913920671/posts/4127914637330926



Figure 16 shows a post posted by media from the German Not_EUR Gender dataset which is exemplary of the posts containing the Social Media Representation with the largest coefficient estimate of Media: Culture. Metoo, the movement which was triggered in 2017 by US film producer Harvey Weinstein's sexual abuses, was still very much an issue in Germany at the end of 2021 with new and ongoing cases in fashion, sports, theatre, broadcasting and other sectors of the creative industries. Next to Weinstein, the present post by the newspaper Taz⁷⁸ mentions two of the most prominent cases in Germany: the former editor in chief of the boulevard paper Bild and a comedian and TV presenter. The post announced a podcast in which journalists reflect on the question of how to research these difficult cases of sexual abuse in movies, newspapers and TV. Ordered chronologically, Metoo is present in the first and the last post and throughout the entire period and can therefore been seen as typical of the set.

Figure 16. Illustrative example from Twitter



Figure 17 shows a post posted by not media from the German EUR Gender dataset which is exemplary of the posts containing the Social Media Representation with the smallest coefficient estimate of Media: Law. In this Facebook post, CSD Berlin in a bi-lingual Germ and English text, of which here only the English version is shown, summarises the queer political plans of the new three-party German government.⁷⁹ The Transgender Act alone is mentioned in 14.5% of the posts in the German EUR Gender Not-Media set. After the new government had published its Coalition Treaty on 24 November 2021, about half of the posts in our set, just like Figure 17, discuss the plans for gender legislation.

Figure 17. Illustrative example from Facebook



ENGL: The new german government coalition of SPD, FDP and Bündnis90/DieGrünen has big queer political plans, as expressed in their coalition agreement:

- 1. The equal treatment article of the Basic Law (Article 3, Paragraph 3 of the Basic Law) is to be expanded to include a ban on discrimination based on sexual identity.
- 2. A "National Action Plan for Acceptance and Protection of Sexual and Gender Diversity" is to be drawn up.
- 3. Family law is to be modernized. Means, for example: "If a child is born into the marriage of two women, both are automatically legal mothers of the child, unless otherwise agreed."
- 4. There will be more government programs for older queer people.
- 5. In Section 46, Paragraph 2 of the Criminal Code, gender-specific and homophobic motives are to be expressly included and hate crime based on gender and against queer people is to be recorded separately by the federal and state police forces.
- 6. The old and discriminatory "transsexual law" is being replaced by a self-determination law.
- 7. "We will set up a compensation fund for trans and inter-people who have suffered physical injuries or forced divorces due to previous legislation."
- physical injuries or forced divorces due to previous legislation." 8. Asylum procedures for queer refugees are being reviewed.
- 9. The partial blood donation ban for gay and bisexual men as well as trans * will be completely abolished.
- 10. A ban on so-called conversion or reparation therapies in adults is being examined.11. The government wants to work to ensure that all same-sex marriages and civil partnerships are recognized in all member states of the EU.

We are happy and wish our new government every success with the implementation! Foto: pixabay





Conclusions

The present paper analyses the Gender debate on German Facebook and Twitter in the period from September to including November 2021. This debate was dominated by the national elections in Germany on 26 September 2021: before, by the candidate's promises on Gender politics and after, by the plans of the newly elected government announced in the Coalition Treaty published on 24 November. This widely discussed announcement as well as the International Day for the Elimination of Violence against Women on 25 November with its numerous events across Germany contributed to a spike in social media activity in general and in all of our Social Media Representations except for one in week 47.

For the radical right, gender and migration are the two core issues of their narratives. In WP2, we have found already that the far-right party AfD is particularly active on social media in Germany. Here we find this confirmed. Without looking for political leaning at all, the issues of gender and migration proved to be strong predictors of AfD and like-minded actors in the debate on Facebook and Twitter. "Gender ideology" is one of their central phrases. It assumes that Gender is a biological fact, whereas the Left-Green 'ideology' claims that it is socially constructed. The topos reproduces stereotypes of traditional Christian family values and a traditional role of women which are then framed as under threat from two sides: the women's and LGBTQ movements with their 'socialist egalitarianism' who want to exert their encroaching influence even on little children, and stereotypes of a migrant other.

This connection of Gender and Migration/Islam dates back at least the sexual assaults on New Year's Eve 2015/16 in Cologne, where the culprits were identified as North-African, Muslim, young migrant men. ⁸⁰ It was escalated to top priority by AfD MP Alice Weidel's infamous speech in the Bundestag on 16.05.2018 in which she ranted about "Burqas, headscarf girls and alimented knife men". ⁸¹ This creates a simplistic, yet highly toxic dualism: On the one side, there is the 'bio-German' man who claims his nativist right over his soil and his women. On the other, there are waves of young Muslim migrant man flooding Germany and its social security system, group-raping German women, reproducing like rabbits, with the ultimate goal of "The Great Replacement". ⁸² A German version of this was published by then SPD politician and member of the Executive Board of Deutsche Bundesbank Thilo Sarrazin in his book *Germany Abolishes Itself* (2010).

The intersection of gender and migration becomes evident in our data. In the set of 400 manually coded posts on topic for Gender, a search for keywords indicative of migration shows that about half the posts in that set refer to migrants in a supportive, solidary way (a CSO who tries to motivate

⁸⁰ DW, Fünf Jahre danach: Lehren aus der Kölner Silvesternacht, 31.12.2020, https://www.dw.com/de/f%C3%BCnf-jahre-danach-lehren-aus-der-k%C3%B6lner-silvesternacht/a-55980209

⁸¹ Bundestag, Weidel-Einspruch gegen Ordnungsruf mit 549 Stimmen abgelehnt, 17.05.2018, https://www.bundestag.de/dokumente/textarchiv/2018/kw20-de-einspruch-ordnungsruf-555494

For a history of the topos, see The Guardian, A deadly ideology: how the 'great replacement theory' went mainstream, 08.06.2022, https://www.theguardian.com/world/2022/jun/08/a-deadly-ideology-how-the-great-replacement-theory-went-mainstream. It starts from the 1916 book The Passing of the Great Race by US lawyer, zoologist, anthropologist, eugenicist and advocate of scientific racism, Madison Grant, mentions French philosopher Alain de Benoist's Nouvelle Droite movement and leads to to French philosopher Renaud Camus' book Le Grand Remplacement (2011), an anti-Muslim, anti-immigration conspiracy theory.

eligible voters with a migration background to use their right to vote, ⁸³ a CSO which supports women who have experienced violence addressing migrant women in particular, ⁸⁴ a critique on Die Linke for leaving unmentioned such topics as equality, anti-racism and migration in a strategy paper ⁸⁵ and similar) while about half the posts are from AfD manifesting the linkage of the Gender topic with Migration. ⁸⁶ The latter primarily address the new government's Coalition Treaty: "Imagine the Merkel government, only with even more immigration, gender and climate delusions. This is the programme of the coalition government." They call the Treaty a "list of ideological insanities", ridiculing the concept of a "feminist foreign policy" and predicting a massive acceleration of Germany's decline: "Germany is facing dark times."

When looking at the effects of a Gender post being about Europe or not, we find statistically significant differences for four of our Social Media Representations. The variable Values proved to be particularly expressive. It appears more often in Europe posts. This might be an indication that Gender legislation to a certain degree has moved to the Union level. Values are mentioned to legitimise law making and civil society actions by linking them to fundamental rights and freedoms. They are expressed positively in award ceremonies for achieving steps towards realising values and in the context of international days of commemoration. Values are also brought up where they are trampled underfoot, in the ongoing Metoo movement, in statistics on gender-related crimes, in reports about the continuing Gender pay gap.

In short, values are called up in the Gender debate in order to measure reality against them and to mobilise political will for legislation and other measures to improve reality where it is lacking. In this sense, democratic voices in the gender debate regularly refer to fundamental values like non-discrimination, self-determination and equality. In striking contrast, when we look at far-right post, e.g. from the AfD, we will find there are no explicitly expressed values, not even general ones like 'fairness' or 'justice'. The right are very clear and aggressive about what they do not like, but do not offer any any positive value alternatives. The AfD party slogan is: "Germany, but normal". This "normality" is not a value, but the longing for an imaginary status quo ante, before the arrival of migrants and before the sexual confusion caused by the women's and the LGBTQ movements.

The variable "Values" therefore proved to be a good indicator of two kinds of policy frameworks: Democratic actors base their policy narratives on values and principles, at the highest level expressed in the Constitution and the Declaration of Human Rights, which are thought of as universal and as entailing the obligation to positively make these values a reality everywhere,

https://www.facebook.com/120508577977637/posts/4955499377811842

⁸⁴ https://www.facebook.com/264688680239475/posts/6375496449158637

⁸⁵ https://twitter.com/tomfelicious/status/1454027642844352517

⁸⁶ https://www.facebook.com/105196990914241/posts/565182851582317, https://www.facebook.com/319006178685355/posts/968105463775420, https://www.facebook.com/459077044164282/posts/6621052127966712, https://www.facebook.com/105196990914241/posts/565182851582317, https://www.facebook.com/827542717585199/posts/1637835483222581, https://www.facebook.com/173415666027913/posts/4550256851677084.

⁸⁷____https://www.facebook.com/1162229030454420/posts/4944283395582279

⁸⁸ https://www.facebook.com/100232087997794/posts/630662658288065

regardless of one's own conflicting interests or those of others. The other framework is promoting purely interest-based policies. "Germany First" is an expression of group egotism at national level. This goes along with identity-based expression which demands the monopolisation of privileges and power by 'Bio-Germans'. Where Thatcher's statement that "there is no such thing as society" has sunk in, there is no space anymore where values can be agreed and agreed values can guide policies. What remains then is resistance against change and the idealisation of a "normality" projected back to various periods of history (Reichsbürger!) 'when a man was still a man and woman still woman'.

Identity occurs more often in Not-Europe posts. This seems to indicate a more local or national perspective. On the positive side, here we find posts about the International Coming Out Day, WorldMen'sDay and the Transgender Day of Remembrance as well as first-person accounts of a person's gender identity. On the negative side, we see reports on thousands of women and hundreds of trans-persons killed globally every year and about state persecution of trans identities in the Near-East. And again, we find far-right posts, e.g. ridiculing 'lifestyle feminism' or an exhibition asking whether god is male, female or divers as well as a British professor arguing that gender is biological.

While the chi-squared tests claim that there are statistically significant differences for People and Culture as well, they occur roughly at the same percentage in both Europe and Not-Europe sets.

In WP2, we had found already that professional (news) media are important voices in the chorus on social media in Germany. When looking at the effects of a Gender post being published by a professional media actor or not, we again find statistically significant differences for four of our six Social Media Representations. The variables Social movements and Culture occur more often in Media posts, in our hand-coded sample with a difference of 10 and 7 percentage points respectively. Media, of course, report about social movements and cultural events, but why they would be talking about them significantly more often on social media than civil society, politicians and common citizens is not clear.

Law and Values are more frequent among Non-Media posts, in our hand-coded sample with a difference of 27 and 30 percentage points respectively. Civil society and certainly political actors, of course, speak about gender-related laws and their enforcement as well as their value foundations. But why they should do so significantly more than media, whose task it is to critically accompany legislation and check it against fundamental values, is again unclear. Intuitively we would expect the opposite: Social movements and Culture are more frequent in Not-Media posts, whereas Law and Values appear more frequently in Media posts, yet even a closer analysis of individual posts in the respective sets did not reveal why in the findings in the German dataset are such.

When looking at the sentiments of the posts in our sample, we find that 85% of them are written in a neutral tone. Ten percent of the others are positive. That leaves only five percent of posts expressing a negative sentiment. This is in contrast to the impression often conveyed in public discussion of social media leading to a brutalization of the debate, to constant boundary crossings, trolling and hate speech. The latter, we can confirm, is not present in our sample. Since we can safely assume that Gender is an issue prone for triggering hate speech, we must conclude that

Facebook and Twitter did a good job in detecting and removing it. 90 Considering that the majority of posts in our sample are not by media actors, who we might assume to be guided by professional ethics to separate reporting and opinion, we can conclude that the debate we find is quite civilised and considerate. The impression that social media are dominated by excited, hateful, toxic communications seems to be caused by a small minority. In both cases, comparing for Europe and for Media, the differences for Negative and Positive Sentiment are statistically significant

The question, whether there are similar debates about gender across Europe and whether these are interconnected across border into something like a European public sphere, cannot be answered based on the present national dataset but only by overviewing all of the country reports.

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Appendices

Appendix A. Tables supporting the section on Descriptive overview

Table 3. Social Media Representations – Frequency and % occurrence among all posts

Social Media Representation	Number of of Social Media Representations	% of Social Media Representations	% of Posts
New social movements	630	11.2	35.1

While this seems to be case for our research period, it might no longer be so, since Elon Musk took over Twitter.

Law	609	10.8	34.0
Values	1110	19.7	61.9
People	1770	31.4	98.7
Identity	577	10.2	32.2
Culture	939	16.7	52.4
Total	5635	100.0	314.3

Table 4. Social Media Representations – Frequency by week

Unnamed: 0	New social movement s	Law	Values	People	Identity	Culture
35	34	27	53	91	35	52
36	59	49	95	131	30	66
37	58	72	117	166	45	91
38	58	71	123	171	53	80
39	43	34	70	131	43	60
40	34	27	60	109	53	58
41	42	42	92	150	53	80
42	41	38	68	120	43	69
43	29	22	54	113	44	46
44	31	17	47	85	29	47
45	32	29	58	106	36	46
46	67	35	85	134	52	82
47	95	139	170	239	47	148
48	7	7	18	24	14	14
Total	630	609	1110	1770	577	939

Table 5. Number of Social Media Representations in posts-Frequency and % occurrence among all posts

Nr of Social Media Representations	Number of Posts	% of Posts
1	132	7.4
2	391	21.8
3	569	31.7
4	508	28.3

5	176	9.8
6	17	0.9
Total	1793	100.0

Table 6. Sentiment – Frequency and % occurrence among all posts

Sentiment	Number of Posts	% of Posts
Negative	84	4.7
Neutral	1522	84.9
Positive	187	10.4
Total	1793	100.0

Appendix B. Tables supporting the section on Comparisons – Europe and Not Europe

Table 7. Social Media Representations Europe – Frequency and % occurrence among Europe posts

Social Media Representation	Number of Social Media Representations	% of Social Media Representations	% of Posts
New social movements	140	11.5	38.3
Law	177	14.6	48.4
Values	288	23.7	78.7
People	355	29.2	97.0
Identity	68	5.6	18.6
Culture	187	15.4	51.1
Total	1215	100.0	332.0

Table 8. Social Media Representations Not Europe – Frequency and % occurrence among Not Europe posts

Social Media Representation	Number of Social Media Representations	% of Social Media Representations	% of Posts
New social movements	490	11.1	34.3
Law	432	9.8	30.3
Values	822	18.6	57.6
People	1415	32.0	99.2
Identity	509	11.5	35.7
Culture	752	17.0	52.7

Total 4420 100.0 309.7

Table 9. Number of Social Media Representations Europe – Frequency and % occurrence among Europe posts

Nr of Social Media Representations	Number of Posts	% of Posts
1	15	4.1
2	73	19.9
3	116	31.7
4	109	29.8
5	48	13.1
6	5	1.4
Total	366	100.0

Table 10. Number of Social Media Representations Not Europe – Frequency and % occurrence among Not Europe posts

Nr of Social Media Representations	Number of Posts	% of Posts
1	117	8.2
2	318	22.3
3	453	31.7
4	399	28.0
5	128	9.0
6	12	0.8
Total	1427	100.0

Table 11. Sentiment Europe – Frequency and % occurrence among Europe posts

Sentiment	Number of Posts	% of Posts
Negative	14	3.8
Neutral	298	81.4
Positive	54	14.8
Total	366	100.0

Table 12. Sentiment Not Europe – Frequency and % occurrence among Not Europe posts

Sentiment	Number of Posts	% of Posts
Negative	70	4.9
Neutral	1224	85.8
Positive	133	9.3

Total 1427 100.0

Table 13. Marginal effects of Logistic regressions with New Social Movements as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.0386	0.0211	0.0182
	(0.028)	(0.028)	(0.028)
Twitter		-0.1076****	-0.1073****
		(0.028)	(0.028)
Interactions		-3.53e-06	–5.075e–06
		(0.0)	(0.0)
Followers		7.832e-08***	8.295e-08***
		(0.0)	(0.0)
Sentiment Score		-0.0232****	-0.0226****
		(0.006)	(0.006)
October			-0.0258
			(0.047)
November			0.1129
			(0.085)
week			-0.0108
			(0.009)
N	1793	1793	1793
Pseudo R–squared	0.00	0.01	0.02

Table 14. Marginal effects of Logistic regressions with Law as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.1683****	0.0741***	0.0664***
	(0.025)	(0.025)	(0.025)
Twitter		-0.3574***	-0.3502****
		(0.03)	(0.03)
Interactions		3.569e-05**	3.394e-05**
		(0.0)	(0.0)
Followers		6.742e-08**	7.237e-08**
		(0.0)	(0.0)

Sentiment Score		0.0032	0.0040
		(0.006)	(0.006)
October			-0.2144***
			(0.044)
November			-0.2337***
			(0.081)
week			0.0268***
			(0.009)
N	1793	1793	1793
Pseudo R–squared	0.02	0.09	0.10
Table 15. M	larginal effects of Logistic regr	essions with Values as depend	dent variable
Variable	Model 1	Model 2	Model 3
Europe	0.2285****	0.0224	0.0203
	(0.03)	(0.024)	(0.024)
Twitter		-0.4462***	-0.4467***
		(0.014)	(0.014)
Interactions		7.002e-06	3.294e-06
		(0.0)	(0.0)
Followers		-5.086e-08**	-4.705e-08*
		(0.0)	(0.0)
Sentiment Score		0.0034	0.0031
		(0.005)	(0.005)
October			-0.0924**
			(0.04)
November			-0.0434
			(0.075)
week			6.305e-05
			(0.008)
N	1793	1793	1793

Table 16. Marginal effects of Logistic regressions with People as dependent variable

Pseudo R-squared

0.02

0.27

0.27

Variable	Model 1	Model 2	Model 3
Europe	-0.0163***	-0.0195***	-0.0186***
	(0.006)	(0.007)	(0.007)
Twitter		-0.0118*	-0.0124*
		(0.007)	(0.007)
Interactions		-1.822e-06*	-2.07e-06*
		(0.0)	(0.0)
Followers		7.364e-09	6.193e-09
		(0.0)	(0.0)
Sentiment Score		-0.0007	-0.0007
		(0.001)	(0.001)
October			0.0184*
			(0.011)
November			0.0233
			(0.02)
week			-0.0032
			(0.002)
N	1793	1793	1793
Pseudo R–squared	0.04	0.05	0.07

Table 17. Marginal effects of Logistic regressions with Identity as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	-0.1896****	-0.2020****	-0.1961****
	(0.03)	(0.031)	(0.03)
Twitter		-0.0316	-0.0360
		(0.026)	(0.026)
Interactions		3.999e-07	2.98e-06
		(0.0)	(0.0)
Followers		-7.77e-08**	-8.332e-08***
		(0.0)	(0.0)
Sentiment Score		0.0005	-5.411e-05
		(0.006)	(0.006)

October			0.1902****
			(0.046)
November			0.1951**
			(0.086)
week			-0.0198**
			(0.009)
N	1793	1793	1793
Pseudo R–squared	0.02	0.02	0.03
Table 18. Ma	arginal effects of Logistic regre	essions with Culture as depend	ent variable
Variable	Model 1	Model 2	Model 3
Europe	-0.0160	-0.0989****	-0.1007****
	(0.029)	(0.028)	(0.028)
Twitter		-0.3106****	-0.3113****
		(0.035)	(0.025)

Europe	-0.0160	-0.0989***	-0.1007****
	(0.029)	(0.028)	(0.028)
Twitter		-0.3106****	-0.3113****
		(0.025)	(0.025)
Interactions		2.669e-05	2.876e-05
		(0.0)	(0.0)
Followers		1.299e-07****	1.326e-07****
		(0.0)	(0.0)
Sentiment Score		-0.0098	-0.0089
		(0.006)	(0.006)
October			0.0629
			(0.048)
November			0.1700*
			(0.088)
week			-0.0117
			(0.009)
N	1793	1793	1793
Pseudo R–squared	0.00	0.05	0.06

Table 19. Marginal effects of Logistic regressions with Non–neutral Sentiment as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.0408**	0.0051	0.0043

	(0.02)	(0.017)	(0.017)
Twitter		-0.0241	-0.0246
		(0.02)	(0.02)
Interactions		-4.838e-06	-3.297e-06
		(0.0)	(0.0)
Followers		-3.16e-08	-3.106e-08
		(0.0)	(0.0)
Sentiment Score		0.0509****	0.0511****
		(0.005)	(0.005)
October			0.0175
			(0.029)
November			0.0121
			(0.056)
week			0.0019
			(0.006)
N	1793	1793	1793
Pseudo R–squared	0.00	0.12	0.12

Table 20. Coefficient estimates of OLS regressions with Number of Social Media Representations as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.2223***	-0.1792***	-0.1870***
	(0.0646)	(0.0629)	(0.0626)
Twitter		-1.3824***	-1.3806***
		(0.0520)	(0.0519)
Interactions		0.0001**	0.0001**
		(0.0000)	(0.0000)
Followers		0.0000***	0.0000***
		(0.0000)	(0.0000)
Sentiment Score		-0.0261**	-0.0248**
		(0.0119)	(0.0120)
October			-0.0632
			(0.0979)

November			0.2126
			(0.1780)
week			-0.0173
			(0.0184)
Intercept	3.0974***	3.5443***	4.2054***
nan	(0.0297)	(0.0315)	(0.6816)
R–squared	0.0064	0.2718	0.2771
R–squared Adj.	0.0058	0.2697	0.2738
N	1793	1793	1793

Appendix C. Tables supporting the section on Comparisons – Media and Not Media

Table 21. Social Media Representations Media – Frequency and % occurrence among Media posts

Social Media Representation	Number of Social Media Representations	% of Social Media Representations	% of Posts
New social movements	114	14.8	46.3
Law	69	8.9	28.0
Values	113	14.7	45.9
People	244	31.6	99.2
Identity	77	10.0	31.3
Culture	154	20.0	62.6
Total	771	100.0	313.4

Table 22. Social Media Representations Not Media – Frequency and % occurrence among Not Media posts

Social Media Representation	Number of Social Media Representations	% of Social Media Representations	% of Posts
New social movements	516	10.6	33.4
Law	540	11.1	34.9
Values	997	20.5	64.4
People	1526	31.4	98.6
Identity	500	10.3	32.3
Culture	785	16.1	50.7

Total 4864 100.0 314.4

Table 23. Number of Social Media Representations Media – Frequency and % occurrence among Media posts

Nr of Social Media Representations	Number of Posts	% of Posts
1	16	6.5
2	54	22.0
3	88	35.8
4	62	25.2
5	21	8.5
6	5	2.0
Total	246	100.0

Table 24. Number of Social Media Representations Not Media – Frequency and % occurrence among Not Media posts

Nr of Social Media Representations	Number of Posts	% of Posts
1	116	7.5
2	337	21.8
3	481	31.1
4	446	28.8
5	155	10.0
6	12	0.8
Total	1547	100.0

Table 25. Sentiment Media – Frequency and % occurrence among Media posts

Sentiment	Number of Posts	% of Posts
Negative	17	6.9
Neutral	225	91.5
Positive	4	1.6
Total	246	100.0

Table 26. Sentiment Not Media – Frequency and % occurrence among Not Media posts

Sentiment	Number of Posts	% of Posts
Negative	67	4.3
Neutral	1297	83.8
Positive	183	11.8

Total 1547 100.0

Table 27. Marginal effects of Logistic regressions with New Social Movements as dependent variable

Variable	Model 1	Model 2	Model 3
Media	0.1233****	0.1161***	0.1200***
	(0.031)	(0.037)	(0.037)
Twitter		-0.1120****	-0.1107****
		(0.027)	(0.027)
Interactions		-3.867e-06	-5.479e-06
		(0.0)	(0.0)
Followers		2.703e-08	2.995e-08
		(0.0)	(0.0)
Sentiment Score		-0.0211***	-0.0205***
		(0.006)	(0.006)
October			-0.0345
			(0.048)
November			0.1016
			(0.085)
week			-0.0092
			(0.009)
N	1793	1793	1793
Pseudo R–squared	0.01	0.02	0.02

Table 28. Marginal effects of Logistic regressions with Law as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.0713**	-0.0449	-0.0328
	(0.034)	(0.039)	(0.039)
Twitter		-0.3774***	-0.3680****
		(0.029)	(0.029)
Interactions		3.902e-05***	3.678e-05**
		(0.0)	(0.0)
Followers		8.863e-08***	8.827e-08***
		(0.0)	(0.0)

Sentiment Score		0.0033	0.0042
		(0.006)	(0.006)
October			-0.2182****
			(0.044)
November			-0.2384***
			(0.081)
week			0.0275***
			(0.009)
N	1793	1793	1793
Pseudo R–squared	0.00	0.08	0.10
Table 29. Mo	arginal effects of Logistic regr	essions with Values as depena	lent variable
Variable	Model 1	Model 2	Model 3
Media	-0.1756****	-0.0180	-0.0151

Table 29. Marginal effects of Logistic regressions with values as dependent variable			
Variable	Model 1	Model 2	Model 3
Media	-0.1756****	-0.0180	-0.0151
	(0.031)	(0.035)	(0.035)
Twitter		-0.4520****	-0.4519****
		(0.012)	(0.013)
Interactions		7.953e-06	4.132e-06
		(0.0)	(0.0)
Followers		-4.066e-08	-3.837e-08
		(0.0)	(0.0)
Sentiment Score		0.0033	0.0031
		(0.005)	(0.005)
October			-0.0929**
			(0.04)
November			-0.0438
			(0.075)
week			0.0001
			(800.0)
N	1793	1793	1793
Pseudo R–squared	0.01	0.27	0.27

Table 30. Marginal effects of Logistic regressions with People as dependent variable

Variable	Model 1	Model 2	Model 3
Media	0.0066	0.0046	0.0032
	(0.009)	(0.01)	(0.01)
Twitter		-0.0042	-0.0052
		(0.006)	(0.006)
Interactions		-2.328e-06**	-2.6e-06**
		(0.0)	(0.0)
Followers		3.454e-09	3.469e-09
		(0.0)	(0.0)
Sentiment Score		-0.0009	-0.0010
		(0.001)	(0.001)
October			0.0205*
			(0.011)
November			0.0257
			(0.02)
week			-0.0036
			(0.002)
N	1793	1793	1793
Pseudo R–squared	0.00	0.01	0.03
Table 31. Marginal effects of Logistic regressions with Identity as dependent variable			

Variable	Model 1	Model 2	Model 3
Media	-0.0103	0.0618	0.0522
	(0.032)	(0.039)	(0.039)
Twitter		0.0117	0.0054
		(0.026)	(0.026)
Interactions		-6.673e-06	-3.909e-06
		(0.0)	(0.0)
Followers		-1.164e-07***	-1.167e-07***
		(0.0)	(0.0)
Sentiment Score		-0.0002	-0.0008
		(0.006)	(0.006)

October			0.1971****
			(0.047)
November			0.2011**
			(0.087)
week			-0.0210**
			(0.009)
N	1793	1793	1793
Pseudo R–squared	0.00	0.00	0.02

Table 32. Marginal effects of Logistic regressions with Culture as dependent variable

Variable	Model 1	Model 2	Model 3
Media	0.1203****	0.1303***	0.1308***
	(0.035)	(0.043)	(0.043)
Twitter		-0.2881****	-0.2883****
		(0.025)	(0.025)
Interactions		2.174e-05	2.367e-05
		(0.0)	(0.0)
Followers		6.865e-08**	7.081e-08**
		(0.0)	(0.0)
Sentiment Score		-0.0088	-0.0079
		(0.006)	(0.006)
October			0.0614
			(0.049)
November			0.1654*
			(0.087)
week			-0.0113
			(0.009)
N	1793	1793	1793
Pseudo R–squared	0.00	0.05	0.06

Table 33. Marginal effects of Logistic regressions with Non–neutral Sentiment as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.0925***	-0.0195	-0.0189

	(0.03)	(0.032)	(0.032)
Twitter		-0.0256	-0.0260
		(0.019)	(0.019)
Interactions		-4.654e-06	-3.124e-06
		(0.0)	(0.0)
Followers		-2.142e-08	-2.131e-08
		(0.0)	(0.0)
Sentiment Score		0.0507****	0.0509****
		(0.005)	(0.005)
October			0.0182
			(0.029)
November			0.0131
			(0.056)
week			0.0017
			(0.006)
N	1793	1793	1793
Pseudo R–squared	0.01	0.12	0.13

Table 34. Coefficient estimates of OLS regressions with Number of Dimensions as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.0100	0.2476***	0.2561***
	(0.0765)	(0.0844)	(0.0844)
Twitter		-1.3375***	-1.3337***
		(0.0507)	(0.0506)
Interactions		0.0000*	0.0000*
		(0.0000)	(0.0000)
Followers		0.0000	0.0000
		(0.0000)	(0.0000)
Sentiment Score		-0.0239**	-0.0226*
		(0.0120)	(0.0121)
October			-0.0667
			(0.0982)

November			0.2040
			(0.1778)
week			-0.0163
			(0.0185)
Intercept	3.1441***	3.4751***	4.0997***
nan	(0.0285)	(0.0296)	(0.6840)
R–squared	0.0000	0.2717	0.2770
R–squared Adj.	-0.0005	0.2697	0.2737
N	1793	1793	1793

Greece

Authors: National and Kapodistrian University team

Institution: National and Kapodistrian University

Introduction

Over the last years, Greece ranks last in terms of gender equality. According to the last Report of the European Institute for Gender Equality (EIGE, 2022), the EU scores 68.6 on gender equality (68 was last year), while Greece receives 53.4 out of 100 (last year was 52.5) and is being positioned in last place on the map. The score of Greece is 15.2 points below the European average. Women - compared to men - in the context of the labour market face many more challenges and disadvantages in terms of employment positions and earnings. The differences between the two genders are related to how much they work and the types of positions they hold with the employment rate of women being significantly at a lower level than that of men. Since 2010, Greece's score in terms of gender equality index has increased by 4.8 points, however the greatest inequalities in Greece concern the incomes available to women, a sector showing deterioration over the past ten years (Touchtidou, 2022).

On the other hand, a significant development in the field of gender equality is considered to be the fourteen-day paternity leave voted in Greece in 2021, an initiative that brought the country to the fifth place among the member states of the Organization for Economic Co-operation and Development (OECD). Specifically, paternity leave is provided for in article 27 of Law 4808/2021, which incorporated articles 4 and 8 of Directive (EE) 2019/1158.

In regards to securing the rights of LGBTI+ people, over the last years positive steps have been taken in Greece, especially since 2004 that the National Human Rights Commission

(NHRC) has been pointing out several deficits in the protection of LGBTQ+ people's rights proving that the country in the last three decades has been making continuous efforts to improve its liberalism index (Papadopoulou, 2019).

The present report investigates how the topic of gender is presented on Greek social media (Facebook and twitter) over the period September – November 2021 based on a number of representations and the type of sentiments governing the overall content of the relevant posts.

The analysis being implemented adopts a quantitative and qualitative approach with the aim of justifying to the best possible way the major trends being emerged as to the ways the topic of gender is placed under discussion among social media users.

The analysis draws on the theoretical framework of media representations and is based on the manual coding being conducted on individual posts, following the parameters set by a codebook, a process then supplemented by the automatic coding of new posts by means of machine learning techniques.

The investigation of how social media texts frame the topic of gender was based on the frequency of occurrence of a number of predefined media representations dimensions, considered important in the case of gender topic: Law, People, Culture, Values, New Social Movements. These dimensions, combined with the assessment of sentiments (negative, neutral, positive) governing social media posts, gave rise to fundamental narratives appearing online with regard to gender, operating as the basis for understanding how Europe is represented on platformised settings of communication.

For the purposes of the research, the present report tries to answer the question of whether in the case of Greece the debate about gender, as emerged on social media platforms, is dominated by a national or European perspective. Additional question under investigation concerns to what extent the aspects of debate about gender differ among posts adopting a European perspective and those adopting a non-European one. Considering that sentiment analysis can provide useful additional insights into how Europe is represented though the lens of gender topic another question being raised is related to whether sentiments associating with gender differ between European and non-European-related social media posts.

1.1 Background

Gender Representations from the analogue to the digital age

Gender identity construction is an issue being addressed by various studies analyzing either interpersonal settings, mediated settings or fiction-based texts such as television series, TV commercials (Reichert, 2003) and films (Eschholz et al., 2002). In Greece, gender representations have been mainly investigated in different components of the analogue era (e.g. on TV fictional series, on TV commercials, on Greek magazine advertisements, on printed press political advertising), however the respective research in the digital environment has yet remained scarce. Despite this trend, the press has often hosted phenomena of celebrities

being targeted through social media, particularly women coming from the political and artistic field (Rigatou, 2021).

In the Greek context established-hegemonic representations of femininity have been reproduced by fictional stories on television (Stamou & Maleskou, 2007, Stamou et al., 2012). These are representations reflecting a multi-faceted perception of gender identities, incorporating, for instance, traditional and progressive female images situated in the dipole rural vs. urban life respectively. Other examples of stereotyped gendered behaviours reproductions by TV fictional series concern male and female behaviours in their financial dealings and relationship goals. Particularly, relevant research has shown that, in a context of conflict, the dipole of the female caregiver persona as opposed to the male sarcastic and mistrustful persona as well as the representation of female character as "a grumpy, nagging woman" stuck in her desires dominate, reflecting a dialectical connection with the Greek society and referring to the conventional "battle of the sexes" (Photiou, Charalambous & Maniou, 2019).

Research implementing a social semiotic analysis of TV commercials in Greece, broadcast in different periods of Greek television history (1966-79, 1980-90 and 1991-2001 respectively) has revealed the construction of stereotypic roles for women through representations reflecting dominant patriarchal values: women as housewives in the form of fairytale characters (charming/happy housewife, adorable mother), as sexual objects with attractive female bodies and perceived as provocative figures, as captivating or wild creatures presented in sexist frames, as clerical employees within male-dominated professional environments, as super-women in a setting deprived of men, images that lay in accordance with the dominant views of society (Nina-Pazarzi & Tsangaris, 2008).

Moreover, the depiction of genders through the adoption of a stereotypical perspective with regard to their capabilities and potential has also been found to occur in Greek magazine advertisements since the 1980s (e.g. women portrayed as housewives, as sex objects or as personalities obsessed with attractiveness, while men depicted in a context of sex appeal, career-oriented path and in out-house activities), even though over time the negative portrayals of women have undergone some improvement (Zotos & Lysonski, 1994). In Greek lifestyle magazines of the late 1980s patriarchal stereotypes framed by the objectification of (mainly) female bodies were reproduced in combination with the frequent promotion of (mainly male) homosexuality from a liberal perspective (Zestanakis, 2017). Gender stereotypes have also been found in printed press political advertising where over the period 1993-2009 male candidates were presented as successful and active/dynamic political players, reflecting dominant perceptions of masculinity within Greek society related to the stereotype of the ideal man, roles that changed and turned into gender egalitarian, less tough but attractive and friendly male figures, reflecting a general shift in the position of the two sexes within politics and society (Kotzaivazoglou et al., 2018).

As to the digital field, research has shown that the online construction of masculinity and fatherhood in contemporary Greece, through Instagram posts released by renowned public figures in the period 2017-2021, involves imagery of affluent and tender fatherhood as a joyful lifestyle, related to leisure, raising nostalgic memories of the pre-crisis era relating to thriving and successful consumerism. This type of visualization, associating masculinity with tenderness and care towards children, is argued to reflect enthusiasm for traditional values

of the Greek society (the male role model of breadwinner/provider, the importance of family) and to denote that established gender identities, incorporating the image of the successful, protective and tender father who ensures a financially sound survival of his family, perpetuate even after the Greek crisis (Zestanakis, 2023).

In Greek speaking twitter, over the period 2019-2022, the term femicide has widely been employed by the platform's users from a positive perspective in terms of adopting the feministic semantics of the word (in 85% of the tweets), being derived from the mainstream news media. Hate speech examples have been found to be part of tweets adopting either positive or negative stance (i.e. positively or negatively tagged tweets), albeit to a greater extent in the latter case in which the word femicide is replaced or accompanied by terms such as homicide, murderer, andromicide (Aggistrioti et al., 2022).

As to the linguistic representations of women in Greek speaking social media, research has revealed that a large part of the users endorse the need for combating gender-based violence and recognise femicide as a special type of crime, however there is also a minority stance perpetuating anachronistic norms such as that of patriarchy devaluating the role of women in society (Apospori, 2022). Particularly, with regard to the term femicide, despite its wide and emphatic use even in the titles of the social media posts, indicating a wider reflection of society on this crucial issue, its acceptance and hence the social and legal recognition of the phenomenon behind the term divides the social media users into two categories: supporters vs. underminers.

1.2 Legislation

According to the Greek Constitution, "Greeks are equal before the law and Greek men and women have equal rights and obligations" (Article 4, Government Gazette, 2019). The legal recognition of gender identity took place just five years ago through the Law 4491/2017, which laid the groundwork for fundamental rights to be conferred to transgender people, who for years has been experiencing violation of their rights living under conditions of stigmatization. Based on this law, in case of discrepancy between gender identity and registered gender, citizens (above 15 years old) can request - without prior surgery or medical diagnosis of gender dysphoria - the correction of their registered gender, so that it corresponds to their will, personal body sensation and external image.

The right to gender identity recognition is perceived for everyone as a fundamental element of his/her personality, protected by the Greek Constitution stipulating that "everyone has the right to freely develop his/her personality and to participate in the social, economic and political life of the Country, since he/she does not violate the rights of others and does not violate the Constitution or good morals" (Article 5, Government Gazette, 2019). Changing the registered gender is a serious procedure for which certain conditions must be met, among which is that of celibacy (Georgiadou, 2021: 24, 28). "Gender characteristics", which are defined in Greek legislation by Law 4491/2017, are an explicit reason for prohibited discrimination, according to Law 4443/2016. According to the Racist Violence Incident Recording Network, there are official complaints revealing that the legislation on gender

identity has not been properly implemented even by state officials (judicial ones, registrars, municipal ones), let alone by private sector officials (such as bank employees) (Konstantinidi, 2022).

Despite the above positive developments at the legal level regarding the right of every citizen to lead a life with a true gender identity, it is a paradox that the process of correcting the registered gender predated the aforementioned legal framework for *the legal recognition* of gender identity, since based on Law 344/1976 (article 13, paragraph 1), one could correct the details of the birth certificate after a court order, provided the application to the court was preceded by gender reassignment surgery, conducted at the individual's own expense, and an appropriate medical opinion from a psychiatrist.

As to the same-sex marriage issue, it is a right not recognized in Greece because the legal system is based on the biological duality of man-woman. While child fostering by same-sex couples who have entered into a cohabitation contract was institutionalized by the previous government (SYRIZA) through the Law 4538/2018, the acceptance of the adoption process was not achieved in the context of the same law (Logginidis, 2022). A same-sex couple who have entered into a cohabitation agreement is prohibited from adopting children, however when one of its members reassigns his/her gender, even without surgery, the couple can get married and adopt children.

This anachronism seems to be gradually reversing, as the current government in power (of New Democracy party) since May 2022 has released to the press that the relevant request of the LGBTQ+ community (marriage for all) has been adopted with the official enactment being delayed because "the lawyers dealing with the regulation have not yet been settled with the issue of relative rights that will result from marriages of this type" (tanea.gr, 2022; Siouti, 2022). Press reports indicate that the Greek Ministry of Justice has sought the help of the corresponding ministry of France.

At the end of March 2018 it was passed by broad parliamentary consensus the bill of the Ministry of Justice for the incorporation into the Greek legislation of the decision of the Council of Europe on the Prevention and Combating of Violence against Women and Domestic Violence (vouliwatch.gr, 2018; Government Gazette Sheet of Law 4531/2018 on the ratification of the Istanbul Convention). Violence against women in all its forms is considered the hard core of gender inequalities and reproduces power relations between men and women. Domestic violence in the Greek legal order constitutes an offense punishable by the provisions of "Law 3500/2006" on dealing with domestic violence and other provisions", as amended by Law 4531/2018 and nowadays is in force (Grylli, 2021). By domestic violence it is meant the commission of a criminal act, against a family member, in accordance with articles 6 (domestic bodily harm), 7 (domestic unlawful violence and threats), 8 (rape and domestic abuse) and 9 (domestic sexual assault) of dignity) of the same law, as well as with articles 299 (manslaughter) and 311 (fatal bodily harm) of the Criminal Code. Even though in Greece the phenomenon of femicide has escalated, femicide has not been established as a separate crime. The recognition of the term femicide officially is believed to constitute a necessary resounding response that needs to be given to the morbid phenomenon (Papaioannou, 2021).

The provision of Directive 2006/54/EC related to the implementation of the principle of equal opportunities and equal treatment of men and women in matters of work and

employment, was incorporated in the Greek legal system in 2010 through the law 3896/2010. Another legal step aimed at combating inequality was enacted in 2019 (Law 4604/2019) and addressed the issue of substantive gender equality, the prevention and combating of gender-based violence. Both laws recognized and defined indirect discriminations based on gender, however the concept of indirect discrimination has largely remained dormant at the level of jurisprudence as it has not yet been deeply understood (Tsotsou, 2022).

Last but not least, in February 2023 a new aspect with regard to the assisted procreation was raised in the public sphere. The National Authority for Assisted Reproduction/Procreation heralded the imminent start of consultations focusing on the provision of opportunity to single men to procreate, with a surrogate mother and in vitro fertilization, steps aimed at their creating a single-parent family. According to the current legislation, this possibility is provided only to single women (who are not married and do not lead a life cohabiting in an official relationship), providing they are unable to give birth naturally. In the case of single men, the criteria due to be put to consultation concern issues of age and health status, while social criteria will also be discussed based on what are the relevant procedures abroad in similar cases (Insider.gr, 2023).

1.3 National context

In Greece the year 2021 was stigmatised - far from the COVID-19 pandemic that challenged the capacities of the health authorities to respond - by two phenomena of wider public interest that put to the test the willingness of the Greek society to seriously address issues related to gender discrimination: these are the emergence of the so-called *Me Too movement* and the rise of the femicide cases.

The Greek version of *Me Too movement*, incorporating disclosure of sexual abuse cases by the victims, commenced in December 2020 but gained greater dynamic in 2021 starting with complaints of sexual assaults occurring in the sporting field and continuing with relevant complaints coming from the field of acting. Particularly, the confession of a female Olympic medalist about her rape by executives of the Hellenic Sailing Federation prompted other women to find the courage to disclose their own traumatic experiences. The rise of the movement affected considerably as well the field of acting where the revelations made about abusive acts and crimes involved well-known actors and directors as alleged abusers. The period between September 2021 and November 2021 was characterized, among others, by considerable developments related to complaints against prominent people of the artistic field with the judicial authorities being on the alert in order to investigate the relevant issues (Lifo, 2021).

The year 2021 has been perceived by the public opinion in Greece as the period in which the crucial issue of femicide was raised repeatedly in the public sphere. All over the year numerous stories of femicides were highlighted by the mainstream media, fifteen of which shook the country, causing reactions (Maroulidis, 2021).

The unprecedented number of murders of women because of their gender gave rise to an intense public debate about whether these are femicides or homicides, that continues even today dividing Greek citizens. One portion opposes to the term "femicide" arguing that a woman is a human being and thus the wider term of homicide embraces all the cases of gender violence, whereas, on the other hand, there is a prevailing opinion considering the legal recognition of the term femicide as something multiply important and necessary.

In Greece the massification of crimes involving women is a phenomenon characterizing the year 2021, the disclosure of which has been aided by society's changing attitudes towards feminism /LGBTQ+/minority issues. However, a persisting complaint expressed by organisations engaged in advocating gender rights and equality (e.g. Diotima Centre) is related to the fact that official figures of resolved femicide cases are not made public by the authorities annually and this omission contributes to the difficulty of capturing the dimension of the phenomenon (Agrimanaki, 2022).

Nevertheless, the year 2021 concludes in Greece with some important initiatives in the field of gender rights. The National Human Rights Commission (EEDA in Greek), the independent advisory body of the Greek State in matters of protection of Human Rights, issues a report incorporating observations on the *National Action Plan for Gender Equality 2021-2025* which had been created by the Ministry of Labour and Social Affairs (Greek National Commission for Human Rights, 2021). The National Plan for Gender Equality was presented officially by the Greek Prime Minister on the 10th of December 2021 based on four central axes and suggesting 67 actions: preventing and combating gender-based and domestic violence, equal participation of women in decision-making positions, equal participation of women in the labour market and gender inclusion dimension in sectoral policies (ta nea.gr, 2021).

Quantitative analysis

Descriptive overview

In the case of Greece the analysis of data incorporate the observation of 13.079 social media representations in total. Among the five categories of social media representations the most prominent ones in frequency of occurrence are people, culture and new social movements. By contrast, values represent the type of representations with the lowest incidence, followed by the law issue which shows a slightly higher frequency of occurrence.

The supremacy of the dimension of people among the posts is reasonable considering that over the year 2021 the public discourse in Greece was overwhelmed by the issue of femicide and the phenomena of gender abuse or gender violence, as emerged by the surge of grievances, accusations and protests related to the Me Too movement. Both these social trends gained visibility in the public sphere through revelations based mostly on specific persons' experiences. The strong emphasis placed by the posts on the element of culture can be partly attributed to the rise of gender inequalities within public discourse, caused by the multiple incidents of femicide. Social media messages of that period abound with phrases exposing negative cultural gender habits, practices and norms dominating the Greek society (e.g. a) the stories of violence against women are silences of history, b) the violence, the abuse against women and the femicide cases are the symptom of a system devaluating women).

30 25

Figure 1. Social Media Representations - Distribution among Social Media Representations

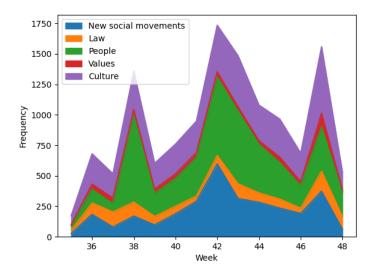
15 10 5 New social movements Law People Values Culture Social Media Representation

Notes: Created with data from Table 3 presented in Appendix A. N = 13079.

The data reveal various peaks in the appearance of representations occurring mainly in week 42 (October), in week 38 (September) as well as in week 47 (November). Among them the most intense peak takes place during the week 42 when all thematic categories of representations show their most dynamic appearance on social media platforms. Culture and values are the most frequently occurring representations both during 42nd week and over all the other weeks, followed by the dimension focusing on people.

The 42nd week corresponds to October 2021, a period in which the Greek society experiences 2 incidents of femicide (the 12th and 13th in a row during this specific year) and, at the same time, a great trial is in progress concerning a well-known actor and director accused of one rape and two attempted rapes against his female colleagues.

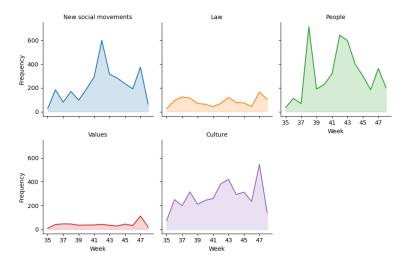
The most stable types of social media representations in terms of changes and peaks in their frequency of appearance over time are law and values. Both representations show the least pronounced fluctuations over time with week 47th, which belong to the end of November, peaking in incidence. Even for the representation of culture, which shows more fluctuations over time compared to the previous types of representations, the same week (47th one) is a period of apparent climax in incidence. The other two representations (i.e. new social movements and people) are characterised by the most unstable trends over time having dissimilar peak weeks both among themselves and in relation to the other categories of representations: in particular, for new social movements the peak week in terms of incidence is the 42^{nd} one, which belong to October, whereas for people is the 38^{th} one and the 42^{nd} one, which belong to September and October respectively.



Notes: Created with data from Table 4 presented in Appendix A. N = 13079.

In October 2021 a major trial began in Greece involving the murder of a gay/drag queen person in the centre of Athens, which caused protest marches and gatherings in various cities of the country organised by LGBTQ+ collectives and simple citizens shocked by the heinous crime. The buzz accompanying this murder was unrepeatable until the delayed adjudication of the case, which was framed by political parties and organizations issuing statements, mainly condemning the phenomenon of self-justice and police violence. Moreover, in September and October 2021 the list of femicides in the country is expanding resulting in public dialogue's being reignited both on Facebook and twitter as to whether it is reasonable and legitimate to distinguish the murder of a woman when its causes are based on gender by attributing the crime as femicide and not as homicide (e.g. "The 11th femicide in our country since the beginning of the year happened yesterday in Rhodes. While the debate in Greece is, unfortunately, still spent on whether the term is correct or not and the EU is promoting legal provisions on gender-based violence, a 40-year-old man murdered his ex-partner with a rifle and then committed suicide").

Figure 3. Social Media Representations - Evolution over time



Notes: Created with data from Table 4 presented in Appendix A. N = 13079.

A large number of social media posts (around 35%) incorporate in their contents either one or two representations, whereas the posts with more than two representations are limited. There are also few exceptional cases of posts (around 12%) in which there are no representations at all.

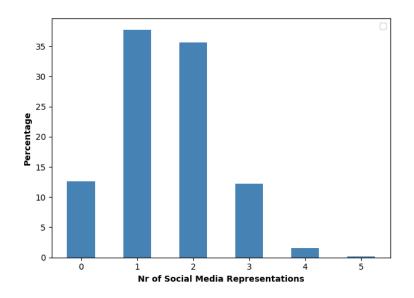


Figure 4. Number of Social Media Representations - Distribution among all posts

Notes: Created with data from Table 5 presented in Appendix A. N = 8552.

The social media posts involving more than two types of representations usually combine the legal aspect of gender issues with the dimensions of values and culture. This synthesis may refer either to the Greek society or to a foreign one (e.g. a) Popaganda news media Facebook account mentions about Spain that that "is a pioneer in addressing gender-based violence and in 2004 became the first European country to adopt legislation that considers the gender of the perpetrator an aggravating factor in cases of assault. Those convicted of domestic or gender-based violence will not have the right to visit their children",

b) The Deputy Minister of Labour and Social Insurance mentions in a tweet, framed by infographic on equality value and policy, "Today is European Equal Pay Day this year. Equality is a fundamental value for the European Union. We implement policies aimed at empowering women in all areas of their activity".

In terms of the type of sentiment related to the posts, the data reveal that the vast majority of cases (exceeding 90%) bear a neutral tone. Posts with negative or positive tonalities in terms of sentiments are extremely few in number. Although the period of data collection represents a phase over which femicides in Greece are increasing and the dynamically emerging Me Too movement encourages victims of violence (mainly women and LGBTQ+ people) to speak out, the public discourse on social media is based on posts commenting on either the anachronisms of Greek society or the necessity to turn the page on the issue of gender rights keeping distances from sentimentalities. This necessity has already been signaled, at the state level, since the beginning of 2021 (March 2021) by the Prime Minister's initiative to set up a committee with the aim of drafting the National Strategy for Gender Equality with regard to LGBTQ+ community (primeminister.gr, 2021).

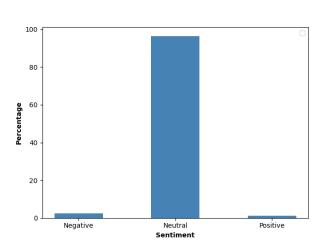


Figure 5. Sentiments - Distribution among all posts

Notes: Created with data from Table 6 presented in Appendix A. N = 8552.

Comparisons between Europe and Not Europe

According to the research data, the social media representations relating to Europe have a much less frequent presence (1.061 in total) compared to those which are unrelated to Europe (16.716 in total). Additionally, chi-square tests reveal that there are statistically significant differences in the proportions of all social media representations dimensions when comparing posts relating to Europe and those unrelated to Europe. (p = 0.0 in all the cases). Three out of the five types of representations (culture, law and values) show a more dynamic presence in those posts concerning Europe compared to those lacking the European dimension. On the other hand, the dimensions related to new social movements and people have a more dynamic occurrence in posts lacking the European perspective. This divergence

is reasonable considering that the two categories of social media posts (European and non-European ones) highlight either different themes related to gender or the few common themes are governed by a different perspective and targeting in terms of meanings.

Particularly, the social media posts which incorporate the European element raise the need for the removal of obstacles regarding the rights of LGBTQ+ community, the inclusion of gender-based violence as crime in the European legislation and the legal initiatives aimed at dealing with this type of violence, the necessary vigilance to address effectively femicide as a major social pathogenesis and the legal recognition of the relevant term. These are presented as thought-provoking issues in some European countries, including Greece, and when discussed on social media platforms are framed by references to values (equality, solidarity, justice) that need to be defended or have already been protected by means of recent initiatives taken by the European institutions.

On the other hand, the public discourse on social media posts, deprived of the European perspective, touches on the highly controversial issue relating to the institutional recognition of the term femicide and the essential fight against gender discrimination, presented in a context of increasing cases of femicides. The awareness of the society on gender equality is projected as a necessity based on significations that embrace the increasing personalised stories of women subjected to gender-based violent acts or femicides. The explicit references to gender discrimination, experienced by women in several regions of Greece, are the starting point for users' outlining the stereotypical practices that affect Greek society. In addition to these frames social media users, especially on twitter, resort to comments with regard to celebrities being engaged in Me Too movement.

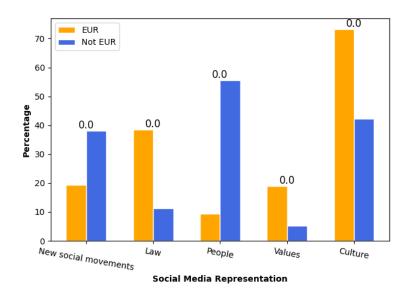


Figure 6. Social Media Representations - % occurrence among Europe and Not Europe posts respectively

Notes: Created with data from Table 7 and Table 8 presented in Appendix B. P value from chisquared test of equal proportions between Europe and Not Europe in variable above each pair of bars. N = 8552 in each pair of comparison. The data reveal that on average the social media representations presented in Europerelated posts are slightly more than those presented in non-Europe-related posts (1.59 and 1.52 mean values respectively) with the t-test confirming that the difference in means is statistically significant (p= 0.0322). The social media posts bearing two, three or four representations are approximately equal in number between the Europe-related content and the non-Europe-related content, whereas the social media posts with one representation prevail in the case of European content compared to non-European content. Moreover, the social media posts lacking representations are less in the case of Europe-related content compared to the case of non-European content.

The supremacy of the Europe-related content in representations can be partly attributed to the fact that these posts embrace comparative references among the EU countries against a framework of initiatives taken by the European institutions with the aim of achieving progress in terms of the institutional protection of women's or LGBTQ+ community's rights and the fight against gender discrimination.

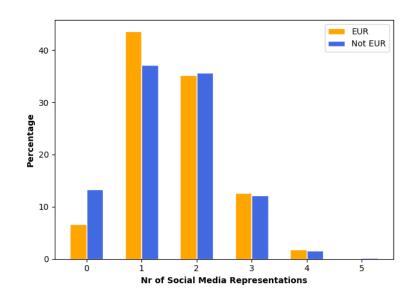


Figure 7. Number of Social Media Representations - % occurrence among Europe and Not Europe posts respectively

Notes: Created with data from Table 9 and Table 10 presented in Appendix B. N = 8552.

Table 1. Number of Social Media Representations by Europe and Not Europe - Mean, standard deviation (SD) and results from t-test of difference in means

	Europe	Not Europe	Significance	P value
Mean	1.5941	1.5222	**	0.0322
SD	(0.865)	(0.936)		

In the case of sentiment dimension chi-square tests reveal that when comparing Europerelated content with non-Europe-related content statistical significant difference appears only on posts incorporating either negative or positive sentiment (p= 0.025 and p= 0.0 respectively). By contrast, social media posts framed by neutral sentiment, which constitute the majority of cases, appear no statistically significant differences when comparing those focusing on Europe with those which are unrelated to Europe.

As to the social media posts with the negative sentimental nuance, the non-Europerelated content outnumbers posts of such type, since femicide cases are on the increase while the discussion that takes place in public sphere as to whether the legal recognition of the term femicide is necessary or not prompts social media users to employ words charged with negative connotations (e.g. in an indicative tweet it is underlined that "13th femicide for this year but jokes about whores, divas, harlots, tolerance of violence against women etc. Continue to fuel misogyny, after all, femicide-committers fall from the sky #gynaikoktonia #crete #MeToo #metooGR"). Moreover, posts referring to the Me Too movement in Greece (which belong to non-Europe-related content) frequently involve caustic or provocative discourse to get their messages across (e.g. In a non-European tweet it is emphatically mentioned that "Greek society is sick, basically it has always been seriously sick when it comes to women's rights and gender equality, let alone when it comes to sex. #MeToo").

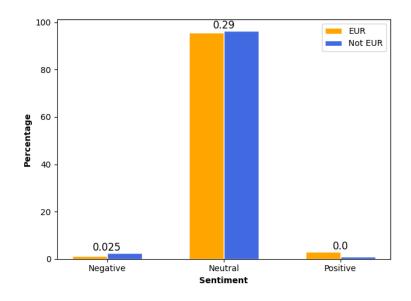


Figure 8. Sentiment - % occurrence among Europe and Not Europe posts respectively

Notes: Created with data from Table 11 and Table 12 presented in Appendix B. P value from chisquared test of equal proportions between Europe and Not Europe in variable above pair of bars. N = 8552.

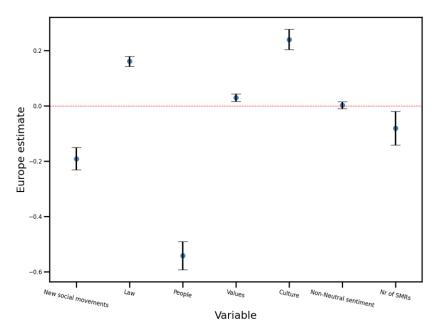
According to the coefficient estimates, there are notable differences between Europerelated and non-Europe-related posts. The results derived from Logit regressions confirm that culture, law and values representations are more likely to appear on Europe-related posts than on non-Europe-related posts with the effects sizes being around 3, 1.5 and 0.5 percentage points respectively. On the other hand, people and new social movements are more likely to be found on non-Europe-related social media posts with effect sizes being around 5.5 and 2 percentage points respectively. Between Europe-oriented content and non-Europe-oriented content there are no statistically significant differences in the appearance of non-neutral sentiment representation. The results derived from an OLS regression reveal that on Europe-related posts compared to those of non-Europe-related the social media representations are less in number (-0.0809).

Culture, values and laws are more likely to be reflected in the meanings disseminated by social media posts adopting a European perspective, since users (i.e. political actors, political institutions, representatives of non-profit organizations, media organisations) when criticizing explicitly or implicitly the omissions of Greece in the field of gender rights' defense they frequently invoke the necessity for drastic changes in the relevant legislation on the part of the state, they communicate the legislative initiatives and recommendations of the European institutions as well as the positions of the Greek MEPs on the gender-related EU resolutions (e.g. a) through rosa.gr non-mainstream media news portal it is disseminated on Facebook that "the centrist and supposedly liberal facade of the ruling party has completely collapsed, as it is proved (also) today by members of its Euro-parliamentary group. After Stelios Kymbouropoulos questioning the female body's self-determination, and the delayed condemnation of Hungary for a failed law against LGBTQ+ people, two MEPs coming from New Democracy [i.e. the ruling party of Greece] abstained from a resolution for LGBTQ+ families", b) the news portal voria.gr uploads a Facebook post underlining that "The European Union should remove all obstacles facing LGBTQ+ people in exercising their basic rights, says a resolution passed by majority in the European Parliament").

Additionally, the wider debate related to the legalization of the term femicide empowers opposition MPs and human rights activists to express thought-provoking argumentation closely associated with the failures of the political system in gender rights issues and the deficits in the overall culture and values of the Greek society (e.g. the Pan-Hellenic non-profit association tomov.gr highlights in a Facebook post that "The Gender Equality Index published today by the European Institute for Gender Equality (EIGE), rated the EU with 68 out of 100 and Greece with 52.5 out of 100, placing our country, for another year, in last place of ranking").

The representations related to people and new social movements, which are more likely to be found on posts of non-European content can be attribute to the public debate that unfolded on social media about aspects of Me Too movement, taking place domestically or abroad, and human-oriented stories focusing on femicides (e.g. a) iefimerida news portal tweets that "lerapetra: Video-documentary of the femicide - He chases her with the knife and Nektaria runs to save herself #iefimerida", b) protagon.gr news portal disseminates through twitter that "Cuomo put his hand under my shirt" - new complaint against the former governor of NY #protagongr #metoo").

Figure 9. Coefficient estimates Europe



Notes: Coefficient estimates and their 95 % confidence intervals of Europe variable from Model 3 of Table 13, Table 14, Table 15, Table 16, Table 17, Table 18, Table 19 presented in Appendix B. N = 8552 in each estimation.

Comparisons between Media and Not Media

The data reveal that social media posts derived from media have a much lower incidence compared to posts coming from non-media (505 and 8.047 respectively). Chi-squared tests indicate that in most types of representations (i.e. new social movements, law, values and culture) there are statistically significant differences in terms of their incidence proportions when comparing posts coming from media with those derived from non-media (p= 0.0). People representation is the only exception (p= 0.33) to the aforementioned finding. Three out of five representations (i.e. new social movements, people and culture) show a more frequent presence on non-media posts, whereas law and values representations appear more frequently on media posts.

Non media posts such as those coming from political actors/ political parties, non-profitable organisations tend to adopt a more macroscopic and macro-social point of view when commenting on the developments regarding the Greek Me Too movement and the failures or the (delayed) initiatives of Greece to strengthen the rights of women or LGPT+ people against a background of increasing femicides. Even the policy decisions related to

gender issues at the EU level are also discussed by non-media sources in social media posts where the cultural habits and daily life practices of European societies or Greek society are raised based on thematic framings (e.g. the non-profitable organisation called Diotima Centre, when announcing the approval by the European Parliament "of the Legislative initiative calling for targeted legislation and policies to tackle all forms of gender-based violence and discrimination online and offline", it also highlights that the situation of domestic violence has worsened due to the pandemic in a social context where there seems to exist "lack of trust in law enforcement and the justice system", a trend operating as a major "contributing factor to underreporting" of such cases).

On the other hand, posts coming from news media organisations (mainstream ones or not) usually break news to the public concerning the policy decisions made by the European institutions on gender-related issues and delineate the skeptical or rejection attitude of those Greek members of the European Parliament in matters pertaining to equal rights for LGBTQ+ people across all EU members (e.g. the Anti-virus magazine and the mainstream news portal protothema.gr disseminate the message that "Europe calls for equality for same-sex couples" by means of "same-sex marriages and cohabitation agreements to be recognized throughout the EU").

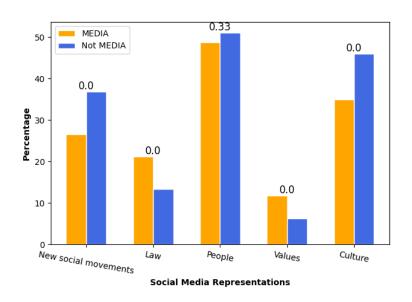


Figure 10. Social Media Representations - % occurrence among Media and Not Media posts respectively

Notes: Created with data from Table 20 and Table 21 presented in Appendix C. P value from chisquared test of equal proportions between Media and Not Media in variable above each pair of bars. N = 8552 in each pair of comparison.

According to data, the social media posts released from non-media accounts embrace on average more representations than the posts coming from media (the mean values are 1.53 and 1.43 respectively) with the t-test confirming that the difference in means is statistically significant (p=0.0). This trend seems to be dictated by the fact that the content which incorporate two or three representations has a higher incidence in the case of non-

media posts, whereas the content framed by only one representation prevails in frequency of occurrence in those posts coming from media. This divergence can be considered reasonable if we take into account that the posts derived from non-media sources (i.e. LGBTQ+community, press office of parliamentary opposition group, political actors, non-governmental organisations engaged in rights equality defense) are more expansive in their attempt to criticize policy failures or stereotypes afflicting Greek society as opposed to the posts derived from media organisations' accounts which usually try to convey to the audience in brief the essence of a news story.

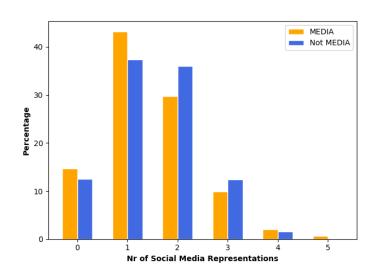


Figure 11. Number of Social Media Representations - % occurrence among Media and Not Media posts respectively

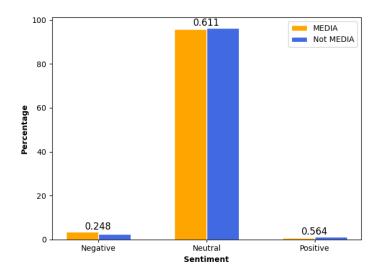
Notes: Created with data from Table 22 and Table 23 presented in Appendix C. N = 8552.

Table 2. Number of Social Media Representations by Media and not Media - Mean, standard deviation (SD) and results from t-test of difference in means

	Media	Not Media	Significance	P value
Mean	1.4317	1.5355	**	0.0149
SD	(0.964)	(0.927)		

The chi-squared tests reveal that with regard to the incidence frequency of sentiments (negative, neutral, and positive) there are no statistically significant differences between media posts and non-media posts (p= 0.248, p= 0.611 and p=0.564 respectively). The supremacy of neutral sentiment on posts originating both in media organisations' accounts and in non-media accounts can be attributed to the tendency of these sources to provide the followers with fact-oriented information and argumentation rather than dramatised piece of writings.

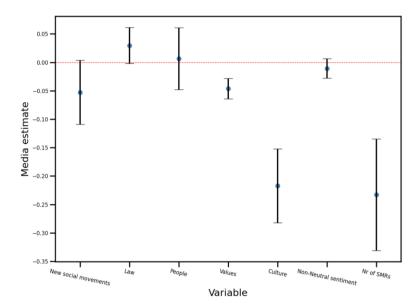
Figure 12. Sentiment - % occurrence among Media and Not Media posts respectively



Notes: Created with data from Table 24 and Table 25 presented in Appendix C. P value from chi-squared test of equal proportions between Media and Not Media in variable above pair of bars. N = 8552.

According to coefficient estimates, there are several differences between media and non-media posts. The results derived from Logit regressions confirm that the number of social media representations, culture and values are likely to have higher frequency of incidence among posts derived from non-media with effects sizes being around 2.4, 2.3 and 0.5 respectively. On the other hand, when it comes to representations such as new social movements, law, people and non-neutral sentiment there are no statistically significant differences in frequency of presence between media and non-media posts.

Figure 13. Coefficient estimates Media



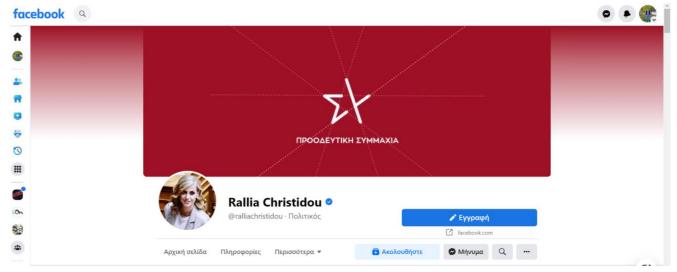
Notes: Coefficient estimates and their 95 % confidence intervals of Media variable from Model 3 of Table 26, Table 27, Table 28, Table 29, Table 30, Table 31, Table 32. presented in Appendix C. N = 8552 in each estimation.

Illustrative examples

The data in Figure 9 reveal that Culture is related to the largest coefficient estimate of Europe and People is characterised by the smallest coefficient estimate of Europe.

From the Europe-related social media posts one indicative example reflecting Culture dimension focuses on the issue of violence against women and has been uploaded by a young ex-singer who gave up singing with the aim of being actively involved in politics. Specifically, she is now member of the Greek parliament (supporting the left-wing SYRIZA party), member of the Committee relating to Educational Affairs as well as of the Committee on Gender Equality and Human Rights.

The post is published online on the occasion of the *International Day for the Elimination of Violence against Women* (25th of November) and is an open and clear protest against domestic violence and other forms of violence (physical, sexual, verbal, psychological) against women "solely because they are women", reflecting a persistent vulnerability of the Greek society that came to the fore again as a result of the pandemic. The post aims at decrying the patriarchal mentality-culture characterizing Greeks since years, regardless their gender, and at launching a vituperative attack on government members for their refusal to include femicide in the new criminal code as opposed to what has already been done in Cyprus and in other European countries. The post explicitly exemplifies the overall spirit of a difficult period when Greek society had been suffering from continuous incidents of femicide (14 cases within 2021, as underlined by the post).





Ο όρος γυναικοκτονία στο δημόσιο λόγο επικράτησε μετά από προσπάθειες των γυναικείων οργανώσεων και μεγάλου μέρους της κοινωνίας. Ωστόσο η κυβέρνηση της ΝΔ αρνήθηκε πρόσφατα να εισάγει τον όρο στον Ποινικό μας Κώδικα παρότι προτάθηκε με τροπολογία από το ΣΥΡΙΖΑ και παρά το γεγονός ότι η Κύπρος και άλλες ευρωπαϊκές χώρες το έχουν ήδη πράξει.

Γιατί; Αν η Πολιτεία δεν αναγνωρίσει το πρόβλημα και δεν το πει με το όνομά του, πώς θα ευαισθητοποιηθεί η κοινωνία στο να το εντοπίζει και να μην το κρύβει κάτω από εκφράσεις που μας είναι τόσο οικείες από πρωτοσέλιδα, δελτία ειδήσεων ή και από ταινίες και τραγούδια; «Τη σκότωσε γιατί την αγαπούσε», «Η υπερβολική αγάπη όπλισε το χέρι του δολοφόνου»; «..φύγε κρατάω μαχαίρι» «... δε σ 'αγάπησε ποτέ κανένας τόσο...μου περνάει απ' το μυαλό να σε σκοτιίστων κα

Το πρόβλημα δεν αντιμετωπίζεται με ευχολόγια. Χρειάζεται διαρκής ενημέρωση. Χρειάζεται η ΕΛ.ΑΣ να ενεργοποιήσει τα τμήματα Αντιμετώπισης Ενδοοικογενειακής Βίας, τα οποία δημιούργησε η κυβέρνηση ΣΥΡΙΖΑ, ώστε να κάνουν τη δουλειά τους αφού ενισχυθούν με ειδικούς επιστήμονες (Κοιν. Λειτουργούς ,Ψυχολόγους κ.λ.π). Χρειάζεται η Σύμβαση της Κωνσταντινούπολης -που επικυρώθηκε με νόμο το 2018 επί κυβέρνησης ΣΥΡΙΖΑ- να λειτουργήσει σε σύνδεση με την κοινωνία. Χρειάζονται περισσότερες δομές ώστε να υπάρχει πραγματική διέξοδος για τις γυναίκες -με παιδιά ή μη- όταν το έχουν ανάγκη.

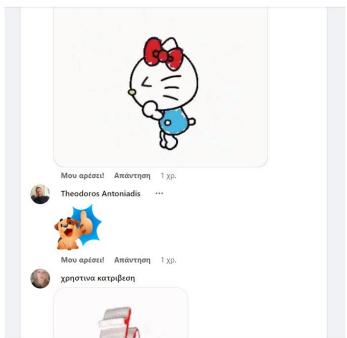
Και περισσότερο από όλα χρειάζεται πρόληψη για να μην φτάνει καμία γυναίκα στο σημείο να χρειάζεται βοήθεια.

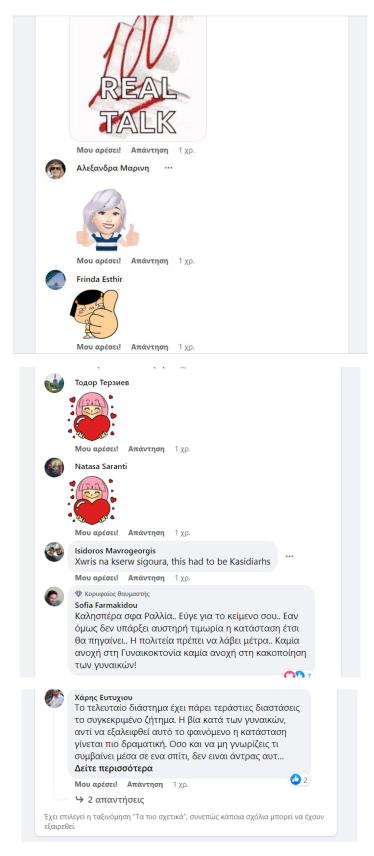
Η σημαντικότερη στιγμή στη ζωή μιας γυναίκας είναι η στιγμή που νιώθει ότι η αυτοεκτίμηση δεν προϋποθέτει κανένα αντάλλαγμα. Η αγάπη του εαυτού δεν σημαίνει ότι δεν αγαπάς τον απέναντί σου. Αντιθέτως η θυσία και ο υποβιβασμός του εαυτού σου δεν αποτελούν έκφραση αγάπης. Το "Fixer Syndrome" (με την αγάπη μου θα τον/την διορθώσω) δεν έχει αποτέλεσμα στις κακοποιητικές προσωπικότητες όπως δεν έχει και η συγχώρεση που μεταφράζεται ως αδειοδότηση για να επαναλάβουν τα λάθη που ποτέ δεν αναγνωρίζουν. Δεν μπορείς και δεν είναι δουλειά σου να βοηθήσεις εκείνον που δεν επιθυμεί να βοηθηθεί. Δουλειά σου είναι να ζήσεις τη ζωή σου ως ελεύθερος άνθρωπος που αξίζει ευτυχία, γαλήνη και αγάπη.

photo credits make up, hair, photo by Thanos Molos









From the non-Europe-related social media posts one indicative example of people representation is a post made by the digital-born news website "The Press Project" concerning a memorial event, held by the University of Athens, in relation to of a young woman who fell victim of a femicide incident. The post on the occasion of the student's death reflects the concern of the Greek society with regard

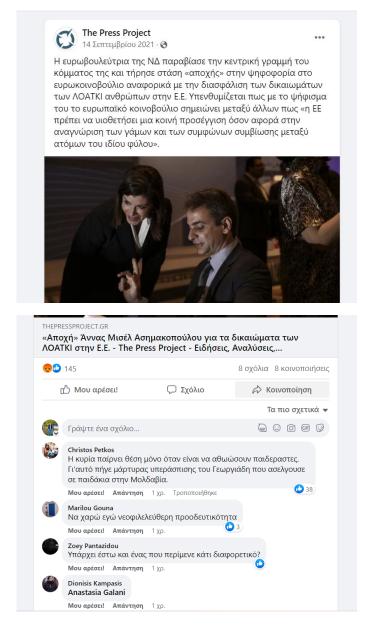
to the increase of femicide incidents, as voiced through the professors' statements. The refers to the victim by her name and highlights the fact that her mother received her daughter's post-graduate degree, however this personalised story gives rise to a number of arguments, expressed by professors, with regard to the gender-based violence, being described as "the biggest threat - a leading cause of death and disability for women, after cancer and traffic accidents", according to data derived from the *Greek team for the European Observatory on Femicide*. The post is based on a person-oriented story which provides the ground for further criticisms on gender-based violence, dictated by the toxic masculinity that permeates the Greek society and perpetuates the perception of woman as subordinate and obedient.





The data in Figure 13 reveal that Law representation is related to the largest coefficient estimate of Media, whereas culture representation bears the smallest coefficient estimate of Media.

An indicative example of social media post released by Media organisation, incorporating law representation, focuses on the LGBTQ+ community, highlighting the abstention attitude adopted by a Greek Member of the European Parliament in the context of voting held in the European Parliament regarding the safeguarding of the rights of LGBTQ+ people in the EU. The politician though her abstinence stance is described as violating her party's (New Democracy) overall mentality and attitude towards LGBTQ+ community's rights. The aforementioned resolution of the European Parliament concerns the recognition of marriages and cohabitation agreements between persons of the same gender, a highly debatable issue within the Greek public sphere, framed frequently by the media based on incidents of polarization.



In regard to culture representation, a social media post released by non-media, i.e. the press office of the Opposition party, focuses on gender violence and its extreme expression, the femicide incidences, reflecting a major concern of the Greek society against a backdrop of successive murders of women within 2021 as a result of domestic violence. The post presents the Deputy Head of the Justice Department of the Opposition party (SYRIZA), who is responsible for Equality issues, to emphasize the slogan "Femicide: Name it, measure it, end it!", as created by the European Institute for Gender Equality, and, at the same time, to criticize the government members for their audacity to include the term femicide in the legal system, despite the fact that a large number of bodies, representatives and officials of Justice have spoken in favour of such an inclusion and despite the dramatic increase in the incidents of gender-based and domestic violence. This post exemplifies a new trend within Greek society, emerged as a result of Me Too movement, as it gave voice to female victims who were once in obscurity.



Αυτό είναι το σύνθημα του ΕΙGΕ, του Ευρωπαϊκού Ινστιτούτου για την Ισότητα των Φύλων, για την φετινή 25η Νοέμβρη, Διεθνής Ημέρα για την Εξάλειψη της Βίας κατά των Γυναικών. Ένα σύνθημα που αναδεικνύει τρεις βασικές παραμέτρους-προϋποθέσεις για την εξάλειψη της έμφυλης βίας και της ακραίας έκφρασής της, τις γυναικοκτονίες: Ορατότητα όλων των μορφών της έμφυλης βίας και ιδιαίτερα των γυναικοκτονιών, μέτρησή τους και σύστημα ταξινόμησης και αντίστοιχες οριζόντιες πολιτικές ώστε να εκλείψει. Στην χώρα μας ήδη 13 γυναίκες έχουν χάσει την ζωή τους από χέρι συντρόφου, νυν και πρώην, από χέρι συλύγου.

Αντίστοιχα στην Ευρώπη, σύμφωνα με τα επίσημα στοιχεία που συγκέντρωσε το ΕΙGΕ, 444 γυναίκες σε 10 κράτη μέλη της ΕΕ σκοτώθηκαν από τους συντρόφους τους το 2020. Η πανδημία ανέδειξε την ένταση, την έκταση και το μέγεθος της έμφυλης βίας, ως ζώσας καθημερινότητας των γυναικών. Λειτούργησε ωστόσο και ως θρυαλλίδα, ως το φυτίλι που πυροδότησε ένα ντόμινο καταιγιστικών καταγγελιών, από πλευράς γυναικών και θηλυκοτήτων και επιτάχυνε τον βαθμό αφύπνισης της ελληνικής κοινωνίας που φαίνεται να ξυπνάει από ένα λήθαργο αιώνων, από μια σιωπή που έρχεται από τα βάθη της ιστορίας.

Για μια ακόμη φορά, η πλειοψηφία της ελληνικής κοινωνίας, το φεμινιστικό κίνημα, σκεπτόμενοι/ες πολίτες είναι ένα βήμα μπροστά από την παρούσα κυβέρνηση, η οποία και στον πρόσφατα ψηφισθέντα νόμο για τους Ποινικούς Κώδικες φάνηκε άτολμη κι αρνήθηκε να εντάξει τον όρο γυναικοκτονία στο δικαιικό μας σύστημα, παρά το γεγονός ότι πληθώρα φορέων, εκπροσώπων και λειτουργών της Δικαιοσύνης τάχθηκαν υπέρ και παρά το γεγονός ότι τα περιστατικά έμφυλης και ενδοοικογενειακής βίας έχουν εκτοξευθεί. Ως ΣΥΡΙΖΑ-ΠΣ, θεωρούμε την νομική αναγνώριση του όρου δίκαιο αίτημα και συμπορευόμαστε με τις φεμινιστικές οργανώσεις, την κοινωνία των πολιτών και με όλους και όλες που το υπερασπίζονται.

Καλούμε την Κυβέρνηση να αποδεχτεί στην πράξη, το τρίπτυχο, ορατότητα, μέτρηση, εξάλειψη μέσω πολιτικών της έμφυλης βίας, για να μην ξαναφωνάξουμε ως απούσα καμιά γυναίκα.

Την καλούμε να αναλάβει άμεσα δράση, ως ελάχιστο φόρο τιμής στις γυναίκες που δολοφονήθηκαν από το χέρι των οικείων τους, γιατί ήταν γυναίκες. Έμπρακτα!

https://www.facebook.com/agathopoulou



Conclusions

In Greece during 2021 gender-related issues have proved to be a major component of the public debate. It is a period in which the Greek society experiences the sudden appearance and growth of the *Me Too movement* combined with the explosion of femicides. The year 2021 concludes with the European Parliament's calls on the EU and its Member States to propose concrete measures aimed at protecting women's rights and reducing gender inequalities in the EU (European Parliament, 2021).

It is noteworthy that the Greek government, during the presentation of *The National Plan* for Gender Equality, admits that, according to the official data, Greece is found in the lowest positions in the EU when it comes to the most critical indicators of gender equality and women's participation in the labour market, but also in positions of responsibility in businesses, in the central political scene, in local-government field.

The data analysis reveal that people, culture and new social movements constitute the types of representations dominating social media posts. The rise of Greek Me Too movement in combination with the increasing cases of femicides gave rise to a digital public discourse incorporating human-interest stories and daily life practices - habits, reflecting the anachronistic culture of the Greek society in the field of gender-based rights, as well as voices expressing, implicitly or explicitly, the need for a change of mindset in matters of gender equality and for harmonization with the recommendations derived from EU institutions. Even though the description of femicide cases, the stories related to the Me Too movement and the debate about the legal recognition of the term femicide are crucial themes, often causing a contentious discourse employed by the social media users, the posts are mainly governed by neutrality in terms of their emotional weight.

Comparing the social media posts oriented to Europe with those unrelated to Europe, gender equality issues, to some extent, are illuminated from quite different perspectives. Particularly, in Europe-related posts users frequently highlight the legal advances or omissions with regard to gender equality discussing values close to equality such as respect for diversity, inclusion, freedom from discrimination. Through this discussion daily habits and practices are

raised concerning European societies, including Greece, where women or LGBTQ+ people have been suffering from violence or violation of their rights. On the other hand, in non-Europerelated posts users usually highlight aspects of Me Too movement, cases of domestic violence and femicides as a serious social issue that needs to be addressed urgently by the state against a background of views exchange on whether femicide is a proper term due to be included in the national legislation. The social media narrations concerning femicides are occasionally framed by people's experiences providing a human-interest dimension to the overall message.

Comparing posts originating in non-media sources with those derived from media organisations' accounts, there seems to exist some common themes being disseminated, mainly related to European institutions' recommendations or resolutions based on which member states are asked to act effectively towards equality for same-sex couples or towards the removal of obstacles for LGBTQ+ people in exercising their rights. These policy initiatives are usually presented more extensively by non-media posts, where more representations emerge, particularly those related to new social movements, culture and people, confirming that in some cases the diversity of the network (for instance, in terms of age, occupation, nationality, race) is instrumental in online users' exposure to new information and diverse viewpoints with social media being powerful in cultivating awareness on aspects not covered by the mainstream media (Wohn & Bowe, 2016).

As to the element of sentiment within posts, the supremacy of neutrality (regardless of the origins of the content) is indicative of a public discourse which tries to raise the essence of gender topic without being undermined by emotionally charged approaches. However, in non-Europe-related posts it is more likely to be hosted content of negative sentimentality, since they mostly refer to the social environment of Greece which is afflicted by increasing trends of femicides and an ongoing Me Too movement. Posts coming either from media or from non-media sources disseminate content mainly of neutral sentimentality proving the dedramatised approach of all sources on gender issues.

Last but not least, most social media posts, regardless of their origins (from media or non-media sources) or the degree of their European perspective focus on issues mainly related to women or LGBTQ+ people as opposed to male issues holding a scanty presence in the overall content (e.g. among the few exceptions is a post made by a politician urging men not to neglect their mental and physical health).

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<u>%CE%B1%CE%B1%CE%B3%CE%BD%CF%8E%CF%81%CE%B9%CF%83%CE%B7</u> -%CF%84%CE%BF%CF%85-%CF%86%CF%8D/

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Appendix A. Tables supporting the section on Descriptive overview

Table 3. Social Media Representations - Frequency and % occurrence among all posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	3098	23.7	36.2
Law	1186	9.1	13.9
People	4354	33.3	50.9
Values	560	4.3	6.5
Culture	3881	29.7	45.4
Total	13079	100.0	152.9

Table 4. Social Media Representations - Frequency by week

Unnamed: 0	New social movements	Law	People	Values	Culture
35	28	26	36	9	74
36	184	94	112	41	250
37	80	124	68	46	199
38	170	115	713	45	315
39	97	70	190	35	211
40	189	62	229	36	244
41	291	43	318	37	259
42	598	69	643	42	383
43	314	120	597	34	419
44	283	77	399	28	293
45	235	74	300	44	312
46	192	43	185	32	234
47	374	165	363	112	546
48	63	104	201	19	142
Total	3098	1186	4354	560	3881

Table 5. Number of Social Media Representations in posts - Frequency and % occurrence among all posts

Nr of Social Media Representations	Count	% of Posts
0	1081	12.6
1	3227	37.7
2	3047	35.6
3	1044	12.2
4	139	1.6
5	14	0.2
Total	8552	100.0

Table 6. Sentiment - Frequency and % occurrence among all posts

Sentiment	Count	% of Posts
Negative	213	2.5
Neutral	8240	96.4
Positive	99	1.2
Total	8552	100.0

Appendix B. Tables supporting the section on Comparisons - Europe and Not Europe

Table 7. Social Media Representations Europe - Frequency and % occurrence among Europe posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	165	12.2	19.4
Law	326	24.1	38.4
People	80	5.9	9.4
Values	161	11.9	18.9
Culture	623	46.0	73.3
Total	1355	100.0	159.4

Table 8. Social Media Representations Not Europe - Frequency and % occurrence among Not Europe posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	2933	25.0	38.1
Law	860	7.3	11.2

People	4274	36.5	55.5
Values	399	3.4	5.2
Culture	3258	27.8	42.3
Total	11724	100.0	152.2

Table 9. Number of Social Media Representations Europe - Frequency and % occurrence among Europe posts

Nr of Social Media Representations	Count	% of Posts
0	57	6.7
1	371	43.6
2	299	35.2
3	107	12.6
4	15	1.8
5	1	0.1
Total	850	100.0

Table 10. Number of Social Media Representations Not Europe - Frequency and % occurrence among Not Europe posts

Nr of Social Media Representations	Count	% of Posts
0	1024	13.3
1	2856	37.1
2	2748	35.7
3	937	12.2
4	124	1.6
5	13	0.2
Total	7702	100.0

Table 11. Sentiment Europe - Frequency and % occurrence among Europe posts

Sentiment	Count	% of Posts
Negative	11	1.3
Neutral	813	95.6
Positive	26	3.1
Total	850	100.0

Table 12. Sentiment Not Europe - Frequency and % occurrence among Not Europe posts

Sentiment	Count	% of Posts
Negative	202	2.6
Neutral	7427	96.4
Positive	73	0.9
Total	7702	100.0

Table 13. Marginal effects of Logistic regressions with New Social Movements as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	-0.2136****	-0.1910****	-0.1909****
	(0.02)	(0.02)	(0.02)
Twitter		0.1731****	0.1607****
		(0.031)	(0.032)
Interactions		-5.379e-05	-4.721e-05
		(0.0)	(0.0)
Followers		-1.598e-07	-1.017e-07
		(0.0)	(0.0)
Sentiment Score		0.0054	0.0113**
		(0.005)	(0.005)
October			0.2907****
			(0.021)
November			0.3636****
			(0.035)
week			-0.0283****
			(0.004)
N	8552	8552	8552
Pseudo R- squared	0.01	0.02	0.03

Table 14. Marginal effects of Logistic regressions with Law as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.1805****	0.1621****	0.1607****

	(0.009)	(0.009)	(0.009)
Twitter		-0.1079****	-0.1006****
		(0.014)	(0.014)
Interactions		3.065e-05	2.834e-05
		(0.0)	(0.0)
Followers		-5.777e-08	-6.704e-08
		(0.0)	(0.0)
Sentiment Score		-0.0017	-0.0036
		(0.003)	(0.003)
October			-0.0972****
			(0.016)
November			-0.0699***
			(0.027)
week			0.0049
			(0.003)
N	8552	8552	8552
Pseudo R- squared	0.05	0.06	0.07

Table 15. Marginal effects of Logistic regressions with People as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	-0.5738****	-0.5453****	-0.5413****
	(0.025)	(0.026)	(0.026)
Twitter		0.1717****	0.1622****
		(0.029)	(0.029)
Interactions		2.821e-05	3.011e-05
		(0.0)	(0.0)
Followers		2.153e-07**	2.158e-07**
		(0.0)	(0.0)
Sentiment		-0.0210****	-0.0202****
Score			
		(0.005)	(0.005)

October			0.0450**
			(0.022)
November			-0.0559
			(0.037)
week			0.0025
			(0.004)
N	8552	8552	8552
Pseudo R- squared	0.06	0.07	0.07

Table 16. Marginal effects of Logistic regressions with Values as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.0865****	0.0295****	0.0294***
	(0.006)	(0.007)	(0.007)
Twitter		-0.1614****	-0.1603****
		(0.007)	(0.007)
Interactions		3.022e-05**	2.882e-05**
		(0.0)	(0.0)
Followers		-1.267e-07*	-1.213e-07
		(0.0)	(0.0)
Sentiment Score		0.0068***	0.0070***
		(0.002)	(0.002)
October			-0.0102
			(0.009)
November			0.0044
			(0.015)
week			0.0003
			(0.002)
N	8552	8552	8552
Pseudo R- squared	0.04	0.26	0.26

Table 17. Marginal effects of Logistic regressions with Culture as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.3158****	0.2463****	0.2397****
	(0.018)	(0.019)	(0.019)
Twitter		-0.5972****	-0.5910****
		(0.043)	(0.043)
Interactions		0.0003***	0.0003***
		(0.0)	(0.0)
Followers		-9.46e-07***	-9.26e-07****
		(0.0)	(0.0)
Sentiment Score		0.0451****	0.0456****
		(0.005)	(0.005)
October			0.1023****
			(0.021)
November			0.2573****
			(0.035)
week			-0.0235****
			(0.004)
N	8552	8552	8552
Pseudo R- squared	0.03	0.07	0.07

Table 18. Marginal effects of Logistic regressions with Non-neutral Sentiment as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.0073	0.0033	0.0022
	(0.006)	(0.006)	(0.006)
Twitter		-0.0510****	-0.0529****
		(0.007)	(0.007)
Interactions		2.559e-06	2.985e-06
		(0.0)	(0.0)
Followers		-1.023e-07**	-1.065e-07**
		(0.0)	(0.0)

Sentiment Score		-0.0235****	-0.0235****
		(0.003)	(0.003)
October			0.0256****
			(0.007)
November			0.0441****
			(0.012)
week			-0.0054****
			(0.001)
N	8552	8552	8552
Pseudo R- squared	0.00	0.11	0.12

 $\textit{Table 19. Coefficient estimates of OLS regressions with \, \textit{Number of Social Media Representations as dependent variable} \\$

Variable	Model 1	Model 2	Model 3
Europe	0.0719**	-0.0750**	-0.0809***
	(0.0315)	(0.0308)	(0.0311)
Twitter		-0.8906***	-0.9014***
		(0.0492)	(0.0496)
Interactions		0.0001***	0.0001***
		(0.0000)	(0.0000)
Followers		-0.0000***	-0.0000***
		(0.0000)	(0.0000)
Sentiment		0.0341***	0.0383***
Score			
		(0.0103)	(0.0102)
October			0.3298***
			(0.0415)
November			0.4949***
			(0.0715)
week			-0.0451***
			(0.0079)
Intercept	1.5222***	2.4001***	4.0018***

nan	(0.0107)	(0.0497)	(0.3012)
R-squared	0.0005	0.0456	0.0529
R-squared Adj.	0.0004	0.0451	0.0520
N	8552	8552	8552

Appendix C. Tables supporting the section on Comparisons - Media and Not Media

Table 20. Social Media Representations Media - Frequency and % occurrence among Media posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	134	18.5	26.5
Law	107	14.8	21.2
People	246	34.0	48.7
Values	59	8.2	11.7
Culture	177	24.5	35.0
Total	723	100.0	143.2

Table 21. Social Media Representations Not Media - Frequency and % occurrence among Not Media posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	2964	24.0	36.8
Law	1079	8.7	13.4
People	4108	33.2	51.1
Values	501	4.1	6.2
Culture	3704	30.0	46.0
Total	12356	100.0	153.5

Table 22. Number of Social Media Representations Media - Frequency and % occurrence among Media posts

Nr of Social Media Representations	Count	% of Posts
0	74	14.7
1	218	43.2
2	150	29.7

3	50	9.9
4	10	2.0
5	3	0.6
Total	505	100.0

Table 23. Number of Social Media Representations Not Media - Frequency and % occurrence among Not Media posts

Nr of Social Media Representations	Count	% of Posts
0	1007	12.5
1	3009	37.4
2	2897	36.0
3	994	12.4
4	129	1.6
5	11	0.1
Total	8047	100.0

Table 24. Sentiment Media - Frequency and % occurrence among Media posts

Sentiment	Count	% of Posts
Negative	17	3.4
Neutral	484	95.8
Positive	4	0.8
Total	505	100.0

Table 25. Sentiment Not Media - Frequency and % occurrence among Not Media posts

Sentiment	Count	% of Posts
Negative	196	2.4
Neutral	7756	96.4
Positive	95	1.2
Total	8047	100.0

Table 26. Marginal effects of Logistic regressions with New Social Movements as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.1104***	-0.0712**	-0.0528*
	(0.024)	(0.03)	(0.029)

Twitter		0.2158****	0.2048****
		(0.031)	(0.031)
Interactions		-5.178e-05	-4.177e-05
		(0.0)	(0.0)
Followers		8.003e-09	1.817e-08
		(0.0)	(0.0)
Sentiment Score		0.0007	0.0067
		(0.005)	(0.005)
October			0.2850****
			(0.021)
November			0.3480****
			(0.035)
week			-0.0263****
			(0.004)
N	8552	8552	8552
Pseudo R- squared	0.00	0.01	0.03

Table 27. Marginal effects of Logistic regressions with Law as dependent variable

Variable	Model 1	Model 2	Model 3
Media	0.0657****	0.0365**	0.0297*
	(0.014)	(0.016)	(0.016)
Twitter		-0.1574****	-0.1501****
		(0.013)	(0.013)
Interactions		2.385e-05	2.132e-05
		(0.0)	(0.0)
Followers		-1.251e-07*	-1.231e-07
		(0.0)	(0.0)
Sentiment		0.0045	0.0021
Score			
		(0.003)	(0.003)
October			-0.0872****

			(0.016)
November			-0.0428
			(0.026)
week			0.0014
			(0.003)
N	8552	8552	8552
Pseudo R- squared	0.00	0.02	0.04

Table 28. Marginal effects of Logistic regressions with People as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.0234	0.0048	0.0064
	(0.023)	(0.028)	(0.028)
Twitter		0.2950****	0.2841****
		(0.029)	(0.029)
Interactions		4.863e-05**	5.051e-05**
		(0.0)	(0.0)
Followers		2.099e-07*	2.076e-07*
		(0.0)	(0.0)
Sentiment Score		-0.0321****	-0.0306****
		(0.005)	(0.005)
October			0.0312
			(0.023)
November			-0.0980**
			(0.038)
week			0.0082**
			(0.004)
N	8552	8552	8552
Pseudo R- squared	0.00	0.01	0.02

Table 29. Marginal effects of Logistic regressions with Values as dependent variable

Variable	Model 1	Model 2	Model 3
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Media	0.0421****	-0.0455****	-0.0462****
	(0.009)	(0.009)	(0.009)
Twitter		-0.1807****	-0.1794***
		(0.007)	(0.007)
Interactions		1.905e-05	1.773e-05
		(0.0)	(0.0)
Followers		-7.938e-08	-7.52e-08
		(0.0)	(0.0)
Sentiment Score		0.0074***	0.0075***
		(0.002)	(0.002)
October			-0.0115
			(0.009)
November			0.0062
			(0.015)
week			-0.0002
			(0.002)
N	8552	8552	8552
Pseudo R- squared	0.00	0.26	0.26

Table 30. Marginal effects of Logistic regressions with Culture as dependent variable

		-	•
Variable	Model 1	Model 2	Model 3
Media	-0.1131****	-0.2230****	-0.2170****
	(0.024)	(0.034)	(0.033)
Twitter		-0.7045****	-0.6950****
		(0.042)	(0.041)
Interactions		0.0002**	0.0002**
		(0.0)	(0.0)
Followers		-4.455e-07***	-4.458e-07***
		(0.0)	(0.0)
Sentiment Score		0.0500****	0.0500****

		(0.005)	(0.005)
October			0.1047****
			(0.021)
November			0.2730****
			(0.036)
week			-0.0259****
			(0.004)
N	8552	8552	8552
Pseudo R- squared	0.00	0.06	0.06

Table 31. Marginal effects of Logistic regressions with Non-neutral Sentiment as dependent variable

Variable	Model 1	Model 2	Model 3
Media	0.0051	-0.0108	-0.0107
	(0.008)	(0.009)	(0.009)
Twitter		-0.0535****	-0.0551****
		(0.007)	(0.007)
Interactions		1.933e-06	2.394e-06
		(0.0)	(0.0)
Followers		-7.53e-08*	-7.996e-08*
		(0.0)	(0.0)
Sentiment Score		-0.0234***	-0.0235****
		(0.003)	(0.003)
October			0.0254***
			(0.007)
November			0.0440****
			(0.012)
week			-0.0054***
			(0.001)
N	8552	8552	8552
Pseudo R- squared	0.00	0.11	0.12

Table 32. Coefficient estimates of OLS regressions with Number of Dimensions as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.1038**	-0.2511***	-0.2330***
	(0.0441)	(0.0500)	(0.0497)
Twitter		-0.9035***	-0.9099***
		(0.0482)	(0.0487)
Interactions		0.0001***	0.0001***
		(0.000)	(0.0000)
Followers		-0.0000	-0.0000
		(0.0000)	(0.0000)
Sentiment Score		0.0303***	0.0344***
		(0.0102)	(0.0102)
October			0.3191***
			(0.0414)
November			0.4765***
			(0.0712)
week			-0.0433***
			(0.0079)
Intercept	1.5355***	2.4109***	3.9452***
nan	(0.0103)	(0.0478)	(0.2982)
R-squared	0.0007	0.0479	0.0547
R-squared Adj.	0.0006	0.0473	0.0538
N	8552	8552	8552

Italy

Authors: Libera Università di Lingue e Comunicazione team

Institution: Libera Università di Lingue e Comunicazione

Introduction

The present report investigates how the topic of gender is presented on Italian social media (Facebook and twitter) over the period September – November 2021 based on a number of representations and the type of sentiments governing the overall content of the relevant posts.

The analysis being implemented adopts a quantitative and qualitative approach with the aim of justifying to the best possible way the major trends being emerged as to the ways the topic of gender is placed under discussion among social media users.

The analysis draws on the theoretical framework of media representations and is based on the manual coding being conducted on individual posts, following the parameters set by a codebook, a process then supplemented by the automatic coding of new posts by means of machine learning techniques.

The investigation of how social media texts frame the topic of gender was based on the frequency of occurrence of a number of predefined media representations dimensions, considered important in the case of gender topic: Law, People, Culture, Values, New Social Movements. These dimensions, combined with the assessment of sentiments (negative, neutral, positive) governing social media posts, gave rise to fundamental narratives appearing online with regard to gender, operating as the basis for understanding how Europe is represented on platformised settings of communication.

Background

The general principle of equality between women and men has been enshrined in Article 3 of the Italian Constitution: 'All citizens have equal social dignity and are equal before the law, without distinction of sex, race, language, religion, political opinion, personal and social conditions.' Italy's progress in gender equality stemmed primarily from the need to adopt European Union (EU) directives and use European funds, which had the goal of ensuring equal opportunities for all as a crosscutting theme⁹¹

Legislative Decree No. 198 of 2006 established the National Code of Equal Opportunities between Women and Men and is considered the Italian legal framework for gender equality and women's empowerment⁹² The Code assembles 11 laws on equal opportunities in a single text, intending to rationalise and harmonise the current legislative provisions on gender equality and regulating the promotion of equal opportunities between women and men in the areas of ethical, social and economic relations, and civil and political rights. It also introduced the principle of gender mainstreaming, obliging the government to consider a gender perspective.

⁹¹ ISFOL (2015). Pari opportunità e non discriminazione: il Fondo sociale europeo nei territori in convergenza tra attuazione e proposte per la programmazione 2014–2020.

⁹² Code of equal opportunities between men and women (2006) https://www.gazzettaufficiale.it/dettaglio/codici/pariOpportunita

Before adopting an overall national strategy on gender mainstreaming in July 2021, Italy relied on regional or sector-specific good practices.

In July 2021, Italy adopted an overall strategy focused on gender equality, 'the National Strategy for Gender Equality' (Strategia nazionale per la parità di genere)⁹³. Covering the period 2021-2026, it focuses on the following areas: work, salaries/income, competences, time, power, and the impact of COVID-19. Further, the National Strategy is a de facto government commitment encompassing gender mainstreaming and gender budgeting. Specifically, it promotes measures for the integration of a gender perspective in all areas of social and economic life, and policy, and for the dissemination of suitable tools to allow for the assessment of the impacts of public policies from a gender perspective (gender budget). To date, there is no national action plan for gender equality. Going forward, a national action plan implementing 'the National Strategy for gender equality for 2021-2025' will likely be adopted.

In addition to the National Strategy, there are sectoral laws on specific aspects of gender equality in place.

Legislation

The Ministry for Rights and Equal Opportunities was created in 1996, in line with the UN's Beijing Platform for Action (BPfA) and EU guidelines on gender mainstreaming. Its functions were established in 1997 (Decree of the Presidency of the Council of Ministers No. 405 of 28 October 1997)[4] and modified through subsequent ministerial decrees. Its broad mandate includes representing the Italian position on gender issues at the EU level, preparing the government's gender equality policies and implementing the EU Equality Directives, as well as engaging in gender mainstreaming. Italy's main government equality body is the Department for Equal Opportunities (Dipartimento per le pari opportunità, DEO) of the Italian Presidency of the Council of Ministers (since 1996). It has supported the Office of the Minister for Equal Opportunities since 1997, now Minister for Equal Opportunities and Family (Decree of the Presidency of the Council of 12 February 2021). The Minister for Equal Opportunities and Family holds the highest level of governmental responsibility for gender equality.

In Italy, same-sex marriage has been legalized with the so-called unioni civili [literally, civil unions], introduced by the Center-Left government coalition with the Law 76/2016, also known as "legge Cirinnà" [after the Democratic Party congresswoman and LGBTQ+ activist Monica Cirinnà, who draw the text]. The law acknowledges very basic rights to non-married couples [called in Italian "coppie di fatto"], such as inheritance, assistance to the infirm, and similar. During the parliamentary iter, the section about the step-child adoption has been expunged; therefore, the latter is still regulated by generic civil laws [namely, law 44/1983]. Surrogacy is forbidden [Law 40/2004, article 12, point 6]; as a consequence, some couples [and men of spectacle] resorted to surrogacy in other countries.

The debate around domestic violence has been polarizing Italian public opinion, based on the keyword feminicide, the murder of women for gender-related issues. Law 69/2019 introduced aggravations for domestic violence, with the formula of codice rosso [literally, code red]. There is an ongoing debate about whether to introduce an additional aggravation for the feminicide. For the time being, and depending on the judge and on the pressure of the media and public opinion, murderers have been

⁹³ The National Strategy for equal opportunities (Strategia nazionale per la parità di genere) (2021). http://www.pariopportunita.gov.it/wp-content/uploads/2021/08/strategia-Parit%C3%A0_genere.pdf

charged in some cases with generic aggravations, or rather with the same aggravations foreseen for discrimination and racial crimes.

There are no quotas in Italian law, as they are generally claimed to be constitutionally illegal [in violation of the principle of equality of opportunities, as paradoxical as it may seem]. Some private companies have launched initiatives in this direction, but gender gap is still a relevant issue in the country, and so is the salary gap.

Hate speech and violence against transexual, homosexual and non-binary are usually framed in terms of aggravations caused by discrimination; therefore, they are likened to acts of racism and ethnic violence. No specific law is in place, though it has been repeatedly discussed by the Italian Parliament. In Fall 2021 the Senate rejected an ad-hoc law proposal – known as "DdL Zan", after his main promoter Alessandro Zan – after huge polemics: with the left wing presenting it as a law against homotransphobia; and the right parties as a limitation to freedom of expression.

Under Italian law, citizens are allowed to both change their given name and surname [Law 396/2000] and to surgically change their sex [Law 164/1982 and Decree 150/2011]. The law does not allow to formally change sex without a having materially modified it with surgery. Recognition of non-binary identities per se is under dispute and, needless to say, it has been producing a huge left/right polarization. There is no public funding for change-of-sex surgery. Toilets for transgender persons are not foreseen by the law, though the matter is under discussion as well.

National context

At the time, Italy was ruled by a wide coalition including the populist party Movimento 5 Stelle [having the relative majority of seats, after the 2018 elections], and both right-wing [Lega and Forza Italia] and left-wing forces [Partito Democratico]. The only major party at the opposition was the right-wing nationalist Fratelli d'Italia, which would inevitably win the 2022 general elections [as a matter of fact, in Italy the former opposition always wins the elections: right-wing coalition in 1994, 2001, and 2008; left-wing in 1996, 2006, and 2013]. The Prime Minister was former European Central Bank Director Mario Draghi.

Two major issues in the agenda were: the economic state of the country; and the implementation of Covid-related measures. At the economic level, the discussion was mostly about the use of the so-called PNRR, the recovery plan launched by the European Commission. We may add that the major economic law ruling taxation and the allocation of public funding – either known as "legge finanziaria" ["finance law"] or "legge di stabilità" [stability law] – is always presented in the last months of the year, and often approved in its very last days. This might explain the centrality of the issue in the Italian debate.

As to the Sars-Cov-2 pandemic, it was the time of the introduction of the so-called Green Pass, the Italian implementation of the EU Covid certificate. On October 15, the Green Pass has become mandatory to access all public places — including transportation and workplaces — with the only exceptions of grocery stores and pharmacies. The Green Pass initially relied on the vaccination, testing and recovery formula: by proving to have recovered from Covid; with the vaccination certificate; or with a negative PCR test. Despite the Council of Europe had explicitly prohibited any discrimination towards citizens not willing to take the shot, the Italian Green Pass has been imposed in a totally illiberal way. Right after its introduction, the discussion has started about how to furtherly limit the freedom of the unvaccinated, eventually resulting in the so-called Super Green Pass, officially approved by a government decree on December 6, 2021. The new version of the Green Pass was only granted to people having recovered from Covid or being vaccinated with three shots, whilst the option

of the negative PCR test was denied [despite the existing evidence of vaccinated carrying the virus]. Unvaccinated people aged 12+ were banned from public places, workplaces, shops [besides grocery and pharmacies], transportation of any sort, and even hospitals. In short, Italy witnessed the worst – and supposedly inadmissible – discrimination since the end of WWII.

In terms of gender themes, there was an intense and polarizing debate, due to the Zan Law going through the parliamentary approval votes. The law proposal has been approved by the Low Chamber, but subsequently overruled by the Senate on October 27, and therefore rejected [notice that in the Senate, due to an awkward electoral law, there is rarely a stable majority, this leading to embarrassing negotiations among political forces]. The good part of the law was, on paper at least, the protection of non-binary, transgender and fluid identities from discrimination. On the other hand, the proposal was criticized [by the right-wing and the Catholics] for endorsing radical and woke principles, and for threatening freedom of speech [for instance, the law would have made formally illegal to state any biological difference between women and men].

In 2019, the National Institute of Statistics ('ISTAT') suggested that women in Italy experience difficulty entering the labour market and often face more tenuous working conditions and a marked gender pay gap in the private sector.

At the same time, women are still under-represented in public sector top-management positions, where they fill only 16.8 per cent of positions at decision-making bodies (eg, the Constitutional Court, embassies etc), while in the private sector the presence of women on boards of directors is growing and has reached about 36.4 per cent of the total (this is just above the minimum threshold of one third required under Italian law for listed companies, a threshold that was raised to 40 per cent by the most recent Budget Law).

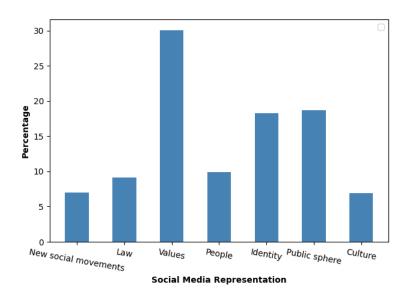
Discrimination issues are increasingly being addressed by Italian courts. A recent decision issued by the Italian Supreme Court (No 11530 of 15 June 2020) draws attention to the rules governing the burden of proof in gender discrimination cases. The case involved a woman who sued her former employer. After an apprenticeship period she had not been hired as a permanent employee, unlike her male colleagues and other female colleagues who were not mothers.

Quantitative analysis

Descriptive overview

Figure 1 shows the % occurrence (distribution) of Social Media Representations among all Social Media Representations in the data. In our case, we see in the notes that we have 828 Social Media Representations occurring in total (N=32963). The data to create the figure can be found in column "% of Social Media Representations" of the indicated table.

Figure 1. Social Media Representations - Distribution among Social Media Representations



Notes: Created with data from Table 3 presented in Appendix A. N = 32963.

In general, the three SM representations that (overall) emerge are Values (about 30%), Identity and Public Sphere (about 20%). Italian social media that deal with gender mainly publish posts and tweets on:

- certain values connected to gender, such as gender in/equality ore non/discrimination on the basis of gender, diversity or freedom related to gender
- the theme of the Gender Identity in term of being a man, woman, non-binary, LGBTQ
- Public Sphere i.e. relevant issues, raised by non-political actors, in particular the relationship between citizens and institutions.

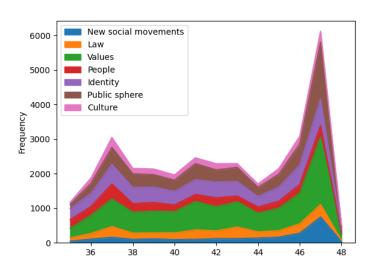


Figure 2. Social Media Representations - Relative importance over time

Notes: Created with data from Table 4 presented in Appendix A. N = 32963.

Week

Figure 2 shows that there are two spikes in all Social Media Representations in week 38 (that occurred in the end of September 2021) and in week 47 (that occurred in the end of November 2021). This graph represents the trend of news on Gender that appeared in the contents of Italian social media. Two "peaks" are evident:

- The first concerns the affirmation of an Italian television presenter Palombelli on the subject of the so-called feminicide (the murder of women for gender-related issues, as mentioned in the Legislation paragraph). The polarizations of the debate have emerged on social media, with fierce criticism, on the one hand, or support for Palombelli
- The second peak relates to the International Day for the Elimination of Violence Against Women (November 25) which generated coverage in the media, both with respect to the theme and also with regard to the demonstrations and initiatives promoted during that day.

Values and Public Sphere are the most frequently occurring Social Media Representations during this week, as well as during any other week of the analysed period. The trends of the other Social Media Representation seem fairly stable over time, but we observed that:

- During the central weeks of September, a news story (femicide) was echoed by the media, reporting stories and data on gender-based violence and homicides in Italy (in the Social Media Representation of "People" there is a spike)
- Between the end of October and the beginning of November, the "new social movements" took action following the decision of the Italian Senate against the law (DdL Zan, mentioned in the Legislation paragraph) on LGBTQ+ rights, which postponed the discussion of the law in six months

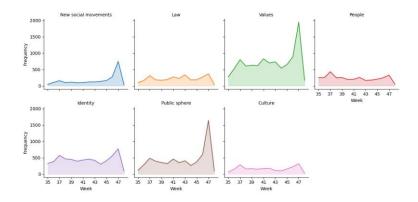
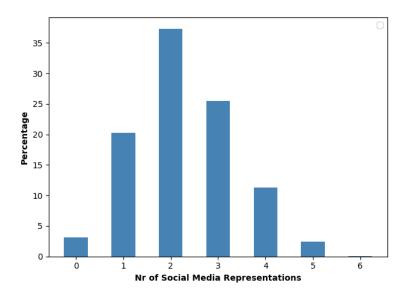


Figure 3. Social Media Representations - Evolution over time

Notes: Created with data from Table 4 presented in Appendix A. N = 32963.

From the below Figure we can see that at least one or more Social Media Representation occurs in the vast majority of posts. Posts belonging to two Social Media Representations is the most common case, with more than 35% of the post. Additionally, we can conclude that a large number of posts (more than 75%) have one or two Social Media Representations present.



Notes: Created with data from Table 5 presented in Appendix A. N = 14373.

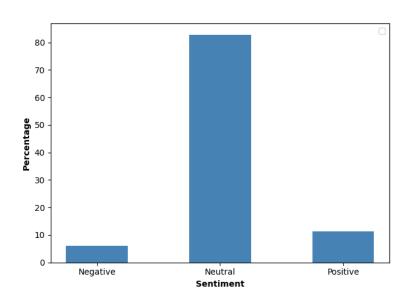


Figure 5. Sentiments - Distribution among all posts

Notes: Created with data from Table 6 presented in Appendix A. N = 14373.

As was to be expected, more than 90% of the posts have a neutral sentiment. There are more negative sentiments than positive, but the posts of the analysed sample are not containing many negative or positive sentiments. There were several instances of posts (long and with several statements) where the sentiment was both positive and negative, so they were marked as neutral (as if the two positions balance each other).

Comparisons between Europe and Not Europe

Posts not about Europe (10789) are much more frequent than posts about Europe (3584) (see Table 9 and Table 10 that show total number of posts at the bottom). Chi-squared tests conclude that

there are statistically significant differences in the proportions of all Social Media Representations when comparing posts about Europe and not about Europe. In particular:

- The Social Media Representations of "Law", "Public Sphere" and "Culture" occur significantly more often in Europe posts than Not Europe posts;
- vice versa, the Social Media Representations of "New Social Movements", "Values", "People" and "Identity" occur more often in Not Europe posts than Europe posts.

However, for the variables "People" and "Culture" and "Identity" there are little statistically significant differences when comparing posts about Europe and not about Europe: Chi-quared p>0.05.

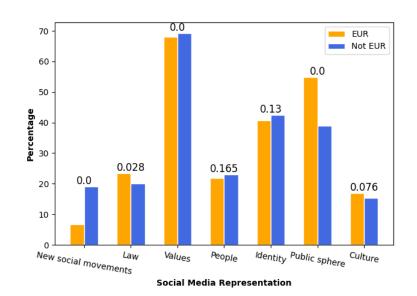


Figure 6. Social Media Representations - % occurrence among Europe and Not Europe posts respectively

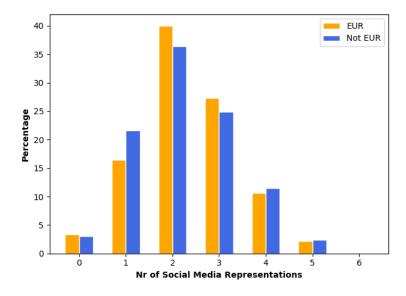
Notes: Created with data from Table 7 and Table 8 presented in Appendix B. P value from chisquared test of equal proportions between Europe and Not Europe in variable above each pair of bars. N = 14373 in each pair of comparison.

From the information in Table 1, we can conclude that there are on average more Social Media Representations among Europe posts than Not Europe posts. The mean values for the Europe and Not Europe posts are 2.324 and 2.283 respectively and a t-test confirms that the difference in means is statistically significant (p = 0.050).

Table 1. Number of Social Media Representations by Europe and Not Europe - Mean, standard deviation (SD) and results from t-test of difference in means

	Europe	Not Europe	Significance	P value
Mean	2.3242	2.2832	*	0.0502
SD	(1.056)	(1.098)		

Figure 7. Number of Social Media Representations - % occurrence among Europe and Not Europe posts respectively



Notes: Created with data from Table 9 and Table 10 presented in Appendix B. N = 14373.

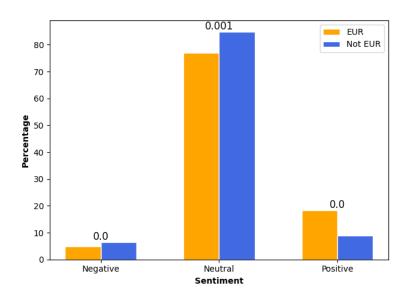
Not Europe posts are more neutral or negative, while Europe posts are more positive.

All negative posts in the Not Europe database concern news related to episodes of feminicide.

For example, in the positive posts of DB Europe we have found the news of the elections in Iceland, where the new Parliament has a female majority, or news related to stories of women who have obtained particular recognitions at European level (in the medical or sports field).

Chi-squared tests confirm that these differences are statistically significant (p<0.001).

Figure 8. Sentiment - % occurrence among Europe and Not Europe posts respectively



Notes: Created with data from Table 11 and Table 12 presented in Appendix B. P value from chisquared test of equal proportions between Europe and Not Europe in variable above pair of bars. N = 14373.

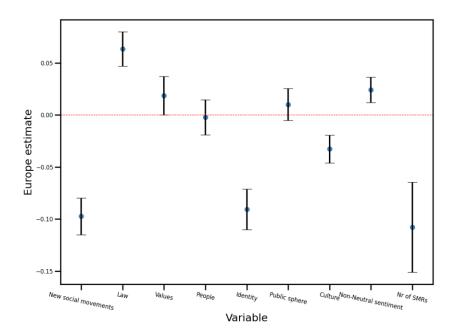


Figure 9. Coefficient estimates Europe

Notes: Coefficient estimates and their 95 % confidence intervals of Europe variable from Model 3 of Table 13, Table 14, Table 15, Table 16, Table 17, Table 18, Table 19, Table 20, Table 21 presented in Appendix B. N = 14373 in each estimation.

The coefficient estimates in Figure 9 show that there are several differences between Europe and Not Europe posts also when controlling for additional variables. Results from Logit regressions confirm that Value and Law are more likely to occur among Europe posts than Not Europe posts. The effects are around 6 and 4 percentage points respectively.

The posts/tweets refer in these two Social Media Representations, on the one hand to the strategy focused on gender equality, 'the National Strategy for Gender Equality' approved in July 2021 (as we said in the background of this Report) and to the comparison with the European parameters in terms of Gender Equality. On the other hand, there are also several posts that refer to Merkel's affirmation (early September 2021) as a guest at a meeting together with the Nigerian writer Chimamanda Ngozi Adichie: the German chancellor Angela Merkel said «we should all be feminists».

At the same time, Identity and Cultures are more likely to be observed in Not Europe posts, with effect sizes of around 3 and 3.5 percentage points respectively. In these Social Media Representations, there are several posts related to the "Non una di meno" initiatives (specifically Italian), which was born in Rome from the confrontation between different female and feminist realities who for several months have been thinking about some issues and values such as education for differences, non-binary identity, freedom of choice etc.

However, there are no statistically significant differences in the occurrence of Public sphere nor People and New Social Movements between Europe and Not Europe posts. In fact, we can recall here the movements both European and not related to the day against gender-based violence, very present in the databases.

Finally, results from a Logistic regression point to that there non-neutral sentiments are more likely to be observed in Europe posts than the Not Europe posts.

Comparisons between Media and Not Media

Posts by Media (3659) are more common than posts by Not Media (29304) (See Table 22 and Table 23). Chi-squared tests conclude that there are statistically significant differences in the proportions of the Social Media representations Law, People, Values, New social Movements, Identity and Public sphere when comparing posts about Media and not about Media (p < 0.001 in all cases except for Values and Identity, p > 0.1). No statistically significant differences in the Social Media Representation of Culture (p = 1.0).

Law and People occur more often in Media posts, while Values, Public Sphere and New Social Movements and Identity are more frequent among Not Media posts.

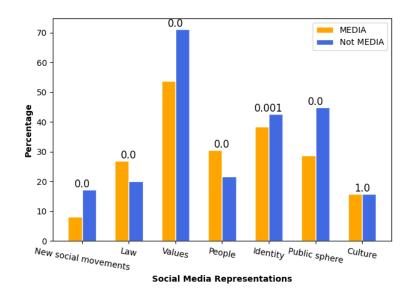
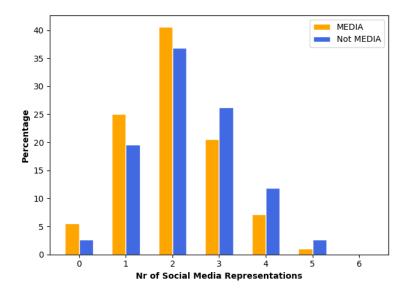


Figure 10. Social Media Representations - % occurrence among Media and Not Media posts respectively

Notes: Created with data from Table 22 and Table 23 presented in Appendix C. P value from chi-squared test of equal proportions between Media and Not Media in variable above each pair of bars. N = 14373 in each pair of comparison.

From the information in Table 2, we can conclude that there are on average more Social Media Representations among Not Media posts than in Media posts. The mean values for the Media and Not Media posts are 2.02 and 2.34 respectively and a t-test confirms that the difference in means is statistically significant (p = 0.0). As we see in the below chart, the result seems to be driven by that there are more Media posts with 1 or 2 Social Media Representations and more Not Media posts with more than 2 Social Media Representation.

Figure 11. Number of Social Media Representations - % occurrence among Media and Not Media posts respectively



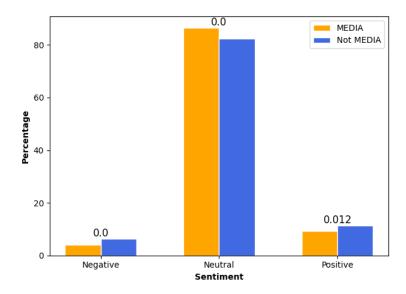
Notes: Created with data from Table 24 and Table 25 presented in Appendix C. N = 14373.

Table 2. Number of Social Media Representations by Media and not Media - Mean, standard deviation (SD) and results from t-test of difference in means

	Media	Not Media	Significance	P value
Mean	2.0204	2.3327	****	0
SD	(1.033)	(1.09)		

The data shows that posts/tweets on Italian news media are more neutral than on Not Media. Therefore, there is a Not-neutral (more positive or more negative) sentiment on the Users Generated Contents. However, Chi-squared tests conclude that there are statistically significant differences the proportions of any of the sentiments when comparing posts about Media and not about Media (association analysis "Sentiment" versus "Media" or "Not Media" p< 0.013).

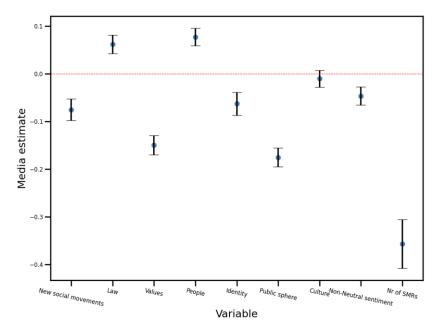
Figure 12. Sentiment - % occurrence among Media and Not Media posts respectively



Notes: Created with data from Table 26 and Table 27 presented in Appendix C. P value from chi-squared test of equal proportions between Media and Not Media in variable above pair of bars. N = 14373.

The coefficient estimates in Figure 13 show that there are several differences between Media and Not Media posts also when controlling for additional variables. Results from Logit regressions confirms that Law and People occur more often among the Media posts as compared to the Not Media posts. The effects are around 15 and 5 percentage points respectively. At the same time, New social movements, Value, Public Sphere and Identity are more likely to be observed in Not Media posts, with effect sizes of around 4, 15, 10 and 5 percentage points respectively. However, there are no statistically significant differences in the occurrence of Culture between Media and Not Media posts.

Figure 13. Coefficient estimates Media



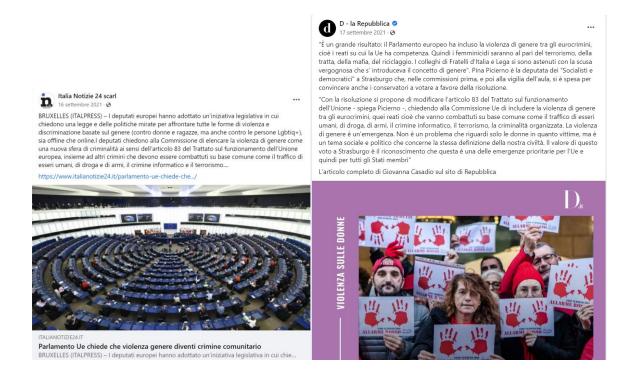
Notes: Coefficient estimates and their 95 % confidence intervals of Media variable from Model 3 of Table 28, Table 39, Table 30, Table 31, Table 32, Table 33, Table 34, Table 35, Table 36. presented in Appendix C. N = 14373 in each estimation.

Illustrative examples

This section is to give examples of posts that reflect the results from the quantitative analysis. Six examples of posts will be presented.

Four posts are related to Figure 9 – "Coefficient estimates Europe" and two posts are related to Figure 13 – "Coefficient estimates Media".

In our case, "Law" has the largest coefficient estimate of Europe and "New Social Movements" has the smallest coefficient estimate of Europe.



The first example is emblematic in two posts relating to European legislative initiatives, in particular we found the news relating to the request of Italian MEPs who ask the European Commission to list gender-based violence as a crime area (like terrorism or cybercrime).

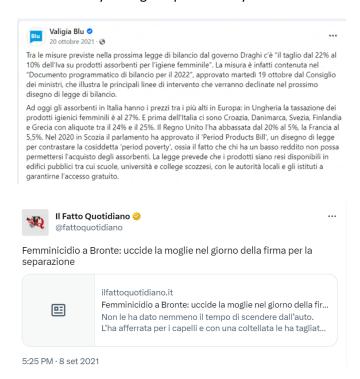
The second example relates to two posts not related to Europe: the first refers to a tweet reporting the MeToo movement and which refers to news related to an accusation of sexual violence by the Chinese vice-premier; the second is a post on Facebook which instead reports the network (already mentioned above) of "Non una di meno" which organized a demonstration in a square in Rome.



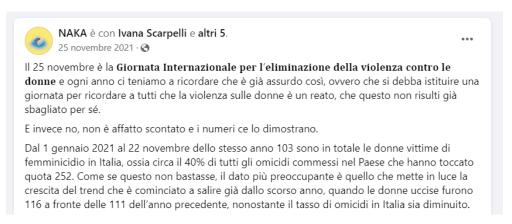
In Italian case, we see that People and Law has the largest coefficient estimate of Media and Public Sphere has the smallest coefficient estimate of Media.

Here we therefore report for the Social Media Representation People and Law:

- an example of a tweet in newsmedia relating to the "Italian Budget Law" (mentioned in the National context paragraph) in which some measures are taken to control the prices (of feminine hygiene products) compared to European ones
- an example di post relating to one of the various news stories reporting cases of feminicide in Italy during the period analysed.



Instead, the second is the example of a user (common citizen who is part of an association)-therefore Not Media - who addresses issues related to the debate (feminicide, gender discrimination, etc.) on the occasion of the International Day for the Elimination of Violence against Women. In this long post there are gender relevant issues, raised by non-political actors a non-political actor who tries to influence decision-making of institutions.



Conclusion

In this analysis, several phenomena emerged that constituted social media representations at the end of 2021 in Italy.

Some phenomena have emerged as more present and linked to the European context, while others have had a wider (global) or narrower (national/local) representation.

The main representations relating to Europe are present in the legislative field. We recall, for example, that the year 2021 concludes with the European Parliament's calls on the EU and its Member States to propose concrete measures aimed at protecting women's rights and reducing gender inequalities in the EU (European Parliament, 2021).

The phenomena that are most present on news media and in user-generated content are: the continuous rise of the femicide cases, which have caused ambivalent reactions from politicians and media personalities; the emergence of such new social movement, both global (Mee Too) and national (Non Una di Meno).

However, the occurrence of the World Day against Violence against Women at the end of November has brought out numerous and different issues related to social media representations relating to gender values and identity, declined at national level.

References

Appendices

Appendix A. Tables supporting the section on Descriptive overview

Table 3. Social Media Representations - Frequency and % occurrence among all posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	2301	7.0	16.0
Law	3001	9.1	20.9
Values	9917	30.1	69.0
People	3263	9.9	22.7
Identity	6047	18.3	42.1
Public sphere	6161	18.7	42.9
Culture	2273	6.9	15.8
Total	32963	100.0	229.3

Table 4. Social Media Representations - Frequency by week

Unnamed: 0	New social movements	Law	Values	People	Identity	Public sphere	Culture
35	45	96	275	251	326	116	62
36	105	166	526	254	384	289	154
37	158	312	799	432	573	487	288
38	98	182	605	249	466	394	158

39	113	171	630	253	449	355	165
40	92	193	617	193	395	322	152
41	98	273	826	201	431	461	169
42	119	226	699	256	460	350	180
43	120	335	734	165	421	408	109
44	136	181	543	176	303	263	100
45	162	187	650	204	410	376	158
46	278	271	893	246	565	602	228
47	746	366	1949	329	775	1643	318
48	31	42	171	54	89	95	32
Total	2301	3001	9917	3263	6047	6161	2273

Table 5. Number of Social Media Representations in posts - Frequency and % occurrence among all posts

Nr of Social Media Representations	Count	% of Posts
0	441	3.1
1	2918	20.3
2	5363	37.3
3	3668	25.5
4	1620	11.3
5	343	2.4
6	20	0.1
Total	14373	100.0

Table 6. Sentiment - Frequency and % occurrence among all posts

Sentiment	Count	% of Posts
Negative	868	6.0
Neutral	11902	82.8
Positive	1603	11.2
Total	14373	100.0

Appendix B. Tables supporting the section on Comparisons - Europe and Not Europe

Table 7. Social Media Representations Europe - Frequency and % occurrence among Europe posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	235	2.8	6.6
Law	838	10.1	23.4
Values	2436	29.2	68.0
People	783	9.4	21.8
Identity	1462	17.6	40.8
Public sphere	1967	23.6	54.9
Culture	609	7.3	17.0
Total	8330	100.0	232.4

Table 8. Social Media Representations Not Europe - Frequency and % occurrence among Not Europe posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	2066	8.4	19.1
Law	2163	8.8	20.0
Values	7481	30.4	69.3
People	2480	10.1	23.0
Identity	4585	18.6	42.5
Public sphere	4194	17.0	38.9
Culture	1664	6.8	15.4
Total	24633	100.0	228.3

Table~9.~Number~of~Social~Media~Representations~Europe~-~Frequency~and~%~occurrence~among~Europe~posts

Nr of Social Media Representatio	Count	% of Posts
0	122	3.4
1	589	16.4
2	1432	40.0
3	977	27.3
4	379	10.6
5	80	2.2

6	5	0.1
Total	3584	100.0

Table 10. Number of Social Media Representations Not Europe - Frequency and % occurrence among Not Europe posts

Nr of Social Media Representations	Count	% of Posts
0	319	3.0
1	2329	21.6
2	3931	36.4
3	2691	24.9
4	1241	11.5
5	263	2.4
6	15	0.1
Total	10789	100.0

Table 11. Sentiment Europe - Frequency and % occurrence among Europe posts

Sentiment	Count	% of Posts
Negative	173	4.8
Neutral	2756	76.9
Positive	655	18.3
Total	3584	100.0

Table 12. Sentiment Not Europe - Frequency and % occurrence among Not Europe posts

Sentiment	Count	% of Posts
Negative	695	6.4
Neutral	9146	84.8
Positive	948	8.8
Total	10789	100.0

Table 13. Marginal effects of Logistic regressions with New Social Movements as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	-0.1600****	-0.1136****	-0.0973****
	(0.009)	(0.009)	(0.009)
Twitter		0.0732****	0.0933****
		(0.006)	(0.006)

Interactions		-1.959e-06	8.129e-08
		(0.0)	(0.0)
Followers		-8.57e-08****	-7.818e-08***
		(0.0)	(0.0)
Sentiment Score		-0.0303****	-0.0269****
		(0.002)	(0.002)
October			-0.0762****
			(0.014)
November			-0.0395*
			(0.024)
week			0.0162****
			(0.003)
N	14373	14373	14373
Pseudo R- squared	0.03	0.08	0.11

Table 14. Marginal effects of Logistic regressions with Law as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.0324****	0.0639****	0.0635****
	(0.008)	(0.008)	(800.0)
Twitter		0.0926****	0.0917****
		(0.008)	(800.0)
Interactions		3.771e-07	4.355e-07
		(0.0)	(0.0)
Followers		1.801e-08*	1.716e-08*
		(0.0)	(0.0)
Sentiment		-8.144e-05	-0.0008
Score			
		(0.001)	(0.001)
October			0.0219
			(0.015)
November			-0.0584**

			(0.027)
week			0.0056**
			(0.003)
N	14373	14373	14373
Pseudo R- squared	0.00	0.01	0.02

Table 15. Marginal effects of Logistic regressions with Values as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	-0.0136	0.0045	0.0186**
	(0.009)	(0.009)	(0.009)
Twitter		0.0297***	0.0479****
		(0.009)	(0.009)
Interactions		-1.656e-06	-4.872e-07
		(0.0)	(0.0)
Followers		-3.418e-08****	-3.222e-08****
		(0.0)	(0.0)
Sentiment Score		-0.0108****	-0.0085****
		(0.002)	(0.002)
October			-0.0409**
			(0.016)
November			-0.1466****
			(0.03)
week			0.0293****
			(0.003)
N	14373	14373	14373
Pseudo R- squared	0.00	0.00	0.02

 $Table\ 16.\ Marginal\ effects\ of\ Logistic\ regressions\ with\ People\ as\ dependent\ variable$

Variable	Model 1	Model 2	Model 3
Europe	-0.0115	0.0131	-0.0021
	(800.0)	(0.009)	(800.0)

Twitter		0.0701****	0.0512****
		(0.008)	(800.0)
Interactions		1.27e-05****	1.108e-05****
		(0.0)	(0.0)
Followers		1.791e-08**	1.65e-08**
		(0.0)	(0.0)
Sentiment Score		-0.0086****	-0.0108****
		(0.002)	(0.002)
October			0.0241
			(0.015)
November			0.1164****
			(0.027)
week			-0.0268****
			(0.003)
N	14373	14373	14373
Pseudo R- squared	0.00	0.01	0.03

Table 17. Marginal effects of Logistic regressions with Identity as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	-0.0171*	-0.0778****	-0.0905****
	(0.01)	(0.01)	(0.01)
Twitter		-0.1782****	-0.1951****
		(0.01)	(0.01)
Interactions		1.482e-05***	1.306e-05***
		(0.0)	(0.0)
Followers		6.902e-09	5.145e-09
		(0.0)	(0.0)
Sentiment Score		0.0047**	0.0022
		(0.002)	(0.002)
October			0.0304*

			(0.018)
November			0.0719**
			(0.032)
week			-0.0211****
			(0.003)
N	14373	14373	14373
Pseudo R- squared	0.00	0.02	0.03

Table 18. Marginal effects of Logistic regressions with Public Sphere as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.1557****	-0.0033	0.0102
	(0.009)	(0.008)	(0.008)
Twitter		-0.7544***	-0.7229****
		(0.018)	(0.017)
Interactions		2.513e-06	3.681e-06**
		(0.0)	(0.0)
Followers		-1.894e-08***	-1.632e-08***
		(0.0)	(0.0)
Sentiment Score		-0.0172****	-0.0135****
		(0.002)	(0.002)
October			-0.1188****
			(0.015)
November			-0.1731****
			(0.028)
week			0.0317****
			(0.003)
N	14373	14373	14373
Pseudo R- squared	0.01	0.24	0.26

Table 19. Marginal effects of Logistic regressions with Culture as dependent variable

Variable	Model 1	Model 2	Model 3
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Europe	0.0154**	-0.0293****	-0.0326****
	(0.007)	(0.007)	(0.007)
Twitter		-0.1376****	-0.1421****
		(0.009)	(0.009)
Interactions		-9.033e-06***	-9.627e-06***
		(0.0)	(0.0)
Followers		6.597e-09**	6.369e-09**
		(0.0)	(0.0)
Sentiment Score		0.0151****	0.0146****
		(0.001)	(0.001)
October			-0.0094
			(0.013)
November			0.0136
			(0.023)
week			-0.0057**
			(0.002)
N	14373	14373	14373
Pseudo R- squared	0.00	0.04	0.04

Table 20. Marginal effects of Logistic regressions with Non-neutral Sentiment as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.0726****	0.0236****	0.0242****
	(0.007)	(0.006)	(0.006)
Twitter		-0.0777****	-0.0765****
		(0.008)	(0.008)
Interactions		-2.053e-06*	-2.006e-06*
		(0.0)	(0.0)
Followers		-1.116e-08*	-1.123e-08*
		(0.0)	(0.0)
Sentiment Score		0.0340****	0.0342***

		(0.002)	(0.002)
October			-0.0334***
			(0.012)
November			-0.0599***
			(0.022)
week			0.0061***
			(0.002)
N	14373	14373	14373
Pseudo R- squared	0.01	0.07	0.07

Table 21. Coefficient estimates of OLS regressions with Number of Social Media Representations as dependent variable

Model 2

Model 3

Variable

Model 1

Europe	0.0411**	-0.1184***	-0.1078***
	(0.0206)	(0.0217)	(0.0219)
Twitter		-0.5843***	-0.5686***
		(0.0196)	(0.0199)
Interactions		0.0000***	0.0000***
		(0.000)	(0.0000)
Followers		-0.0000	-0.0000
		(0.000)	(0.0000)
Sentiment Score		-0.0425***	-0.0396***
		(0.0041)	(0.0041)
October			-0.1760***
October			-0.1760*** (0.0389)
October November			
			(0.0389)
			(0.0389) -0.2107***
November			(0.0389) -0.2107*** (0.0711)
November	2.2832***	2.4921***	(0.0389) -0.2107*** (0.0711) 0.0296***

R-squared	0.0003	0.0623	0.0650
R-squared Adj.	0.0002	0.0620	0.0644
N	14373	14373	14373

Appendix C. Tables supporting the section on Comparisons - Media and Not Media

Table 22. Social Media Representations Media - Frequency and % occurrence among Media posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	145	4.0	8.0
Law	487	13.3	26.9
Values	974	26.6	53.8
People	552	15.1	30.5
Identity	695	19.0	38.4
Public sphere	520	14.2	28.7
Culture	286	7.8	15.8
Total	3659	100.0	202.0

Table 23. Social Media Representations Not Media - Frequency and % occurrence among Not Media posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	2156	7.4	17.2
Law	2514	8.6	20.0
Values	8943	30.5	71.2
People	2711	9.3	21.6
Identity	5352	18.3	42.6
Public sphere	5641	19.2	44.9
Culture	1987	6.8	15.8
Total	29304	100.0	233.3

Table 24. Number of Social Media Representations Media - Frequency and % occurrence among Media posts

Nr of Social Count % of Posts

Media

Representations

0	100	5.5
1	454	25.1
2	736	40.6
3	373	20.6
4	128	7.1
5	18	1.0
6	2	0.1
Total	1811	100.0

Table 25. Number of Social Media Representations Not Media - Frequency and % occurrence among Not Media posts

Nr of Social Media Representations	Count	% of Posts
0	341	2.7
1	2464	19.6
2	4627	36.8
3	3295	26.2
4	1492	11.9
5	325	2.6
6	18	0.1
Total	12562	100.0

Table 26. Sentiment Media - Frequency and % occurrence among Media posts

Sentiment	Count	% of Posts
Negative	75	4.1
Neutral	1566	86.5
Positive	170	9.4
Total	1811	100.0

Table 27. Sentiment Not Media - Frequency and % occurrence among Not Media posts

Sentiment	Count	% of Posts
Negative	793	6.3
Neutral	10336	82.3
Positive	1433	11.4

Total 12562 100.0

Table 28. Marginal effects of Logistic regressions with New Social Movements as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.1158****	-0.0751****	-0.0751****
	(0.012)	(0.012)	(0.012)
Twitter		0.0966****	0.1143****
		(0.006)	(0.006)
Interactions		-4.446e-06	-1.69e-06
		(0.0)	(0.0)
Followers		-5.486e-08***	-4.735e-08***
		(0.0)	(0.0)
Sentiment Score		-0.0315****	-0.0278****
		(0.002)	(0.002)
October			-0.0815****
			(0.014)
November			-0.0478**
			(0.024)
week			0.0179****
			(0.003)
N	14373	14373	14373
Pseudo R- squared	0.01	0.07	0.10

Table 29. Marginal effects of Logistic regressions with Law as dependent variable

Variable	Model 1	Model 2	Model 3
Media	0.0635****	0.0621****	0.0624***
	(0.009)	(0.01)	(0.01)
Twitter		0.0748****	0.0734***
		(0.007)	(0.007)
Interactions		1.058e-06	1.068e-06
		(0.0)	(0.0)

Followers		1.041e-08*	9.501e-09*
		(0.0)	(0.0)
Sentiment Score		0.0014	0.0006
		(0.001)	(0.001)
October			0.0249*
			(0.014)
November			-0.0534**
			(0.027)
week			0.0046
			(0.003)
N	14373	14373	14373
Pseudo R- squared	0.00	0.01	0.01

Table 30. Marginal effects of Logistic regressions with Values as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.1586****	-0.1517****	-0.1495****
	(0.01)	(0.011)	(0.011)
Twitter		0.0234***	0.0374***
		(0.009)	(0.009)
Interactions		-2.862e-06*	-1.6e-06
		(0.0)	(0.0)
Followers		-8.812e-09**	-7.676e-09*
		(0.0)	(0.0)
Sentiment		-0.0104****	-0.0079****
Score			
		(0.002)	(0.002)
October			-0.0405**
			(0.016)
November			-0.1442****
			(0.029)
week			0.0287****

(0.003)

N	14373	14373	14373
Pseudo R-	0.01	0.01	0.03
squared			

Table 31. Marginal effects of Logistic regressions with People as dependent variable

Variable	Model 1	Model 2	Model 3
Media	0.0813****	0.0802****	0.0775****
	(0.01)	(0.01)	(0.01)
Twitter		0.0688****	0.0543****
		(0.007)	(800.0)
Interactions		1.342e-05****	1.162e-05****
		(0.0)	(0.0)
Followers		8.225e-09*	7.301e-09*
		(0.0)	(0.0)
Sentiment Score		-0.0085****	-0.0110****
		(0.002)	(0.002)
October			0.0245*
			(0.015)
November			0.1165****
			(0.027)
week			-0.0267****
			(0.003)
N	14373	14373	14373
Pseudo R- squared	0.00	0.02	0.04

Table~32.~Marginal~effects~of~Logistic~regressions~with~Identity~as~dependent~variable

Variable	Model 1	Model 2	Model 3
Media	-0.0428***	-0.0607****	-0.0627****
	(0.013)	(0.013)	(0.013)
Twitter		-0.1583****	-0.1708****
		(0.009)	(0.009)

Interactions		1.351e-05***	1.184e-05**
		(0.0)	(0.0)
Followers		1.527e-08**	1.358e-08**
		(0.0)	(0.0)
Sentiment Score		0.0029	0.0003
		(0.002)	(0.002)
October			0.0259
			(0.018)
November			0.0641**
			(0.032)
week			-0.0195****
			(0.003)
N	14373	14373	14373
Pseudo R- squared	0.00	0.02	0.03

Table 33. Marginal effects of Logistic regressions with Public Sphere as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.1706****	-0.1772****	-0.1752****
	(0.013)	(0.01)	(0.01)
Twitter		-0.7450****	-0.7181****
		(0.017)	(0.016)
Interactions		1.743e-06	2.961e-06**
		(0.0)	(0.0)
Followers		-2.582e-09	-4.321e-10
		(0.0)	(0.0)
Sentiment Score		-0.0170****	-0.0129****
		(0.002)	(0.001)
October			-0.1183****
			(0.015)
November			-0.1701****

			(0.028)
week			0.0311****
			(0.003)
N	14373	14373	14373
Pseudo R- squared	0.01	0.26	0.28

Table 34. Marginal effects of Logistic regressions with Culture as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.0003	-0.0092	-0.0101
	(0.009)	(0.009)	(0.009)
Twitter		-0.1299****	-0.1332****
		(0.008)	(0.008)
Interactions		-9.407e-06***	-9.997e-06***
		(0.0)	(0.0)
Followers		7.387e-09***	7.289e-09***
		(0.0)	(0.0)
Sentiment Score		0.0144***	0.0138****
		(0.001)	(0.001)
October			-0.0111
			(0.013)
November			0.0104
			(0.023)
week			-0.0050**
			(0.002)
N	14373	14373	14373
Pseudo R- squared	0.00	0.04	0.04

 $Table\ 35.\ Marginal\ effects\ of\ Logistic\ regressions\ with\ Non-neutral\ Sentiment\ as\ dependent\ variable$

Variable	Model 1	Model 2	Model 3
Media	-0.0454***	-0.0461****	-0.0462****
	(0.01)	(0.009)	(0.009)

Twitter		-0.0864***	-0.0857****
		(0.008)	(800.0)
Interactions		-2.288e-06**	-2.275e-06**
		(0.0)	(0.0)
Followers		-4.02e-09	-3.975e-09
		(0.0)	(0.0)
Sentiment Score		0.0345****	0.0346****
		(0.002)	(0.002)
October			-0.0324***
			(0.012)
November			-0.0574***
			(0.022)
week			0.0056**
			(0.002)
N	14373	14373	14373
Pseudo R- squared	0.00	0.07	0.07

Table 36. Coefficient estimates of OLS regressions with Number of Dimensions as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.3123***	-0.3574***	-0.3568***
	(0.0261)	(0.0265)	(0.0264)
Twitter		-0.5606***	-0.5472***
		(0.0185)	(0.0186)
Interactions		0.0000***	0.0000***
		(0.0000)	(0.0000)
Followers		0.0000**	0.0000**
		(0.0000)	(0.0000)
Sentiment Score		-0.0448***	-0.0414***
		(0.0041)	(0.0041)
October			-0.1834***

			(0.0386)
November			-0.2215***
			(0.0706)
week			0.0313***
			(0.0074)
Intercept	2.3327***	2.4975***	1.3218***
nan	(0.0097)	(0.0115)	(0.2733)
R-squared	0.0091	0.0716	0.0745
R-squared Adj.	0.0090	0.0712	0.0740
N	14373	14373	14373

Portugal

Authors: Istituto Universitário de Lisboa team

Institution: Istituto Universitário de Lisboa

Introduction

In this report we will analyze the way in which discussions about gender take place on social media platforms in Portugal. To accomplish this, we will analyze the Social Media Representations in discussions about Europe and not about Europe, but also in posts done by media agents and not media agents. This analysis is based on the codification of Facebook and Twitter posts pertaining to our research period (September-November of 2021). Before we perform this analysis, we present a previous chapter dealing with various aspects that might help us to better understand our data.

In the first chapter we do a succinct literature review to work related to gender representations in the media (Alvares & Verissimo, 2016; Baptista & Himmel, 2016), gender based online social movements in Portugal (Garraio et al., 2020; Prata, 2021; Caldeira & Machado, 2023) and online influencers that deal specifically with gender related issues and thus might influence this kind of discussions (Alemão, 2021; Caldeira & Machado, 2022). Following this background section, we approach the legal framework in Portugal regarding gender related issues. In this section, we highlight some laws that were in effect in Portugal at the time, related to gender equality and parity, violence against women, LGBTQ rights, among others. Lastly, we contextualize some events of importance that were happening in Portugal throughout the research period. We start by highlighting that this was a period of great political instability in Portugal, and then proceed to underline some gender specific events and news that might have prompted discussions on social media.

Following this first chapter, we proceed to the quantitative analysis of the various posts that make up our sample. In this chapter we intend to understand which Social Media Representations are more prevalent, but also in which context. We will start by offering a general descriptive analysis of the data in which we try to better

understand and explain what events drive it. We then proceed to compare Europe and Not Europe posts as well as Media and Not Media posts. By approaching the statistically significant differences between posts we hope to understand how each of these dimensions are portrayed in the Portuguese social media sphere. Lastly, in this chapter, we provide some illustrative examples of posts found within our dataset that feature the Social Media Representations with the largest and lowest coefficient estimates regarding Europe and Media.

After the quantitative analysis, we present a brief conclusion in which we approach the various results of our analysis and try to relate them with previous literature and the context in which the research period took place.

Background

Portugal exhibits a rather conservative vision regarding gender related topics and their discussion in the public sphere. Despite a certain amount of progress regarding legislation and policies, from a cultural standpoint, issues related to feminism and gender tend to be met with some uncertainty and skepticism by the public (Simões & Silveirinha, 2022). In previous literature, work by Caldeira & Machado (2022; 2023) and Simões & Silveirinha (2022) consider that this conservative or traditionalist view of gender is in part related to Portugal's recent history, more specifically, with the authoritarian conservative regime that ruled the country from 1933 to 1974, but also by the long and historied influence of the Catholic Church on the Portuguese society. In that sense, there seems to be an underlying and deeply rooted misogyny and prejudice related to topics such as gender and sexuality.

The traditional media landscape is heavily male dominated, and although many professionals acknowledge the need for positive gender representation, they are not legally bound to do so as Portugal is severely lacking in legislation regarding gender representations (Alvares & Verissimo, 2016). In the past, the Portuguese media has struggled to transcend the representation of gender as binary (Baptista & Himmel, 2016) and to include feminist activists in discussions surrounding gender related topics (Garraio et al., 2020; Prata, 2021). As an example, one can consider the media coverage surrounding the murder of Gisberta, a Brazilian trans woman in Portugal in 2006. Baptista & Himmel (2016) conclude that "In practically all the media coverage on the issue, information about Gilberta is selected and contextualized in a way in which she becomes her sexuality" (p.645.). However, in their recent work regarding the discussion of street harassment in Portugal, Simões & Silveirinha (2022) highlight that feminist interpretations have found their way into media texts.

Online discussions brought about by gender related issues seem to be in a way affected by the same conservatism found in Portuguese legacy media outlets and society at large. One can consider the impact of the international #MeToo movement in Portugal as an example of this. While many Portuguese women participated in the movement and it did bring an increased visibility to issues surrounding sexual violence (Prata, 2021), it did not produce the same kind of public accusations found in other countries nor did it transition into its own national movement or country specific hashtag. (Garraio et al., 2020). However, it's important to note that the #MeToo movement in Portugal was highly conditioned by the rape allegations brought forth by model Kathryn Mayorga against the überpopular Portuguese football star Cristiano Ronaldo. As stated by Garraio et al. (2020), «Ronaldo' status as a national symbol and prodigy and Mayorga's admission that #MeToo had encouraged her to come forward contributed to the case being discussed in Portugal not as "the troubles of a rich Portuguese abroad" but as the case through which the country assessed #MeToo» (p.5.).

While the international #MeToo movement struggled to be fairly assessed in Portugal and gain momentum, the national movement #VermelhoEmBelem showcased that feminist discourse could in fact permeate online and mainstream media discussions. This movement arose during the 2021 Portuguese Presidential Elections when far right candidate André Ventura verbally attacked candidate Marisa Matias based on her use of red lipstick with the comments implying her absence of professionalism and having severe sexual undertones. These comments led to a wave of online support for candidate Marisa Matias, but also in defense of women's rights and feminist principles. The movement was adopted by both common citizens and celebrities alike and involved the act of painting one's lips red and posting it on social media (Caldeira & Machado, 2023). Despite the broad support and adhesion to the movement there was some minor backlash, mostly by supporters of Ventura.

However, unlike what happened during the discussion of the #MeToo movement, this backlash was not heavily or disproportionately represented in traditional media outlets (Caldeira & Machado, 2023). The massive support and overall positive coverage of the movement did not translate into favorable election results for candidate Marisa Matias. Regardless, #VermelhoEmBelem stands as an example of how gender discussions in Portugal can have a predominantly feminist framing on both social media and traditional media.

In addition to online social movements, the discussion of topics surrounding gender have also been promoted by online influencers. As mentioned by Caldeira & Machado (2022), "In Portugal, after years of slow uptake of popular feminism, there seems to be a new wave of social media savvy feminist and social justice minded people quickly gaining a steady footing on online platforms" (p.153.). Authors such as Caldeira & Machado (2022) and Alemão (2021) have delved into the activity of Portuguese online influencers dedicated to feminist topics and have highlighted their importance in giving visibility to issues related to feminism, women's sexuality, the female body, among others. While their status as an influencer does bring forth some potential questions regarding the dissemination of certain topics over others, as well as the nature of the activism being performed, it has also undoubtedly contributed to widen the discussion of genre related issues on social media (Caldeira & Machado, 2022).

The type of discourse surrounding movements like #VermelhoEmBelem and feminist online influencers can not be considered to be the norm in Portugal. Online discussions regarding genre related issues tend to be limited and dominated by a conservative type of discourse. As a whole, the discussion of these issues tends to be sparse and inconsistent (MERCK, 2022). Additionally, returning to Simões & Silveirinha's (2022) work on street harassment, the authors conclude that while the media represented this issue through a fairly feminist lens, the comments surrounding media publications assess street harassment mainly as a "non-issue". In general, while there seems to be some progress in relation to the way genre is portrayed on social media and their translation to traditional media, the discussions surrounding these issues tend to reflect the underlying misogyny and prejudice that still permeates Portuguese society.

Legislation

Portugal is considered a fairly progressive country regarding gender and sexual discrimination issues having been the 8th country in the world to legally acknowledge same sex marriage. The same sex marriage is legal in Portugal since June 2010, having been discussed and voted in the Parliament on the 8th of January. At that time, the law didn't allow for same sex adoption. The same sex adoption and co-adoption was voted favorably by the Parliament in December 2015, but was vetted by the conservative President and the bill only officially passed in 2016 with a new Parliamentary vote that overwrote the presidential veto.

Portugal signed the The Council of Europe Convention on Preventing and Combating Violence Against Women and Domestic Violence, better known as the Istanbul Convention, in 2011, being forced into action in 2014. In Portugal, Domestic Violence is a public crime, which means that the victim isn't required to present a formal complaint in order for the crime to be investigated, being only necessary a denunciation. There have been 5 National Plans against Domestic Violence and a Contingency Plan to support the victims during the Covid-19 was implemented by the Government in 2021.

The first parity law (that requires a weighted participation of both genders in lists for political elections) was approved in 2006. It has been updated in 2017 and more recently in 2019, requiring not 33% - as it first did - but 40% of minimum participation of each gender in the lists for national and local elections, as well as 37% in cases of superior positions in the Public Administration, the public business sector and companies in the stock market.

Although legislation around maternity leave in Portugal is not considered a "best practice" worldwide, the Paternity leave is often mentioned as one of the most comprehensive. In Portugal, new fathers enjoy 20 mandatory fully-paid days after the child is born and an additional 5 days at-will. This is considered an equality policy as it reinforces the importance of shared responsibility in the household and reduces the difference between off-work time for recent fathers and mothers.

Regarding transgender policies, Portugal passed the Gender Identity Bill in 2018, allowing Portuguese people of age to be able to change their gender legally. However, this Bill still doesn't recognize the non-binary people, nor the need to legally change the gender before coming of age. There is no law or public policy regarding gender neutral toilets nor language adoption - Portuguese is a particularly gender-oriented language, with no neutral gender.

Since 2018, Portugal is implementing the National Strategy for Equality and Non Discrimination 2018-2030 (ENIND) that supports three main action areas: 1) Action plan for gender equality; 2) Action plan to fight against gender and domestic violence and 3) Action plan to fight discrimination based on sexual orientation, gender identification and expression. This strategy includes many other public policies to fight gender discrimination in Portugal

National context

The research period (September-November 2021) was marked in Portugal by some events and news that might have shaped or influenced the content of the discussions that arose on the social media landscape. From a general standpoint, discussions of a political nature dominated the public's attention. In September, Portugal was in the midst of local elections that resulted in a change of government in the country's capital city of Lisbon. In October, the negotiations surrounding the state's budget for 2022 took center stage. At the time, Portugal was governed by a minority government led by the Socialist Party (PS) which meant that inter-party negotiations were necessary in order for the state's budget to be approved. At the end of October, due to complications in the negotiation process, the state's budget failed to be approved in parliament, resulting in the scheduling of anticipated elections for the end of January. The entirety of this process was heavily covered in the media and gave rise to a plethora of discussions on social media.

Besides the general political atmosphere, it is also important to highlight some events and news specifically related to gender that were of significance in Portugal during the research period.

The official establishment of the Taliban regime in Afghanistan in 2021 raised concerns all over the world regarding women's rights in the country. September was marked by protests in Afghanistan by women who, in the past 25 years of non-Taliban administration, had achieved a lot of important milestones towards gender equality. The Taliban impositions upon women were heavily covered in the Portuguese media and were represented as violations of women's rights. Additionally, the protests themselves also received a lot of media attention. The media coverage highlighted the specific rights that the Afghan women were fighting for and also displayed the oppressive ways in which the Taliban repressed the protestors.

In the beginning of October, the parliament group of the Socialist Party (PS) proposed an initiative related to the auto determination of gender in schools that had significant media coverage and generated public discussion. This initiative was meant to combat gender identity discrimination by giving more liberty to students to be treated and referred to by the gender that they identify as. Additionally, this initiative proposed that schools should have some responsibilities in terms of raising awareness of gender identity topics.

Later in October, the European Institute for Gender Equality released the Gender Equality Index for 2021. The media published that Portugal scored 62.2 out of 100 points, a rating below the European average of 68 points, and took the 15th place in the overall ranking of European nations.

In November, the Portuguese Observatory of Murdered Women (OMA) published a report revealing that 23 women were murdered in Portugal between January 1st and November the 15th. ⁹⁴ Every quarter there is online discussion around the numbers of domestic violence and its victims. On the 20th of November, which represents the international Transgender Day of Remembrance, there was a protest and a vigil in Lisbon, organized by various groups associated with the defense of transgender rights, in honor of the 360 transgender people that were killed globally in 2021. According to a statement emitted by the groups that organized the demonstration,

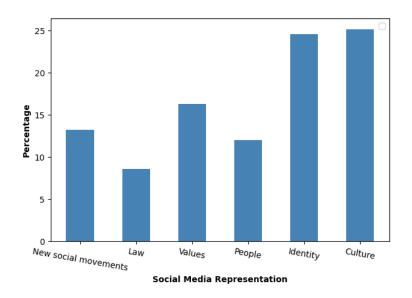
⁹⁴ Link to access this report: http://www.umarfeminismos.org/images/OMA Infografia DadosPreliminares2021.pdf

this was an event not just in honor of the people who died, but also in protest against transphobia, the most predominant cause of their death.

Quantitative analysis

Descriptive overview

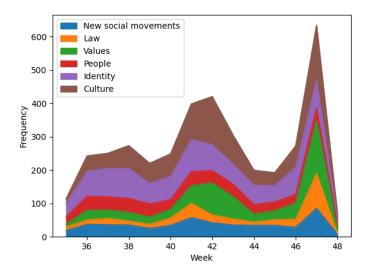
Figure 1. Social Media Representations - Distribution among Social Media Representations



Notes: Created with data from Table 3 presented in Appendix A. N = 3835

Figure. 1 shows that "Culture" and "Identity" are the most frequent Social media Representations, with about 25% of observations concerning each representation. "Values", "New Social Movements" and "People" each represent between 10% and 20% of observations. "Law" is the least occurring Social Media Representation pertaining to less than 10% of observations.

Figure 2. Social Media Representations - Relative importance over time

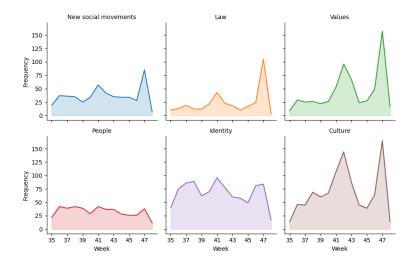


Notes: Created with data from Table 4 presented in Appendix A. N = 3835.

We can conclude from Figure 2 that there were spikes in Social Media Representations around week 42 (end of October of 2021) and week 47 (end of November of 2021). The spike in Social Media Representations in week 42 might be related to posts publicising the European Gender Equality Week that is celebrated between the 25th and 28th of October. The Spike in week 47 is largely related to the celebration of the International Day for the Elimination of Violence against Women on the 25th of November. Additionally, on the 24^{thf} of November, Portugal celebrates the Municipal Day for Equality, which resulted in a substantial amount of posts advertising events that would be happening all over the country.

Throughout the research period, both "Culture" and "Identity" are usually the most frequent Social Media Representations. However, in the two spikes, it's noticeable that "Values" becomes an increasingly significant Social Media Representation. Once again, this might be related to the celebrations surrounding the above mentioned dates.

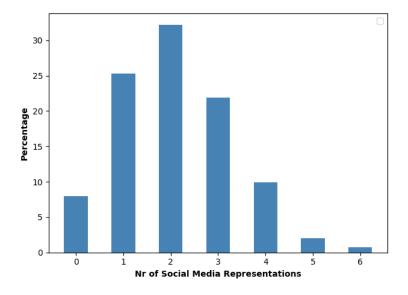
Figure 3. Social Media Representations - Evolution over time



Notes: Created with data from Table 4 presented in Appendix A. N = 3835.

As we can see in Figure 3 there is a spike around week 42 (end of October) and week 47 (end of November) across almost all Social Media Representations with the exception of the "People" Social Media Representation that stays relatively consistent throughout the weeks. These spikes might be related to the celebration of the previously mentioned events that occurred in week 42 and week 47. It's also important to highlight that in the "Identity" Social Media Representation there seems to be a spike in the first few weeks not seen in other representations. While there isn't a definitive trend in the available data that can explain this oscillation, we can nonetheless present some hypothesis based on relevant events regarding this matter happening at the time in Portugal. September 10th is the International Day of Suicide Prevention, which could translate into posts concerning the suicide rates of LGBT individuals. Additionally, the first few weeks of September correspond to the season premiere of the Portuguese version of the reality show Big Brother. In the 2021 edition of the show, for the first time, the two main hosts were openly homosexual, and there were also some homosexual and transexual participants which could potentially have initiated online discussions based on gender identity. Once again, we underline that these are just hypotheses since the available data is not clear regarding this issue.

Figure 4. Number of Social Media Representations - Distribution among all posts



Notes: Created with data from Table 5 presented in Appendix A. N = 1831.

We can conclude from Figure 4 that more than 90% of posts feature at least one Social Media Representation. The most common case is for posts to have two Social Media Representations. Lastly, less than 15% of posts have four or more Representations.

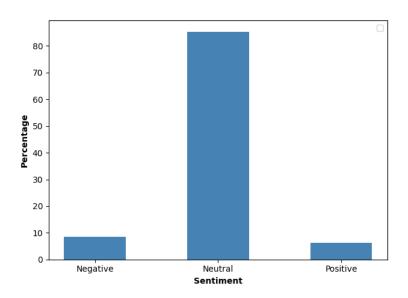


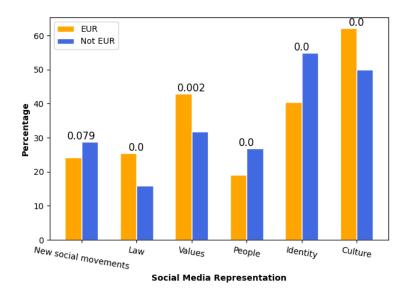
Figure 5. Sentiments - Distribution among all posts

Notes: Created with data from Table 6 presented in Appendix A. N = 1831.

In Figure 5 we can see that around 85% posts have a neutral sentiment. There are slightly more negative posts than positive posts, but in both cases they represent less than 10% of all publications.

Comparisons between Europe and Not Europe

Figure 6. Social Media Representations - % occurrence among Europe and Not Europe posts respectively



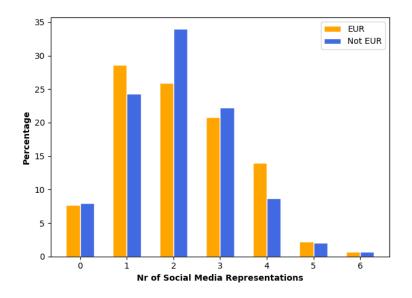
Notes: Created with data from Table 7 and Table 8 presented in Appendix B. P value from chisquared test of equal proportions between Europe and Not Europe in variable above each pair of bars. N = 1831 in each pair of comparison.

Overall, there are a lot more Social Media Representations in posts not about Europe (2950) than about Europe (885). According to the Chi-squared tests, there are significant differences in the proportions of all Representations, except for "New Social Movements", when comparing posts about Europe and not about Europe (New social movements p= 0.079; Values p= 0.002; People, Identity, Culture p= 0.0). Posts about Europe have a higher percentage of "Law", "Values" and "Culture" Social Media Representations.

Regarding "Law", the higher proportion of posts within the Europe Dataset might be related to the substantial number of posts that deal with the need for more gender equality policies in the EU, but also reports of more gender equality in the EU Budget. In "Values", we see in the Europe Dataset many posts that comment on the European gender equality index and the importance of dates such as the European gender equality week and the international day for the elimination of violence against women. In terms of "Culture", we see many posts related to the celebration of cultural events related to European dates. For example, there were some posts publicizing an original documentary show entitled "Women Trafficking" that would be exhibited in high schools in commemoration of the EU Anti Trafficking Day. Additionally, all 3 variables were addressed in a substantial number of posts that promoted an anti-sexism campaign by the Portuguese Platform for Women's rights. The main objective of this campaign was to inform the public about a recommendation from the Council of Europe that established in 2019 the international juridic definition of sexism.

Posts not about Europe have a higher percentage of "People" and "Identity" Social Media Representations. Regarding "Identity", the higher proportion of this representation might be related to a certain prevalence of posts about national feminist and LGBTQ marches and events related to gender identity. However, for "People", the posts within our datasets do not easily explain the higher proportion of this Social Media Representation in posts not about Europe.

Figure 7. Number of Social Media Representations - % occurrence among Europe and Not Europe posts respectively



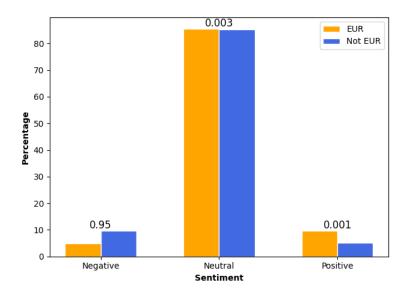
Notes: Created with data from Table 9 and Table 10 presented in Appendix B. N = 1831.

Table 1. Number of Social Media Representations by Europe and Not Europe - Mean, standard deviation (SD) and results from t-test of difference in means

	Europe	Not Europe	Significance	P value
Mean	2.1429	2.0804		0.3579
SD	(1.289)	(1.192)		

We can conclude by Analyzing Table 1 that there is, on average, more Social Media Representations on Europe posts than on Not Europe posts. However, this difference is not considered statistically relevant (p=0.3579).

Figure 8. Sentiment - % occurrence among Europe and Not Europe posts respectively

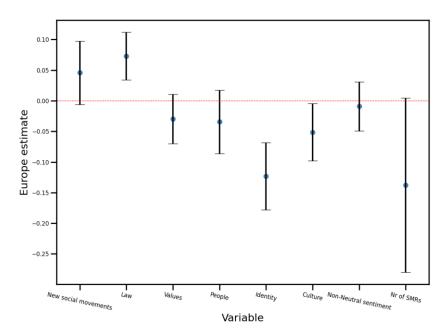


Notes: Created with data from Table 11 and Table 12 presented in Appendix B. P value from chisquared test of equal proportions between Europe and Not Europe in variable above pair of bars. N = 1831.

As we can see in Figure 9, around 85% of posts about Europe and not about Europe have a neutral sentiment. One could argue that this characteristic is related to the conservative nature of Portuguese society and that, overall, Portuguese people usually discuss gender related topics in a general and perhaps superficial way. However, it is also possible that this aspect is simply related to the nature of most social media posts.

Additionally, there is a slightly higher proportion of positive posts about Europe than not about Europe. This difference seems to be partially explained by the posts found within our dataset. In the Europe dataset, we found a vast number of posts dedicated to the celebration of the triumphs of female Portuguese athletes in European competitions. In fact, we can state that the majority of positive posts had this particular theme. In contrast, there is a clear lack of positive posts in the Not Europe Dataset. According to Chi-squared tests, this similarity - on neutral - and difference - on positive - between Europe and Not Europe posts is statistically significant (Neutral Sentiment p=0,003; Positive Sentiment p=0,001). However, regarding posts with a negative sentiment, the difference between Europe posts not Europe posts is not statistically significant (p=0,95).

Figure 9. Coefficient estimates Europe



Notes: Coefficient estimates and their 95 % confidence intervals of Europe variable from Model 3 of Table 13, Table 14, Table 15, Table 16, Table 17, Table 18, Table 19, Table 20 presented in Appendix B. N = 1831 in each estimation.

Observing Figure 9 we can conclude that there are some differences between Europe and Not Europe posts when controlling for additional variables. Results from logit regressions highlight that the "Law" Social Media Representation is more likely to be present in Europe posts than Not Europe posts with an effect size of around 7 percentage points.

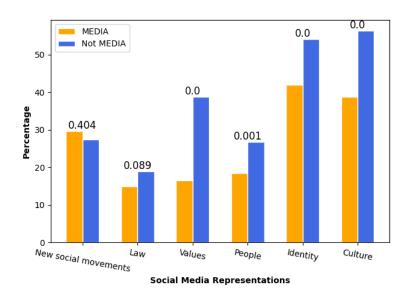
As previously mentioned, the Europe Dataset featured a substantial number of posts related to the discussion of European gender equality policies, and to the promotion of a Portuguese anti-sexism campaign based on an EU recommendation. In that sense, it is reasonable that the "Law" Social Media Representation is more likely to occur in European posts. In fact, some of these posts highlight how national projects and juridic considerations often stem from EU recommendations and thus end up linked to the European sphere. It's also important to note that the Portuguese legislation and public policies concerning gender can also be influenced by the general European project.

We can also see in Figure 9 that the "Identity" and "Culture" Social Media Representations are more likely to be found in Not Europe posts, with effect sizes of around 12 and 5 percentage points, respectively. As previously mentioned, there are a considerable number of posts about events, marches and gatherings related to gender identity that were local celebrations and consequently inside the Not Europe category. This might partially explain why these Social Media Representations are more likely to occur inside Not Europe posts. In addition, one must consider the weight of other categories in Europe posts as a reason why it is more likely to find the "Culture" Social Media Representation in posts not about Europe, even though it exists in higher proportion in Europe posts.

Lastly, it's important to note that there are no statistically significant differences in "New social movements", "Values ","People ", Non-Neutral Sentiments (Positive and Negative sentiments together) or the number of Social Media representations.

Comparisons between Media and Not Media

Figure 10. Social Media Representations - % occurrence among Media and Not Media posts respectively



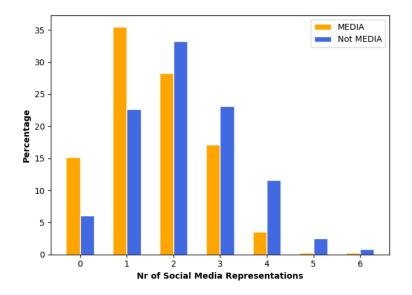
Notes: Created with data from Table 21 and Table 22 presented in Appendix C. P value from chi-squared test of equal proportions between Media and Not Media in variable above each pair of bars. N = 1831 in each pair of comparison.

Overall, there are substantially more Social Media Representations in Not Media posts (3235) than in Media posts (600) (See Table 21 and Table 22). According to Chi-squared tests, we can confirm that there are statistically significance differences in the "Values", "People", "Identity" and "Culture" Social Media Representations when comparing Media and Not Media posts (People p=0,001; Values, Identity, Culture p=0.0).

All these Representations appear in higher proportion in Not Media posts. As mentioned in our background section, the Portuguese media has struggled in the past to represent gender related issues and to offer voices to those openly advocating for the debate and settling of such issues. Additionally, the general conservative nature of Portuguese society might also contribute to a kind of reporting by the media that is more based on strict facts and less on explaining the underlying reasons behind events and news. In that sense, it could be argued that the lower proportion of these representations in the media is connected to this style of reporting. That is, a style of reporting that puts less emphasis on the more sentimental side of gender discussions, on the personalization of stories, and on structural society wide problems that potentiate said issues.

Lastly, there are no statistically significant differences in the "New social movements" and "Law" Social Media Representations (New social movements p=0.404; Law p=0.089). It's interesting to note that when approaching these Social Media Representations, the media tends to mention the name of movements and laws, but do not go too deep into explaining them and the reasons behind them. This could be one of the explanations as to why there are no statistically significant differences between Media and Not Media regarding these Social Media Representations.

Figure 11. Number of Social Media Representations - % occurrence among Media and Not Media posts respectively



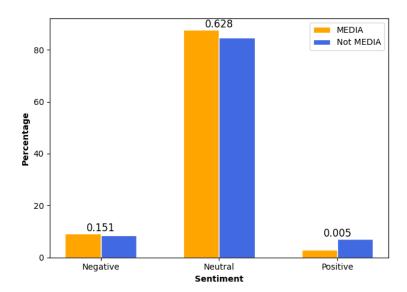
Notes: Created with data from Table 23 and Table 24 presented in Appendix C. N = 1831.

Table 2. Number of Social Media Representations by Media and not Media - Mean, standard deviation (SD) and results from t-test of difference in means

	Media	Not Media	Significance	P value
Mean	1.6	2.2218	****	0
SD	(1.087)	(1.214)		

Considering the information in Table 2, we can understand that, on average, there are more Social Media Representations in Non-Media posts than in Media Posts. The mean values for Media and Not Media posts are 1,60 and 2.22, respectively. According to the t-test, this difference is statistically significant (p=0.00). By analyzing Figure 11, we can conclude that there is a higher percentage of Media posts that have 0 or 1 Social Media Representations, and a higher percentage of Not Media posts that have 2 or more Social Media Representations. This difference seems to explain the contrasting averages.

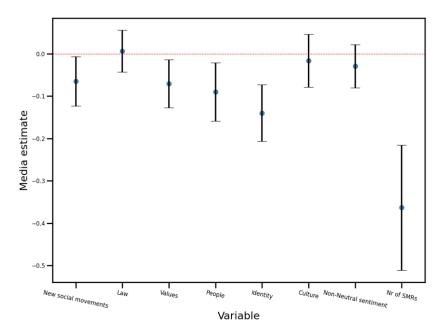
Figure 12. Sentiment - % occurrence among Media and Not Media posts respectively



Notes: Created with data from Table 25 and Table 26 presented in Appendix C. P value from chi-squared test of equal proportions between Media and Not Media in variable above pair of bars. N = 1831.

We can conclude from Figure 12 that there is a higher percentage of positive posts in Not Media (7%) than in Media (2,9%). According to the Chi-squared test, this difference is statistically significant (Positive Sentiment p=0,005). However, regarding posts with a negative or neutral sentiment, the difference between Media and Not Media posts is not statistically significant (Negative Sentiment p=0,151; Neutral Sentiment p=0,628). As previously stated, the majority of positive posts within our datasets were related to the celebration of triumphs by female athletes. While some of this coverage was done by various media outlets, there were also other actors making these posts such as the official pages of the teams, fan pages and even political organizations. This factor might somewhat have contributed the slight prevalence of positive posts by not media agents

Figure 13. Coefficient estimates Media



Notes: Coefficient estimates and their 95 % confidence intervals of Media variable from Model 3 of Table 27, Table 28, Table 29, Table 30, Table 31, Table 32, Table 33, Table 34. presented in Appendix C. N = 1831 in each estimation.

By analyzing Figure 13 we can conclude that there are some differences between Media and Not Media posts when controlling for additional variables. Results from logit regressions highlight that "New social movements", "Values", "People" and "Identity" are more likely to be present in Not Media posts than Media posts with an effect size of around 6, 7, 9, and 14 percentage points, respectively. It's also important to note that there are no statistically significant differences in "Law", "Culture" and Non-Neutral Sentiments (Positive and Negative sentiments together) between Media and Not Media Posts. Lastly, results from the Ordinary Least Squares regression (OLS) suggest that there are more Social Media Representations in Not Media posts than in Media posts.

These results tend to confirm the overarching theme present within our analysis related to the strict and facts-oriented type of reporting done by the media regarding gender related issues. This kind of reporting leaves little room for almost any kind of personalization, sentimental appeal or social assessment to take place. As we can observe, there are no Social Media Representations more likely to occur in Media posts. Additionally, the number of Social Media Representations leans vastly in the favor of Not Media posts. In general, it is evident that there is a considerably different approach in the way media agents and not media cover and portray events and stories.

Illustrative examples

We will now present examples of posts that reflect the coefficient estimates for Europe and for Media observed in Figure 9 and 13, respectively. For both Europe and Media, we will showcase two posts that exemplify the Social Media Representation with the largest coefficient estimate and the lowest coefficient estimate regarding Europe and Media.

Starting with Europe, we can see in Figure 9 that the highest coefficient estimate is related to "Law" and the lowest to "Identity". Below we can find an example of a post from the Europe dataset that

featured the Law Social Media Representation, and of a post from the Not Europe dataset that featured the "identity" Social Media Representation.

Figure 14. Illustrative example of the "Law" Social Media Representation in Europe posts



Assinala-se hoje, 25 de novembro, o Dia Internacional para a Eliminação da Violência Contra as Mulheres, a que naturalmente me associo. A violência de género é um atentado vil à dignidade dos seres humanos.

Fui uma das subcritoras de uma carta da minha colega deputada europeia Sylwia Spurek, enviada hoje à presidente da Comissão Europeia, onde se lamenta a falta de assertividade das instituições europeias numa política comum de combate à violência de género, apesar de sucessivos compromissos nesse sentido. A existência dessa política comum europeia - e de ações concretas à escala da UE - seria um instrumento da maior efetividade na defesa dos nossos valores. Não bastam as bem intencionadas palavras do "Plano de Ação de UE em matéria de Igualdade de Género 2021-2025". Não bastam planos, precisamos de ação! #isabelsantosmep #europeanparliament



In figure 14 we have an example of a post related to the Social Media Representation with the highest coefficient estimate regarding Europe – "Law". This is a Facebook publication made by Portuguese MEP Isabel Santos on the International Day for the Elimination of Violence against Women. The MEP starts by highlighting how gendered violence is an attack on the dignity of human beings. She then proceeds to inform that she is one of the signers of a letter written by MEP Sylwia Spurek, sent to the president of the European Commission, lamenting the lack of assertiveness by the European institutions in promoting a common policy to combat gendered violence. The publication ends with the MEP referring to the importance of said policy and stating the need for action in this matter. This post clearly exemplifies European Law being discussed on social media regarding gender issues.

Figure 15. Illustrative example of the "Identity" Social Media Representation in Not Europe posts



Comentar Comentar

dezanove

15 de Setembro de 2021 · 🚱

r Gosto

In figure 15 we have an example of a post related to the Social Media Representation with the lowest coefficient estimate regarding Europe – "Identity". This is a post by the independent media Facebook page "dezanove" commenting on a statement made by Portuguese commentator Quintino Aires. In this statement, Quintino Aires says that homosexuals used to be a lot more promiscuous, and they show that in what he calls "the marches of shame", referring to Gay Pride Parades. The author of the page comments that this statement is unbelievable. This publication showcases one trying to characterize individuals based on sexual orientation.

Partilhar

Moving on to Media, we can see in Figure 13 that the largest coefficient estimate is related to "New Social Movements" and the lowest to "Identity". Below we can find an example of a post from a media agent that featured the "New social movements" Social Media Representation, and of a post that is not from a media agent that featured the "identity" Social Media Representation.

Figure 16. Illustrative example of the "New social movements" Social Media Representation in Media posts



Tribunal de Pequim rejeita primeiro caso #MeToo 🙌 da China dlvr.it/S7by9z



10:29 AM · 15 de set de 2021

2 Curtidas

In figure 16 we have an example of a post related to the Social Media Representation with the largest coefficient estimate regarding Media – "New social movements". This is a Twitter post by Portuguese legacy media outlet, Jornal de Notícias, stating that the court of Beijing rejects the first #MeToo case in China. This post exemplifies how the media usually refers to social movements by relating events.

Figure 17. Illustrative example of the "Identity" Social Media Representation in Not Media posts



Pintura de Jose Mainos



In figure 17 we have an example of a post related to the Social Media Representation with the lowest coefficient estimate regarding Media – "Identity". This is a post by the Facebook page "Para Português Ler", celebrating the International Men's Day. The author starts by mentioning that the International Men's Day has been celebrated on the 19th of November since 1999. It is also mentioned that the main objectives of this date are to promote men's health, gender equality, positive male contributions to society, positive male role models, among others. Lastly, the author states that this date is celebrated worldwide by various actors of society. This post exemplifies a Not media agent approaching a topic related to gender identity, in this case about men.

Conclusion

The analysis conducted in this report brings forth some interesting questions and potential discussions surrounding gender related discourse on the Portuguese social media sphere. The Social Media Representations "Culture" and "Identity" seem to be the most prevalent in the timeframe analyzed. However, in moments of peak discussion it's the "Values" Social Media Representation that tends to stand out. Throughout the research period, we witnessed two main spikes in Social Media Representations. The first seems to be related to posts regarding the European Gender Equality Week, and the second to celebrations surrounding the International

Day for the Elimination of Violence against Women. Additionally, there was a spike specifically related to the "Identity" Social Media Representation. Although we could not fully explain this spike through our manually coded data, we hypothesized that it could be related to the international Suicide Prevention Day, but also to the season premiere of the popular reality show Big Brother, that featured for the first time two homosexual main hosts in addition to a few homosexual and transsexual contestants. Overall, the spikes in Social Media Representations were mainly related to cyclical/annual events, such as the celebration of dates and events related to gender. While we did not witness, during the research period, any kind of concrete social and digital movement such as the #MeToo or #VermlehoemBelém, extensively covered in the background section of this report, it could be argued that the witnessed events and dates also bring a substantial amount of attention to these topics in a limited timeframe.

Regarding the differences between Europe and Not Europe it's important to highlight that there were differences in the proportions of almost all Social Media Representations, but there were no statistically significant differences in the number of representations. In that sense, while we can't say that discussions about Europe or Not Europe feature more Representations, we can, however, state that certain Representations are proportionally more significant when dealing with topics related to Europe or not related to Europe. For example, Law is proportionally more relevant inside the European sphere, but Identity is proportionally more of a concern in posts not related to Europe.

Lastly, regarding the differences between Media and Not Media posts we can in fact state that there are statistically significant differences in the number of Representations, with Not Media posts having on average more Social Media Representations. Additionally, the proportions of the Representations were also statistically significant and, in all cases, more prevalent in Not Media Posts. It could be argued that this kind of reporting is related to the conservative view of gender found in Portugal, with the media offering more often than not, simple "clean" reports that convey the facts without approaching the underlying social situations behind them.

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Appendices

Appendix A. Tables supporting the section on Descriptive overview

 Table 3. Social Media Representations - Frequency and % occurrence among all posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	508	13.2	27.7
Law	331	8.6	18.1
Values	626	16.3	34.2
People	459	12.0	25.1
Identity	945	24.6	51.6
Culture	966	25.2	52.8
Total	3835	100.0	209.4

Table 4. Social Media Representations - Frequency by week

Unnamed: 0	New social movement s	Law	Values	People	Identity	Culture
35	19	10	9	22	40	14
36	37	13	29	42	75	46
37	36	19	25	39	86	45
38	35	12	26	42	89	69
39	25	12	22	39	62	60
40	34	22	26	29	70	67
41	57	43	53	42	96	107
42	42	23	96	37	78	144
43	35	18	67	37	60	87
44	34	10	24	28	58	45
45	34	17	27	26	49	39
46	28	24	49	26	81	64

47	85	105	157	38	84	165
48	7	3	16	12	17	14
Total	508	331	626	459	945	966

Table 5. Number of Social Media Representations in posts - Frequency and % occurrence among all posts

Nr of Social Media Representations	Count	% of Posts
0	146	8.0
1	463	25.3
2	589	32.2
3	401	21.9
4	182	9.9
5	37	2.0
6	13	0.7
Total	1831	100.0

Table 6. Sentiment - Frequency and % occurrence among all posts

Sentiment	Count	% of Posts
Negative	157	8.6
Neutral	1561	85.3
Positive	113	6.2
Total	1831	100.0

Appendix B. Tables supporting the section on Comparisons - Europe and Not Europe

Table 7. Social Media Representations Europe - Frequency and % occurrence among Europe posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	100	11.3	24.2
Law	105	11.9	25.4
Values	177	20.0	42.9
People	79	8.9	19.1
Identity	167	18.9	40.4
Culture	257	29.0	62.2

Total 885 100.0 214.3

Table 8. Social Media Representations Not Europe - Frequency and % occurrence among Not Europe posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	408	13.8	28.8
Law	226	7.7	15.9
Values	449	15.2	31.7
People	380	12.9	26.8
Identity	778	26.4	54.9
Culture	709	24.0	50.0
Total	2950	100.0	208.0

Table 9. Number of Social Media Representations Europe - Frequency and % occurrence among Europe posts

Nr of Social Media Representations	Count	% of Posts
0	32	7.7
1	118	28.6
2	107	25.9
3	86	20.8
4	58	14.0
5	9	2.2
6	3	0.7
Total	413	100.0

Table 10. Number of Social Media Representations Not Europe - Frequency and % occurrence among Not Europe posts

Nr of Social Media Representations	Count	% of Posts
0	114	8.0
1	345	24.3
2	482	34.0
3	315	22.2

4	124	8.7
5	28	2.0
6	10	0.7
Total	1418	100.0

Table 11. Sentiment Europe - Frequency and % occurrence among Europe posts

Sentiment	Count	% of Posts
Negative	20	4.8
Neutral	353	85.5
Positive	40	9.7
Total	413	100.0

Table 12. Sentiment Not Europe - Frequency and % occurrence among Not Europe posts

Sentiment	Count	% of Posts
Negative	137	9.7
Neutral	1208	85.2
Positive	73	5.1
Total	1418	100.0

Table 13. Marginal effects of Logistic regressions with New Social Movements as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	-0.0469*	0.0432	0.0457*
	(0.026)	(0.027)	(0.027)
Twitter		0.2106****	0.2185****
		(0.021)	(0.022)
Interactions		-0.0001*	-9.814e-05*
		(0.0)	(0.0)
Followers		-2.564e-08	-3.173e-08
		(0.0)	(0.0)
Sentiment Score		-0.0094*	-0.0077
		(0.005)	(0.005)
October			0.0236
			(0.044)

November			0.1062
			(0.077)
week			-0.0033
			(800.0)
N	1831	1831	1831
Pseudo R-squared	0.00	0.05	0.05

Table 14. Marginal effects of Logistic regressions with Law as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.0860****	0.0688***	0.0730****
	(0.02)	(0.02)	(0.02)
Twitter		-0.1220****	-0.1032****
		(0.023)	(0.023)
Interactions		1.219e-05	1.402e-05
		(0.0)	(0.0)
Followers		-3.187e-08	-3.697e-08
		(0.0)	(0.0)
Sentiment Score		-0.0392****	-0.0341****
		(0.005)	(0.005)
October			-0.0015
			(0.039)
November			0.0615
			(0.065)
week			0.0054
			(0.007)
N	1831	1831	1831
Pseudo R-squared	0.01	0.06	0.08

Table 15. Marginal effects of Logistic regressions with Values as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.1073****	-0.0345	-0.0297
	(0.025)	(0.021)	(0.021)
Twitter		-5.0287****	-4.2062****

		(0.033)	(0.069)
Interactions		-1.672e-05	-6.113e-06
		(0.0)	(0.0)
Followers		-3.088e-07****	-3.207e-07****
		(0.0)	(0.0)
Sentiment Score		-0.0024	0.0055
		(0.005)	(0.005)
October			-0.0890**
			(0.042)
November			-0.2128***
			(0.076)
week			0.0471****
			(0.008)
N	1831	1831	1831
Pseudo R-squared	0.01	0.24	0.28

Table 16. Marginal effects of Logistic regressions with People as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	-0.0816***	-0.0343	-0.0344
	(0.026)	(0.027)	(0.026)
Twitter		0.1762****	0.1630****
		(0.022)	(0.023)
Interactions		0.0002**	0.0001**
		(0.0)	(0.0)
Followers		-3.054e-07***	-2.983e-07****
		(0.0)	(0.0)
Sentiment Score		0.0120**	0.0104*
		(0.005)	(0.005)
October			-0.0442
			(0.043)
November			-0.0143
			(0.078)

week -0.0054 (0.008)
N 1831 1831 1831

Pseudo R-squared 0.01 0.05 0.06

Table 17. Marginal effects of Logistic regressions with Identity as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	-0.1434***	-0.1240****	-0.1231****
	(0.027)	(0.029)	(0.028)
Twitter		0.0980****	0.0614**
		(0.028)	(0.029)
Interactions		-3.292e-06	-6.113e-06
		(0.0)	(0.0)
Followers		-2.116e-07***	-2.089e-07***
		(0.0)	(0.0)
Sentiment Score		0.0149**	0.0099
		(0.006)	(0.006)
October			-0.0003
			(0.049)
November			0.1953**
			(0.089)
week			-0.0357****
			(0.009)
N	1831	1831	1831
Pseudo R-squared	0.01	0.02	0.04

Table 18. Marginal effects of Logistic regressions with Culture as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.1231****	-0.0509**	-0.0513**
	(0.028)	(0.024)	(0.024)
Twitter		-0.5168****	-0.4945****
		(0.017)	(0.018)
Interactions		-1.615e-05	-1.701e-05

		(0.0)	(0.0)
Followers		2.232e-08	2.411e-08
		(0.0)	(0.0)
Sentiment Score		-0.0140***	-0.0113**
		(0.005)	(0.005)
October			0.0251
			(0.045)
November			-0.1430*
			(80.0)
week			0.0230***
			(800.0)
N	1831	1831	1831
Pseudo R-squared	0.01	0.20	0.21

Table 19. Marginal effects of Logistic regressions with Non-neutral Sentiment as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	-0.0028	-0.0121	-0.0091
	(0.02)	(0.02)	(0.02)
Twitter		-0.0404**	-0.0290
		(0.02)	(0.02)
Interactions		2.382e-05*	2.585e-05*
		(0.0)	(0.0)
Followers		3.668e-09	-1.941e-09
		(0.0)	(0.0)
Sentiment Score		-0.0076	-0.0047
		(0.01)	(0.009)
October			0.0072
			(0.04)
November			0.0883
			(0.069)
week			0.0002

(0.007)

N 1831 1831 1831

Pseudo R-squared 0.00 0.01 0.02

Table 20. Coefficient estimates of OLS regressions with Number of Social Media Representations as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.0625	-0.1449**	-0.1378*
	(0.0708)	(0.0727)	(0.0725)
Twitter		-0.6392***	-0.5929***
		(0.0627)	(0.0637)
Interactions		0.0000	0.0001
		(0.0001)	(0.0001)
Followers		-0.0000***	-0.0000***
		(0.0000)	(0.0000)
Sentiment Score		-0.0355***	-0.0271**
		(0.0134)	(0.0132)
October			-0.1084
			(0.1165)
November			-0.0068
			(0.2105)
week			0.0318
			(0.0229)
Intercept	2.0804***	2.3563***	1.0657
nan	(0.0317)	(0.0393)	(0.8584)
R-squared	0.0005	0.0771	0.0878
R-squared Adj.	-0.0001	0.0746	0.0838
N	1831	1831	1831

Appendix C. Tables supporting the section on Comparisons - Media and Not Media

 Table 21. Social Media Representations Media - Frequency and % occurrence among Media posts

Social Media	Count	% of Social Media	% of Posts
Representation		Representations	

New social movements	111	18.5	29.6
Law	56	9.3	14.9
Values	62	10.3	16.5
People	69	11.5	18.4
Identity	157	26.2	41.9
Culture	145	24.2	38.7
Total	600	100.0	160.0

Table 22. Social Media Representations Not Media - Frequency and % occurrence among Not Media posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	397	12.3	27.3
Law	275	8.5	18.9
Values	564	17.4	38.7
People	390	12.1	26.8
Identity	788	24.4	54.1
Culture	821	25.4	56.4
Total	3235	100.0	222.2

Table 23. Number of Social Media Representations Media - Frequency and % occurrence among Media posts

Nr of Social Media Representations	Count	% of Posts
0	57	15.2
1	133	35.5
2	106	28.3
3	64	17.1
4	13	3.5
5	1	0.3
6	1	0.3
Total	375	100.0

Table 24. Number of Social Media Representations Not Media - Frequency and % occurrence among Not Media posts

Nr of Social Media Representations	Count	% of Posts
0	89	6.1
1	330	22.7
2	483	33.2
3	337	23.1
4	169	11.6
5	36	2.5
6	12	0.8
Total	1456	100.0

Table 25. Sentiment Media - Frequency and % occurrence among Media posts

Sentiment	Count	% of Posts
Negative	35	9.3
Neutral	329	87.7
Positive	11	2.9
Total	375	100.0

Table 26. Sentiment Not Media - Frequency and % occurrence among Not Media posts

Sentiment	Count	% of Posts
Negative	122	8.4
Neutral	1232	84.6
Positive	102	7.0
Total	1456	100.0

Table 27. Marginal effects of Logistic regressions with New Social Movements as dependent variable

Variable	Model 1	Model 2	Model 3
Media	0.0230	-0.0683**	-0.0649**
	(0.026)	(0.03)	(0.03)
Twitter		0.2065****	0.2135****
		(0.02)	(0.021)
Interactions		-0.0001*	-0.0001*
		(0.0)	(0.0)

Followers		4.813e-08	3.834e-08
		(0.0)	(0.0)
Sentiment Score		-0.0086	-0.0068
		(0.005)	(0.005)
October			0.0248
			(0.044)
November			0.1030
			(0.077)
week			-0.0031
			(0.008)
N	1831	1831	1831
Pseudo R-squared	0.00	0.05	0.06

Table 28. Marginal effects of Logistic regressions with Law as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.0418*	-0.0003	0.0063
	(0.024)	(0.025)	(0.025)
Twitter		-0.1434***	-0.1270****
		(0.023)	(0.023)
Interactions		1.158e-05	1.358e-05
		(0.0)	(0.0)
Followers		-2.627e-08	-3.77e-08
		(0.0)	(0.0)
Sentiment Score		-0.0378****	-0.0326****
		(0.005)	(0.005)
October			0.0002
			(0.039)
November			0.0605
			(0.066)
week			0.0053
			(0.007)
N	1831	1831	1831

Table 29. Marginal effects of Logistic regressions with Values as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.2518****	-0.0730**	-0.0706**
	(0.031)	(0.031)	(0.029)
Twitter		-4.8977****	-4.1247****
		(0.036)	(0.068)
Interactions		-1.659e-05	-5.641e-06
		(0.0)	(0.0)
Followers		-2.6e-07***	-2.784e-07****
		(0.0)	(0.0)
Sentiment Score		-0.0031	0.0048
		(0.005)	(0.005)
October			-0.0959**
			(0.042)
November			-0.2279***
			(0.076)
week			0.0485****
			(0.008)
N	1831	1831	1831
Pseudo R-squared	0.03	0.24	0.28

Table 30. Marginal effects of Logistic regressions with People as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.0904***	-0.0910**	-0.0901**
	(0.027)	(0.035)	(0.035)
Twitter		0.1943****	0.1810****
		(0.021)	(0.022)
Interactions		0.0001*	0.0001*
		(0.0)	(0.0)
Followers		-2.025e-07***	-1.967e-07***
		(0.0)	(0.0)

Sentiment Score		0.0113**	0.0097*
		(0.005)	(0.005)
October			-0.0440
			(0.043)
November			-0.0169
			(0.078)
week			-0.0052
			(0.008)
N	1831	1831	1831
Pseudo R-squared	0.01	0.05	0.06

Table 31. Marginal effects of Logistic regressions with Identity as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.1220****	-0.1437****	-0.1401****
	(0.028)	(0.035)	(0.034)
Twitter		0.1543****	0.1172****
		(0.027)	(0.028)
Interactions		-8.205e-06	-1.048e-05
		(0.0)	(0.0)
Followers		-8.355e-08	-8.353e-08
		(0.0)	(0.0)
Sentiment Score		0.0123**	0.0074
		(0.006)	(0.006)
October			-0.0016
			(0.049)
November			0.1897**
			(0.089)
week			-0.0352****
			(0.009)
N	1831	1831	1831
Pseudo R-squared	0.01	0.02	0.04

Table 32. Marginal effects of Logistic regressions with Culture as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.1753****	-0.0126	-0.0164
	(0.028)	(0.032)	(0.032)
Twitter		-0.5011****	-0.4783****
		(0.016)	(0.017)
Interactions		-1.625e-05	-1.718e-05
		(0.0)	(0.0)
Followers		2.811e-08	3.311e-08
		(0.0)	(0.0)
Sentiment Score		-0.0150***	-0.0124**
		(0.005)	(0.005)
October			0.0244
			(0.045)
November			-0.1441*
			(80.0)
week			0.0231***
			(800.0)
N	1831	1831	1831
Pseudo R-squared	0.01	0.19	0.21

Table 33. Marginal effects of Logistic regressions with Non-neutral Sentiment as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.0330	-0.0340	-0.0291
	(0.022)	(0.026)	(0.026)
Twitter		-0.0316	-0.0217
		(0.019)	(0.019)
Interactions		2.262e-05*	2.483e-05*
		(0.0)	(0.0)
Followers		2.908e-08	1.992e-08
		(0.0)	(0.0)
Sentiment Score		-0.0079	-0.0049

		(0.01)	(0.009)
October			0.0070
			(0.04)
November			0.0869
			(0.069)
week			0.0004
			(0.007)
N	1831	1831	1831
Pseudo R-squared	0.00	0.01	0.02

Table 34. Coefficient estimates of OLS regressions with Number of Dimensions as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.6218***	-0.3731***	-0.3632***
	(0.0645)	(0.0754)	(0.0753)
Twitter		-0.5438***	-0.5003***
		(0.0609)	(0.0624)
Interactions		0.0000	0.0000
		(0.0000)	(0.0000)
Followers		-0.0000**	-0.0000**
		(0.0000)	(0.0000)
Sentiment Score		-0.0388***	-0.0303**
		(0.0132)	(0.0130)
October			-0.1126
			(0.1164)
November			-0.0287
			(0.2103)
week			0.0337
			(0.0229)
Intercept	2.2218***	2.3447***	0.9824
nan	(0.0318)	(0.0351)	(0.8575)
R-squared	0.0427	0.0856	0.0960

R-squared Adj.	0.0422	0.0831	0.0920
N	1831	1831	1831

Spain

Authors: Valentina Latronico and Jim Ingebretsen Carlson

Institution: Fundació per a la Universitat Oberta de Catalunya

Introduction

Background

The increased presence of feminism in the public sphere is undeniable. This applies both nationally and internationally. The Spanish feminist movement has recently gained significant relevance, both in Spain and beyond (Arruzza, Bhattacharya, & Fraser, 2019; Campillo, 2019). In fact, in recent years, there have been significant mobilizations within the country particularly emphasized by the first feminist labour strike on the 8th of March 2018, which coincided with International Women's Day. In general, feminism within the public sphere spread increasingly thanks to social media networks which are currently one of the spaces where popular culture is more visible (Navarro & Villegas-Simón, 2022). Through massive demonstrations, feminist collectives in Spain have managed to legitimize their claims as over-arching issues. However, at the same time, a backlash against this feminist movement is also growing fast. The battle between a renewed feminist movement and its detractors is fought out mainly on social media, where topics related to feminism are increasingly polarized (Willem & Tortajada, 2021). On one hand, there are the feminist activists that lead the struggle against anti-feminist attacks and online hate speech against women, on the other hand, there are the detractors namely users pro anti-feminism and misogyny. The latter ones make use of trolls to attack women and the feminist movement in general, while the former ones portray the constant attacks as absurd and ridiculous and respond with sarcasm and parody, making sexist attitudes look ridiculous (Araüna et al., in press; Lawrence & Ringrose, 2018; Rentschler & Thrift, 2015). A shift in communication style has taken place with the rise of social media such as YouTube, Instagram, and Twitter, where a whole range of feminist and anti-feminist narratives co-exist and contradict. As new social networking sites emerge e.g., TikTok or Twitch, new kinds of interactions will follow. Social agents do not communicate in a one-way direction but feed on their followers' and/or fans' feedback as well as on the platform's affordances to articulate their discourses. Indeed, the same platform can be used to convey different messages to different audiences (Navarro &

Villegas-Simón, 2022). The study of Arias-Rodriguez and Sánchez-Bello (2022) shows that there is nothing intrinsically wrong with using social media as a form of distraction or entertainment, however their potential as a tool for the promotion and development of cyberfeminism has been largely ignored. Therefore, it is necessary to raise awareness of this potential, not just among general users, but also among those with the power to influence others through their online content such as media and influencers. The failure to date to make full use of social media as a tool for social and political change and female empowerment may be due to misconceptions about cyberfeminism among content creators and consumers alike, and to an underestimation of the movement's importance. Cyberactivism has the potential to counteract patriarchal discourses and to influence the social agenda by connecting different groups of feminists and pooling their ideas, resources, and proposals via social media (Árdevol and Gómez 2012; Burgos 2017; Keller et al. 2016; Harris 1991; Sokolova and Perez 2021; Varela 2020).

Having said that, the goal of this work package is to provide an in-depth analysis of media narratives, aiming at detecting to what degree platformization has been changing the representation of gender in Europe. The specific focus will be on how platformization affects the process of Europeanisation and how Europe is represented through gender. To perform this analysis, the study team downloaded relevant social media content in Spain from Facebook and Twitter using different Application Programming Interfaces (API) and search queries consisting of a set of keywords related to gender. In addition, one theoretical framework of media representations is developed for each topic. Each theoretical framework comprises several dimensions, or themes, which are commonly encountered in relation to how Europe is represented through the topics in the scientific literature. Comparisons of how frequent the dimensions are in social media posts will constitute the main unit of analysis. The ethical committee at Catalonia Open University (UOC) has approved the proposed research and methods. The starting point for framing this task is the Europeanisation and Europeanity (E&E) dimension of the Public Sphere. The European public sphere (EPS) approach to E&E focuses on the practices of European citizens, engaging in (allegedly rational) decision-making, providing them with an opportunity to be politically active at a European level. The EPS is also seen as constituted by public discussions on EU (or European) issues in the national media of EU member states (Walter, 2017). Clearly, key European issues are also related to gender equality. By downloading social media posts that are not specifically concerned with Europe, a baseline comparison is provided to assess to which extent there exists an EPS at a European level. To investigate whether platformization changes how Europe is represented through the topic of gender, the study team will compare how representations differ between institutional media and user-generated content namely non-institutional media. Furthermore, it is common to conduct

sentiment analysis when analysing social media conversations (Drus et al., 2019) and Matamoros-Fernández & Farkas (2020)). While representations describe the content of the debates, sentiments provide a sense of the persons' attitudes towards the content. Sentiment analysis can thereby give a deeper understanding of how Europe is represented through the topic of gender. Since gender is a topic that is sensitive in general (Malmqvist, 2015; Nguyen et al., 2020; Park & Kim, 2021; Öztürk & Ayvaz, 2018), we could expect strong and diverging sentiments regarding it. Consequently, by analysing the sentiments towards gender, it is possible to assess the level of sensitivity of the topic in Europe. Moreover, it is possible to disaggregate the analysis of sentiments by the dimensions of representations related to Europe to further assess which dimensions generate more sentiments and divergence. Importantly, by also analyzing sentiments between debates concerning Europe and debates not concerning Europe, it is possible to assess whether European debates generate more sentiments than other debates. It is likely that the change in media- production and consumption has been accompanied by a change in the expression of sentiments in debates, specifically when comparing traditional media to user-generated content. Some evidence for this has been provided when investigating other topics (Godbole et al., 2007; Huang et al., 2020; Kim et al., 2016). We aim to study this change for the topic of gender.

Legislation

The gender equality legislation that has been developed in Spain has progressed towards a new framework in the fight against discrimination and subordination based on sex. Gender equality laws have been based on the principle of equal treatment, as in Article 14 of the Spanish Constitution. It states that "Spaniards are equal before the law, and no discrimination may prevail based on birth, race, sex, religion, opinion or any other personal or social condition or circumstance". Another clear example is the Organic Law 3/2007, of March 22, for the effective equality of women and men, which is committed to carrying out active policies that remove the obstacles that prevent or hinder gender equality in Spanish society, in a comprehensive and coordinated manner. In other words, it is the principle of equal treatment between women and men which implies the absence of any direct or indirect discrimination based on sex, especially those derived from maternity, the assumption of family obligations, and marital status. On the other hand, the definition of a person's sex-gender goes far beyond the visual appreciation of his or her external genital organs at birth, and - as the European Court of Human Rights established - is not a purely biological concept, but also a psychosocial one. Therefore, the free determination of the gender of each individual must be affirmed as a fundamental human right, an inseparable part of his or her right to the free development of personality. Thus, in Spain, the law protects the recognition of gender identity and guarantees the following: "to develop freely as a person according to your gender identity, to receive dignified treatment in accordance with

that identity and to be identified with your first name, your own image, and sex". It should also be mentioned that the Congress of Deputies approved the Integral Guarantee of Sexual Freedom Act, a law that seeks to reinforce the protection and legal security of victims of sexual aggression and to guarantee the sexual freedom of individuals.

National context

In Spain, the socialist groups presented several amendments in October 2021. The debate was aimed at renewing the political postulates of the Spanish Socialist Workers' Party (PSOE). Specifically, they discussed defending the term "sex" as opposed to "gender" and including "persones". The original text of the political postulates of the PSOE declared that "for the Socialist Party equality is the horizon, feminism is the path". One of the amendments proposes adding that "there is a growing concern within the Socialist Party about the diversity of opinion between sex and gender and how this is being transferred to public opinion". The amendment points out that the wording that speaks of "the exclusion of the values associated with the female gender" is incongruous due to incorrect synonymic use of the term 'gender' since it is used as a synonym for 'sex' and the cause of discrimination between women and men is made invisible". Furthermore, it is intended to change the term "gender violence" into "male violence" or "violence against women" and to replace the term "trans" with "transsexual "persones" throughout the text. The original text of the political postulates of the PSOE declared that "for the Socialist Party equality is the horizon, feminism is the path". One of the amendments proposes adding that "there is a growing concern within the Socialist Party about the diversity of opinion between sex and gender and how this is being transferred to public opinion". The amendment points out that the wording that speaks of "the exclusion of the values associated with the female gender" is incongruous due to incorrect synonymic use of the term 'gender' since it is used as a synonym for 'sex' and the cause of discrimination between women and men is made invisible". Furthermore, it is intended to change the term "gender violence" into "male violence" or "violence against women" and to replace the term "trans" with "transsexual "persones" throughout the text. The original text referred to "the law on the registry rectification of the name and sex of trans persons" will be replaced with "regulating the registry rectification of the mention of the sex of trans "persones". Since the amendments presented by the socialist groups were a much-discussed issue, all this provoked a strong debate among voters and political parties. Several feminist demonstrations and protests were held throughout the country and received attention on the country's political and social agenda by demanding more effective measures to counteract gender violence, street harassment, and gender inequalities. The report of Domestic Violence and Gender Violence Statistics (EVDVG) shows the number of women victims of gender violence increased to 30,141. Been reported 30,047 men for

gender violence. Meanwhile, in terms of women murdered by gender violence, 2021 registered one of the lowest figures in recent years with 48 women murdered. Therefore, to continue advancing towards a more equitable and safe country, the Minister of Equality, Irene Montero, together with the Secretary of State against Gender Violence, Ángela Rodríguez; and the Government Delegate against Gender Violence, Victoria Rosell, decided to start a new mechanism for the accounting of femicides and to take stock of equality policies during 2021. "There will be an official and institutional observatory for the counting of femicides, of sexist murders of women killed because they are women. Naming femicides is to do justice, the most basic exercise of reparation with all the victims of male violence," said the minister. This new mechanism makes Spain the first country in Europe to officially count all femicides.

Quantitative analysis

The Social Media Dimensions most prominent for Spain during the analysed time period were New social movements, Law, People, Public sphere, and Values. These dimensions will be analysed quantitatively in the coming sections. 15165 social media posts are classified as being about Gender. All these posts will be used in the analysis.

Descriptive overview

Figure 1 shows the distribution of Social Media Representations of the 15165 analysed posts. There are 30805 Social Media Representations present across all posts and the relative frequency is fairly similar (between 15% and 25%) across the five Social Media Representation. Values is the most common and People is the least common in the analysed data set.

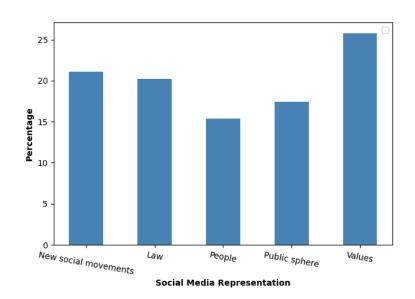


Figure 1. Social Media Representations - Distribution among Social Media Representations

Notes: Created with data from Table 3 presented in Appendix A. N = 30805.

Figure 2. shows the relative frequency of Social Media Representations over time. It is clear that the relative importance of the five social media representations is fairly constant from week 35 to week 45, which is the time period from the beginning of September to the beginning of November 2021. On average there are between 1500 to 2000 posts talking about gender in each of these weeks. However, in weeks 46 and 47 there is a large spike in the occurrence of posts, which are the last two weeks of

November 2021. The study team assumes that it is due to the International Day for the Elimination of Violence against Women, the 25th of November. This might rise the engagement from media and social media users. The total number of posts reached a bit more than 8000 during the week 47 and while all five social media representations stay important, Law and Values seem to be the most prominent ones.

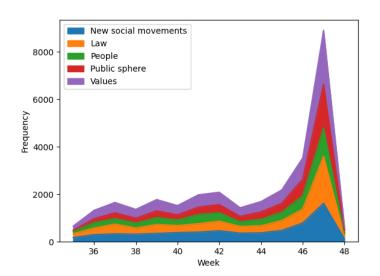
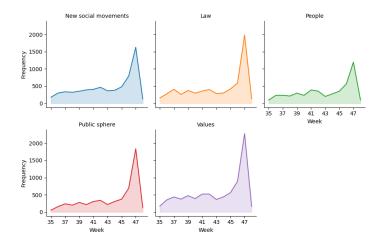


Figure 2. Social Media Representations - Relative importance over time

Notes: Created with data from Table 4 presented in Appendix A. N = 30805.

Figure 3 displays the occurrence of each Social Media Representation over time. As previously concluded, all Social Media Representations stay fairly constant over time and Spike in week 47 namely the end of November.

Figure 3. Social Media Representations - Evolution over time



Notes: Created with data from Table 4 presented in Appendix A. N = 30805.

One social media post can be represented by several (or no) Social Media Representations. Figure 4 shows the distribution of the number of Social Media Posts in the analysed sample. Around 20% of the posts are not represented by any Social Media Representations. One Social Media Representation is most common, and the maximum number of Social Media Representations is five in the analyzed sample.

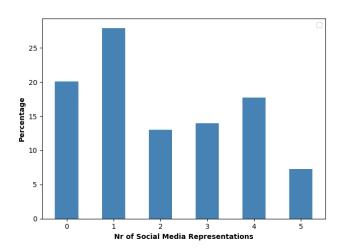
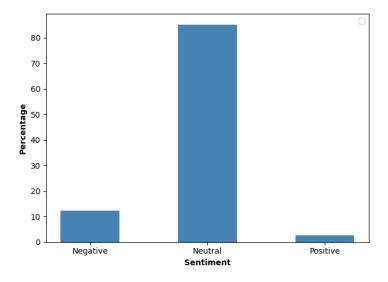


Figure 4. Number of Social Media Representations - Distribution among all posts

Notes: Created with data from Table 5 presented in Appendix A. N = 15165.

To conclude the section, Figure 5 displays the sentiments present in the posts. The analyzed sentiments are negative, neutral, and positive. Neutral sentiments are by far the most common with around 80% of the posts pertaining to this group. There are very few positive sentiments and around 12% of the posts have a negative sentiment.

Figure 5. Sentiments - Distribution among all posts

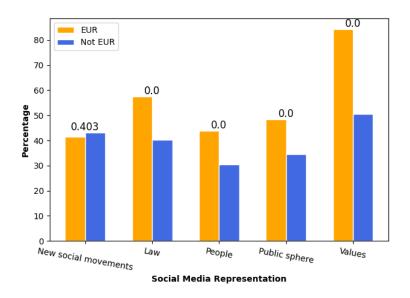


Notes: Created with data from Table 6 presented in Appendix A. N = 15165.

Comparisons between Europe and Not Europe

In this section, we compare the social media discussions between posts that talk about Europe and posts not talking about Europe. A relatively small amount, 2287 posts, is about Europe while 28518 posts talked about topics not related to Europe. Figure 6 displays the % occurrence of Social Media Representations among Europe and Not Europe posts respectively. While there are fewer posts talking about Europe, it is clear that these posts are represented by Social Media Representations to a greater extent than the Not Europe posts. Chi-squared tests confirm that all Social Media Representations except New Social Movements are more common when Europe is discussed compared to when Europe is not discussed (p = 0.0 in all four cases). There is no difference in the proportions of social media posts represented by New social movements between Europe and Not Europe discussions (p = 0.403). The greatest difference is found in Values and is around 34 percentage points.

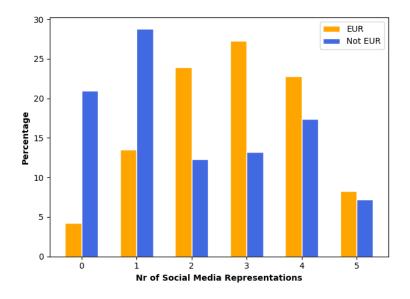
Figure 6. Social Media Representations - % occurrence among Europe and Not Europe posts respectively



Notes: Created with data from Table 7 and Table 8 presented in Appendix B. P value from chisquared test of equal proportions between Europe and Not Europe in variable above each pair of bars. N = 15165 in each pair of comparison.

Table 1 displays the mean and the standard deviation for the number of Social Media Representations that occur among Europe and Not Europe posts respectively. A t-test confirms that more Social Media Representations are present when the discussions are about Europe compared to when they are not about Europe (p = 0.0). There are on average 2.76 number of Social Media Representations for posts about Europe and 1.99 for posts not discussing Europe. Figure 7 shows the % occurrence of the number of posts among Europe and Not Europe posts. Figure 7 suggests that the result can be explained by the fact that there are more posts with one Social Media Representation or less when discussions are not about Europe and more posts with two or more Social Media Representations present in the Europe posts.

Figure 7. Number of Social Media Representations - % occurrence among Europe and Not Europe posts respectively



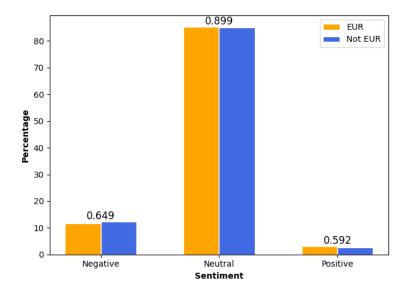
Notes: Created with data from Table 9 and Table 10 presented in Appendix B. N = 15165.

Table 1. Number of Social Media Representations by Europe and Not Europe - Mean, standard deviation (SD) and results from t-test of difference in means

	Europe	Not Europe	Significance	P value
Mean	2.7587	1.9893	****	0
SD	(1.29)	(1.615)		

Figure 8 displays the sentiments (negative, neutral, and positive) among Europe and not Europe posts respectively. No statistically significant differences are observed in any of the sentiments between posts concerning Europe and posts not concerning Europe (p = 0649 for Negative, p = 0.899 for Neutral, and p = 0.592 for Positive). The study team assumes that it may be due to the topics covered in the posts being more universal and less specific to a particular geographic region. For example, gender-based violence, the feminist movement, and transgender rights are topics that are very present in the networks and affect everyone thus are less likely to be associated with specific sentiments towards Europe. Another potential explanation is that even if the topics are specific to Europe, the discussion in the posts does not focus on the emotions associated with the region. For example, if European Union policy is discussed, it is possible that the discussion will focus more on the technical and political aspects of the policy than on the emotions associated with Europe.

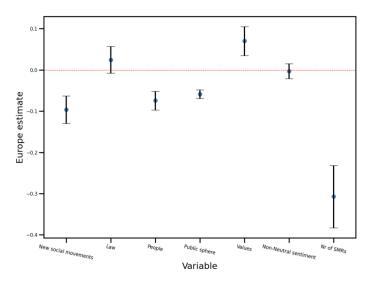
Figure 8. Sentiment - % occurrence among Europe and Not Europe posts respectively



Notes: Created with data from Table 11 and Table 12 presented in Appendix B. P value from chisquared test of equal proportions between Europe and Not Europe in variable above pair of bars. N = 15165.

Figure 9 displays coefficient estimates from Logit and OLS regressions of the effect of Europe on each of the Social Media Representations, non-neutral sentiment (defined as a post having either a negative or positive sentiment), and the number of Social Media Representations (Nr of SMRs), including a number of control variables. The inclusion of control variables changes many of the previously observed results. Values is now the only Social Media Representation that is discussed more when the topic is about Europe, relative when it is not about Europe, and the effect is around 7 percentage points. Contrarily, New social movements, values, and the public sphere are present to a larger extent in discussion that are not about Europe. The effect is largest for New social movements, which is around 10 percentage point more likely to occur in discussions not about Europe. There is no statistically significant difference in the occurrence of Law nor non-neutral sentiment between Europe and not Europe posts. In line with these results, the number of Social Media Representations is on average higher for posts not discussing Europe. Social Media representations and discussions about Europe are more common on Facebook than on Twitter. Therefore, controlling for whether a social media post was extracted from Twitter or Facebook seem to explain the difference in results between Figure 6 and Figure 9. However, the largest (positive) difference between Europe and not Europe discussions is found in values and the smallest (negative) difference is in New social movements in both Figure 6 and Figure 9.

Figure 9. Coefficient estimates Europe

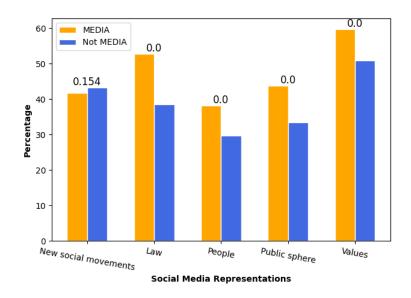


Notes: Coefficient estimates and their 95 % confidence intervals of Europe variable from Model 3 of Table 13, Table 14, Table 15, Table 16, Table 17, Table 18, Table 19 presented in Appendix B. N = 15165 in each estimation.

Comparisons between Media and Not Media

Now we turn to analyzing the difference between the social media posts created by media relative not media. Figure 10 shows the % occurrence of the Social Media Representations among media and not media posts respectively. All Social Media Representations, except New social movements, are more common when the creator of the post is media compare to when the poster is not media. These differences are confirmed by chi-squared tests (p = 0.0 in all cases except). The study team assumes that it may be due to the role of the media, which is mainly responsible for informing citizens about the public sphere, and new legal regulations. The new social movements, instead, are presented by the same citizens who initiate these that are promoting and presenting themselves on their social network profiles to make them known. No statistically significant difference is found for New social movements (p = 0.154). The largest difference is found in Law and is around 14 percentage points.

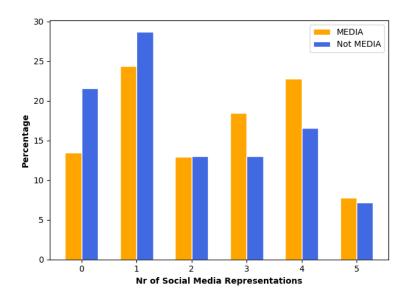
 $\textit{Figure 10. Social Media Representations - \% occurrence among Media and Not Media posts \textit{respectively} \\$



Notes: Created with data from Table 20 and Table 21 presented in Appendix C. P value from chi-squared test of equal proportions between Media and Not Media in variable above each pair of bars. N = 15165 in each pair of comparison.

Turning to the number of Social Media Representations, Table 2 suggests that social media posts from media contain more Social Media Representations than posts from not media. Media posts have on average 2.36 Social Media Representations, while Not media posts contain on average 1.96 Social Media Posts. A t-test confirms that the difference in means is statistically significant. Figure 11 suggests that main difference lies in that media posts typically have more posts with three or four Social Media Representations present and less posts with one Social Media Representation or less.

Figure 11. Number of Social Media Representations - % occurrence among Media and Not Media posts respectively



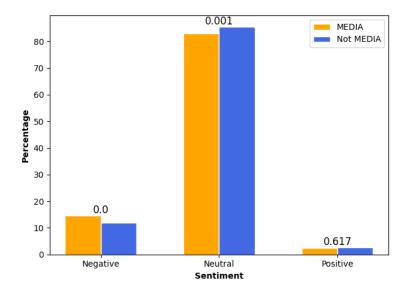
Notes: Created with data from Table 22 and Table 23 presented in Appendix C. N = 15165.

Table 2. Number of Social Media Representations by Media and not Media - Mean, standard deviation (SD) and results from t-test of difference in means

	Media	Not Media	Significance	P value
Mean	2.3618	1.9593	****	0
SD	(1.568)	(1.609)		

Figure 12 displays the sentiments for media and not media posters. Surprisingly, we find that there are fewer neutral posts created by media and that media typically post more negative posts than other social media users. However, there are no difference in the share of Positive posts between the two groups. The differences are confirmed by chi-squared tests (p = 0.0 for Negative, p = 0.001 for Neutral and p = 0.617 for Positive).

Figure 12. Sentiment - % occurrence among Media and Not Media posts respectively



Notes: Created with data from Table 24 and Table 25 presented in Appendix C. P value from chi-squared test of equal proportions between Media and Not Media in variable above pair of bars. N = 15165.

Finally, we turn to the coefficient estimates measuring the difference between media and not media users in the likelihood of observing each of the Social Media Representations, a non-neutral sentiment and the average number of Social Media Representations in a post, using Logit and OLS regressions with additional control variables. The results still suggest that the largest positive effect for media is found in Law and the smallest, now negative effect is observed in New social movements. Law posts are 7.5 percentage points more likely to be observed when posted by media and New social movements is 4.5 percentage points is more likely to appear in posts by not media. As before, results change due to the inclusion of control variables. The effect of values is now negative and there are no significant differences in People, Public sphere, non-neutral sentiments

and number of Social Media Representations. Once again, it seems that controlling for platform (Facebook or Twitter) has the largest effect on the estimates.

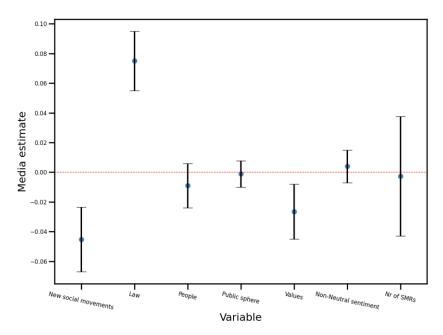


Figure 13. Coefficient estimates Media

Notes: Coefficient estimates and their 95 % confidence intervals of Media variable from Model 3 of Table 26, Table 27, Table 28, Table 29, Table 30, Table 31, Table 32. presented in Appendix C. N = 15165 in each estimation.

Illustrative examples

The main objective of this section is to provide four selected posts that reflect the results of the quantitative analysis. For this, two of these posts should be related to Figure 9, which refers to "Coefficient estimates Europe", and the other two posts should be related to Figure 13, which refers to "Coefficient estimates Media". In this way, we present examples of the Social Media Representations where we find the largest differences between Europe and Not Europe posts. In Figure 14 that "Values" has the highest estimated coefficient in Europe and "New social movements" has the lowest estimated coefficient in Europe. For this reason, we have chosen the post published by Irene Montero, Minister of Equality of the Government of Spain, in which she talks about how Ursula von der Leyen made two key announcements for European legislation on women's rights: a Law against Gender Violence and a European Care Strategy. The first one is particularly relevant because of the commitment to the fight against gender violence. Regarding the Care Strategy, the President of the European Commission has pointed out social justice, fiscal equity, decent jobs, fair working conditions, better health care, and a good life balance. Related to this, Spain launched the Coresponsible Plan, aimed at reconciling families. Based on our experience with manual coding, we consider that this post perfectly reflects the value-based entries and Europe as it clearly talks about values such as social justice, fiscal equity, dignity, inclusion, and non-violence.

Irene Montero
15 setembre de 2021 · 😵 Hoy la presidenta de la Comisión Europea, Ursula von der Leyen, ha hecho dos anuncios clave para la legislación europea de los derechos de las mujeres: una Ley contra la Violencia de Género, que se presentará a finales de año, y una Estrategia Europea de Cuidados. Son dos anuncios de especial relevancia porque la Unión Europea debe mostrar el firme compromiso con la lucha contra las violencias machistas, y asegurar que es mismo objetivo forma parte de las políticas públicas de todos los países que conformamos Europa. Nuestro país está a disposición de la Comisión Europea para aportar lo que sea necesario y tener cuanto antes esa necesaria ley contra las violencias machistas. En cuanto a la Estrategia de Cuidados, la presidenta de la Comisión Europea ha señalado algo que también nos debe guilar como país, que es poner en práctica el pilar europeo de justicia social, de equidad fiscal, de empleos dignos, de condiciones de trabajo justas, de una mejor atención sanitaria y de un buen equilibrio de vida, en definitiva, vidas dignas de ser vividas. Desde el ministerio de Igualdad hemos señalado en numero camino que debemos seguir es hacia un Sistema Estatal de Cuidados, hacia la camino que debemos seguir es nacia un sistema Estatal de Cuidados, nacia la corresponsabilidad. Hemos puesto en marcha el Plan Corresponsables, dirigido a la conciliación de las familias y el próximo lunes 20 convocamos la primera Mesa de Cuidados con expertas y expertos, agentes sociales, y los ministerios de Derechos Sociales y Agenda 2020, Trabajo y Economía Social, Inclusión, Seguridad Social e Inmigración y Educación. Es una buena noticia que Europa comience a dar pasos en este sentido. Nuestro país responderá con la mejor de las predisposiciones. (1) 2.1 mil 116 comentaris 291 comparticions M'agrada Comenta Comenta Comparteix

Figure 14. Illustrative example of Value and Europe

The post in Figure 15 has been chosen as a representation of the entries based on new social movements and not dealing with Europe because the post talks about the new social movements. It refers specifically to how the users of the Occupational Center of #Arucas form a purple human ribbon. The gesture is included in the special program of the International Day for the Elimination of Violence

Against Women. The Department of Equal Opportunity Policies between Women and Men of the City Council of Arucas, which is directed by Beatriz Herrera, communicates that during November different actions will be carried out in commemoration of November 25: International Day for the Elimination of Violence Against Women. One of them has been the formation of a giant purple ribbon formed by the users of the Occupational Center of Arucas. As stated by the Councilor Delegate for Equality: "Every year the commemoration of November 25th makes visible the need to denounce and eradicate violence against women around the world, without forgetting that behind this date there is a bloody story: that of the Mirabal sisters, political activists in the Dominican Republic, with whom a State femicide was committed by order of the Dictator Trujillo in 1960. Women and girls represent 72% of global victims of human trafficking, and adolescent women between the ages of 15 and 19 are at greater risk of experiencing forced sex. If we add to this the data from our country, where 37 women have been murdered by their partners or ex-partners so far this year, and those of minors who are victims of vicarious violence, we can see that we still have a long way to go in the eradication of violence against women. At this point is born our Campaign: "Arucas Sin Violencia /Arucas Sí Violeta", in which we focus our gaze on the importance of establishing healthy relationships as a fundamental tool to eradicate Gender Violence". In the words of the mayor of the #aruquense Consistory, Juan Jesús Facundo, "this Awareness Campaign entitled "Arucas Sin Violencia / Arucas Sí Violeta" reaffirms the position of absolute rejection that we must have the whole of society to violence against women. To make our young people aware of the importance of establishing healthy relationships, demystifying the attractiveness of violence. Likewise, we men must be responsible for a change of attitude in ourselves and also as generators of change in the attitudes of others in our environment. We cannot remain impassive without acting, turning our backs on the serious problem of violence against women. Our duty, as men and as citizens, is to become allies in this fight and to show our public repudiation of this social scourge that subjugates, violates, and assaults half of the world's population". We consider that it perfectly reflects the entries based in Europe and related to new social movements, this being understood as a self-organized citizenry including grass-roots social movements and NGOs. Movements that have targeted the structures, cultural practices, and interactional norms that sustain gender inequality.

Figure 15. Illustrative example of New Social Movements and Europe



#arucasiguales #arucas25n21 Las personas usuarias del Centro Ocupacional de #Arucas forman un lazo humano violeta

El gesto se incluye en la programación especial del Día Internacional para la Eliminación de la Violencia Contra la Mujer

Desde de la Concejalía de Políticas de Igualdad de Oportunidades entre Mujeres y Hombres del Ayuntamiento de Arucas, que dirige Beatriz Herrera, comunica que durante este mes de noviembre, se llevarán a cabo distintas acciones en conmemoración del 25 de Noviembre: Día Internacional para la Eliminación de la Violencia Contra la Mujer. Una de ellas ha sido la formación de un lazo gigante de color violeta formado por las personas usuarias del Centro Ocupacional de Arucas.

Como manifiesta la Concejala Delegada de Igualdad, "cada año la conmemoración del 25 de Noviembre visibiliza la necesidad de denunciar y erradicar la Violencia contra las mujeres en todo el mundo, sin olvidarnos que tras esa fecha hay una cruenta historia: la de las hermanas Mirabal, activistas políticas de República Dominicana, con las que se cometió un feminicidio de Estado por orden del Dictador Trujillo en 1960. Las mujeres y las niñas representan el 72% de las víctimas globales de trata de seres humanos, y las mujeres adolescentes entre 15 y 19 años tienen más riesgo de experimentar relaciones sexuales forzadas.

Si a lo expuesto, sumamos los datos de nuestro país, en el que 37 mujeres han sido asesinadas a manos de sus parejas o ex parejas en lo que vamos de año y los de menores de edad víctimas de la violencia vicaria, podemos comprobar que nos queda un largo camino por recorrer en la erradicación de la violencia contra las mujeres. En este punto nace nuestra Campaña: "Arucas Sin Violencia /Arucas Si Violeta", en la que centramos nuestra mirada en la importancia de establecer relaciones sanas de pareja como herramienta fundamental para erradicar la Violencia de Género".

En palabras del alcalde del Consistorio #aruquense, Juan Jesús Facundo, "esta Campaña de Sensibilización titulada "Arucas Sin Violencia / Arucas Si Violeta" reafirma la posición de rechazo absoluto que debemos tener la totalidad de la sociedad para con la violencia ejercida contra las mujeres. Concienciar a nuestras personas jóvenes de la importancia de que establezcan relaciones sanas de pareja, desmitificando lo atractivo de lo violento. Asimismo, los hombres debemos ser responsables de un cambio de actitud en nosotros mismos y también como generadores de cambio en las actitudes de otros en nuestro entorno. No podemos quedarnos impasibles sin actuar dando la espalda al grave problema que supone la violencia ejercida contra las mujeres. Nuestro deber como hombres y como ciudadanos es el de convertirnos en aliados en esta lucha y mostrar nuestra repulsa públicamente a esta lacra social que somete, vuinera y agrede a la mitad de la población mundial".

#fotografía: Concejalía de Políticas de Igualdad de Oportunidades entre Mujeres y Hombres del Ayuntamiento de Arucas.

Mostra la traducció



Since "Law" has the highest estimated coefficient of Media and "New social movements" the lowest estimated coefficient of Media, we chose the post below which reflects the entries represented by law and published by Media. The post is published by the newspaper *El Diario* and refers to how the European Parliament claims that male violence should be included in the list of cross-border crimes in the EU, which includes terrorism, trafficking, drug trafficking and money laundering.



Figure 16. Illustrative example of Law and Media

Finally, we have chosen the post published by Cristina Cabezon, which reflects the entries represented by new social movements and NOT published by Media. In Figure 17, the author of the post applauds the delegate of Equality Adela Castaño, who ensures that it is consolidated as a benchmark in the fight for gender equality and the eradication of gender violence with the creation of the so-called violet points, safe spaces for the protection of victims of gender violence.

Figure 17. Illustrative example of New Social Movements and No media



Conclusion

This national report outlines the results of the quantitative analysis of media representations conducted in WP4 of EUMEPLAT for Spain with the aim of detecting to what degree platformization has been changing the representation of gender in Europe. In general, feminism within the public sphere spread increasingly thanks to social media networks which are currently one of the spaces where popular culture is more visible (Navarro & Villegas-Simón, 2022). The results of the analysis tried to give an explanation of how platformization affects the process of Europeanisation and how Europe is represented through gender. Indeed, the quantitative analysis finds that the Social Media Representation of Values is the most common compared to the other four representations. However, the debate on social media is highly affected by the occurrences indeed a spike was detected during the International Day for the Elimination of Violence against Women and also during the days just before and just after. Law was the social media representation that was the second most prominent. This is in line with the development and deployment of gender equality legislation in Spain explained in the Legislation paragraph above. When it comes to Europe, all Social Media Representations except New Social Movements are more common when Europe is discussed compared to when Europe is not discussed. Having said that, no statistically significant differences are observed in any of the sentiments between posts concerning Europe and posts not concerning Europe. While representations describe the content of the debates, sentiments provide a sense of the persons' attitudes towards the content. Therefore, we can conclude that European debates related to gender do not generate more sentiments than other debates. Regarding the distinction between Media and not Media users instead, all Social Media Representations, except New social movements, are more common when the creator of the post is media compare to when the poster is not media. Surprisingly, we find that there are fewer neutral posts created by media and that media typically post more negative posts than other social media users. Based on the scientific literature analysed for this work package, this result needs further investigation.

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Appendices

Appendix A. Tables supporting the section on Descriptive overview

Table 3. Social Media Representations - Frequency and % occurrence among all posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	6514	21.1	43.0
Law	6238	20.2	41.1
People	4734	15.4	31.2
Public sphere	5358	17.4	35.3
Values	7961	25.8	52.5
Total	30805	100.0	203.1

Table 4. Social Media Representations - Frequency by week

Unnamed: 0	New social movements	Law	People	Public sphere	Values
35	179	157	96	56	172
36	300	280	230	160	356
37	336	408	235	240	439
38	321	259	212	200	375
39	352	375	297	280	476
40	390	296	232	217	391
41	407	356	389	306	522
42	466	403	356	341	523
43	365	284	201	219	367
44	377	299	273	306	440
45	479	418	353	375	562
46	791	589	566	694	894
47	1627	1981	1196	1837	2277
48	124	133	98	127	167
Total	6514	6238	4734	5358	7961

Table 5. Number of Social Media Representations in posts - Frequency and % occurrence among all posts

Nr of Social Media Representations	Count	% of Posts
0	3052	20.1
1	4235	27.9
2	1964	13.0
3	2119	14.0
4	2690	17.7
5	1105	7.3
Total	15165	100.0

Table 6. Sentiment - Frequency and % occurrence among all posts

Sentiment	Count	% of Posts
Negative	1860	12.3
Neutral	12901	85.1
Positive	404	2.7
Total	15165	100.0

Appendix B. Tables supporting the section on Comparisons - Europe and Not Europe

Table 7. Social Media Representations Europe - Frequency and % occurrence among Europe posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	344	15.0	41.5
Law	477	20.9	57.5
People	364	15.9	43.9
Public sphere	402	17.6	48.5
Values	700	30.6	84.4
Total	2287	100.0	275.9

Table 8. Social Media Representations Not Europe - Frequency and % occurrence among Not Europe posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	6170	21.6	43.0
Law	5761	20.2	40.2

People	4370	15.3	30.5
Public sphere	4956	17.4	34.6
Values	7261	25.5	50.6
Total	28518	100.0	198.9

Table 9. Number of Social Media Representations Europe - Frequency and % occurrence among Europe posts

Nr of Social Media Representations	Count	% of Posts
0	35	4.2
1	112	13.5
2	198	23.9
3	226	27.3
4	189	22.8
5	69	8.3
Total	829	100.0

Table 10. Number of Social Media Representations Not Europe - Frequency and % occurrence among Not Europe posts

Nr of Social Media Representations	Count	% of Posts
0	3017	21.0
1	4123	28.8
2	1766	12.3
3	1893	13.2
4	2501	17.4
5	1036	7.2
Total	14336	100.0

Table 11. Sentiment Europe - Frequency and % occurrence among Europe posts

Sentiment	Count	% of Posts
Negative	97	11.7
Neutral	707	85.3
Positive	25	3.0
Total	829	100.0

Table 12. Sentiment Not Europe - Frequency and % occurrence among Not Europe posts

Sentiment	Count	% of Posts
Negative	1763	12.3
Neutral	12194	85.1
Positive	379	2.6
Total	14336	100.0

Table 13. Marginal effects of Logistic regressions with New Social Movements as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	-0.0155	-0.1098****	-0.0966****
	(0.018)	(0.017)	(0.017)
Twitter		-0.2379****	-0.2253****
		(0.007)	(0.007)
Interactions		-2.358e-05	-2.152e-05
		(0.0)	(0.0)
Followers		-6.401e-09	-6.214e-09
		(0.0)	(0.0)
Sentiment Score		0.0216****	0.0224***
		(0.002)	(0.002)
October			-0.0278
			(0.018)
November			-0.0200
			(0.032)
week			0.0083**
			(0.003)
N	15165	15165	15165
Pseudo R- squared	0.00	0.05	0.05

Table 14. Marginal effects of Logistic regressions with Law as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.1688****	0.0113	0.0246
	(0.017)	(0.016)	(0.016)

Twitter		-0.3537****	-0.3360****
		(0.005)	(0.006)
Interactions		9.249e-06	1.147e-05
		(0.0)	(0.0)
Followers		2.268e-08****	2.257e-08****
		(0.0)	(0.0)
Sentiment Score		-0.0145****	-0.0130****
		(0.002)	(0.002)
October			-0.1383****
			(0.016)
November			-0.1692****
			(0.029)
week			0.0234***
			(0.003)
N	15165	15165	15165
Pseudo R- squared	0.00	0.12	0.13

Table 15. Marginal effects of Logistic regressions with People as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.1239****	-0.0663****	-0.0743****
	(0.015)	(0.011)	(0.011)
Twitter		-0.4354***	-0.4455****
		(0.002)	(0.003)
Interactions		1.78e-05**	1.634e-05**
		(0.0)	(0.0)
Followers		1.068e-08***	1.062e-08***
		(0.0)	(0.0)
Sentiment Score		0.0010	-2.466e-05
		(0.002)	(0.002)
October			0.1007****

			(0.014)
November			0.1471****
			(0.025)
week			-0.0180****
			(0.003)
N	15165	15165	15165
Pseudo R- squared	0.00	0.32	0.32

Table 16. Marginal effects of Logistic regressions with Public Sphere as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.1314****	-0.0776****	-0.0587****
	(0.016)	(0.005)	(0.005)
Twitter		-0.5639****	-0.5338****
		(0.03)	(0.028)
Interactions		-1.073e-05**	-8.381e-06*
		(0.0)	(0.0)
Followers		-1.318e-08**	-8.792e-09**
		(0.0)	(0.0)
Sentiment Score		0.0055****	0.0073****
		(0.001)	(0.001)
October			-0.0398****
			(0.008)
November			-0.0320**
			(0.016)
week			0.0115****
			(0.002)
N	15165	15165	15165
Pseudo R- squared	0.00	0.70	0.72

Table 17. Marginal effects of Logistic regressions with Values as dependent variable

Variable	Model 1	Model 2	Model 3

Europe	0.4055****	0.0661****	0.0701****
	(0.023)	(0.018)	(0.018)
Twitter		-0.4818****	-0.4745****
		(0.004)	(0.004)
Interactions		7.96e-07	2.136e-06
		(0.0)	(0.0)
Followers		-2.367e-09	-2.321e-09
		(0.0)	(0.0)
Sentiment Score		0.0034**	0.0039**
		(0.002)	(0.002)
October			-0.0284**
			(0.013)
November			-0.0037
			(0.022)
week			0.0036
			(0.002)
N	15165	15165	15165
Pseudo R- squared	0.02	0.47	0.47

Table 18. Marginal effects of Logistic regressions with Non-neutral Sentiment as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	-0.0023	-0.0010	-0.0030
	(0.013)	(0.009)	(0.009)
Twitter		-0.0101**	-0.0128***
		(0.004)	(0.004)
Interactions		2.017e-06	1.71e-06
		(0.0)	(0.0)
Followers		2.123e-09	2.162e-09
		(0.0)	(0.0)
Sentiment Score		-0.0788****	-0.0789****

		(0.002)	(0.002)
October			0.0141
			(0.01)
November			0.0242
			(0.017)
week			-0.0035**
			(0.002)
N	15165	15165	15165
Pseudo R- squared	0.00	0.25	0.25

Table 19. Coefficient estimates of OLS regressions with Number of Social Media Representations as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.7695***	-0.3508***	-0.3072***
	(0.0468)	(0.0390)	(0.0388)
Twitter		-2.8105***	-2.7642***
		(0.0144)	(0.0149)
Interactions		-0.0000	-0.0000
		(0.0000)	(0.0000)
Followers		0.0000**	0.0000**
		(0.0000)	(0.0000)
Sentiment Score		0.0169***	0.0202***
		(0.0041)	(0.0041)
October			-0.1423***
			(0.0302)
November			-0.0829
			(0.0542)
week			0.0299***
			(0.0056)
Intercept	1.9893***	3.6617***	2.4432***
nan	(0.0135)	(0.0121)	(0.2088)

R-squared	0.0118	0.7347	0.7388
R-squared Adj.	0.0118	0.7346	0.7387
N	15165	15165	15165

Appendix C. Tables supporting the section on Comparisons - Media and Not Media

Table 20. Social Media Representations Media - Frequency and % occurrence among Media posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	1132	17.7	41.7
Law	1432	22.3	52.8
People	1033	16.1	38.1
Public sphere	1189	18.5	43.8
Values	1624	25.3	59.8
Total	6410	100.0	236.2

Table 21. Social Media Representations Not Media - Frequency and % occurrence among Not Media posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	5382	22.1	43.2
Law	4806	19.7	38.6
People	3701	15.2	29.7
Public sphere	4169	17.1	33.5
Values	6337	26.0	50.9
Total	24395	100.0	195.9

Table 22. Number of Social Media Representations Media - Frequency and % occurrence among Media posts

Nr of Social Media Representations	Count	% of Posts
0	367	13.5
1	662	24.4
2	351	12.9
3	503	18.5

4	618	22.8
5	213	7.8
Total	2714	100.0

Table 23. Number of Social Media Representations Not Media - Frequency and % occurrence among Not Media posts

Nr of Social Media Representations	Count	% of Posts
0	2685	21.6
1	3573	28.7
2	1613	13.0
3	1616	13.0
4	2072	16.6
5	892	7.2
Total	12451	100.0

Table 24. Sentiment Media - Frequency and % occurrence among Media posts

Sentiment	Count	% of Posts
Negative	395	14.6
Neutral	2251	82.9
Positive	68	2.5
Total	2714	100.0

Table 25. Sentiment Not Media - Frequency and % occurrence among Not Media posts

Sentiment	Count	% of Posts
Negative	1465	11.8
Neutral	10650	85.5
Positive	336	2.7
Total	12451	100.0

Table 26. Marginal effects of Logistic regressions with New Social Movements as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.0152	-0.0480****	-0.0452****
	(0.011)	(0.011)	(0.011)
Twitter		-0.2347****	-0.2222****
		(0.007)	(0.007)

Interactions		-2.539e-05*	-2.312e-05*
		(0.0)	(0.0)
Followers		2.601e-09	2.33e-09
		(0.0)	(0.0)
Sentiment Score		0.0212****	0.0221****
		(0.002)	(0.002)
October			-0.0251
			(0.018)
November			-0.0169
			(0.032)
week			0.0085**
			(0.003)
N	15165	15165	15165
Pseudo R- squared	0.00	0.05	0.05

Table 27. Marginal effects of Logistic regressions with Law as dependent variable

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Variable	Model 1	Model 2	Model 3
Media	0.1375****	0.0708****	0.0750****
	(0.01)	(0.01)	(0.01)
Twitter		-0.3460****	-0.3289****
		(0.005)	(0.006)
Interactions		9.94e-06	1.249e-05
		(0.0)	(0.0)
Followers		8.55e-09*	7.667e-09
		(0.0)	(0.0)
Sentiment Score		-0.0139****	-0.0123****
		(0.002)	(0.002)
October			-0.1403****
			(0.016)
November			-0.1706****

			(0.029)
week			0.0235****
			(0.003)
N	15165	15165	15165
Pseudo R- squared	0.01	0.13	0.13

Table 28. Marginal effects of Logistic regressions with People as dependent variable

Variable	Model 1	Model 2	Model 3
Media	0.0798***	-0.0058	-0.0090
	(0.009)	(0.008)	(0.008)
Twitter		-0.4317***	-0.4403****
		(0.002)	(0.003)
Interactions		1.675e-05**	1.535e-05*
		(0.0)	(0.0)
Followers		1.13e-08***	1.177e-08***
		(0.0)	(0.0)
Sentiment Score		0.0010	-3.675e-05
		(0.002)	(0.002)
October			0.1030****
			(0.014)
November			0.1498****
			(0.025)
week			-0.0175****
			(0.003)
N	15165	15165	15165
Pseudo R- squared	0.00	0.32	0.32

 $Table\ 29.\ Marginal\ effects\ of\ Logistic\ regressions\ with\ Public\ Sphere\ as\ dependent\ variable$

Variable	Model 1	Model 2	Model 3
Media	0.0993****	-0.0082*	-0.0011
	(0.01)	(0.005)	(0.005)

Twitter		-0.5757****	-0.5415****
		(0.031)	(0.029)
Interactions		-1.152e-05**	-9.123e-06**
		(0.0)	(0.0)
Followers		-1.294e-08**	-9.296e-09**
		(0.0)	(0.0)
Sentiment Score		0.0053****	0.0074***
		(0.001)	(0.001)
October			-0.0370****
			(800.0)
November			-0.0288*
			(0.016)
week			0.0123****
			(0.002)
N	15165	15165	15165
Pseudo R- squared	0.01	0.69	0.71

Table 30. Marginal effects of Logistic regressions with Values as dependent variable

Variable	Model 1	Model 2	Model 3
Media	0.0901****	-0.0274***	-0.0265***
	(0.011)	(0.009)	(0.009)
Twitter		-0.4901****	-0.4835****
		(0.004)	(0.004)
Interactions		2.256e-06	3.441e-06
		(0.0)	(0.0)
Followers		3.896e-09	3.786e-09
		(0.0)	(0.0)
Sentiment		0.0032*	0.0036**
Score			
		(0.002)	(0.002)
October			-0.0296**

			(0.013)
November			-0.0062
			(0.022)
week			0.0036
			(0.002)
N	15165	15165	15165
Pseudo R- squared	0.00	0.47	0.47

Table 31. Marginal effects of Logistic regressions with Non-neutral Sentiment as dependent variable

Variable	Model 1	Model 2	Model 3
Media	0.0248***	0.0042	0.0040
	(0.007)	(0.006)	(0.006)
Twitter		-0.0095**	-0.0120***
		(0.004)	(0.004)
Interactions		2.047e-06	1.718e-06
		(0.0)	(0.0)
Followers		1.211e-09	1.28e-09
		(0.0)	(0.0)
Sentiment Score		-0.0787***	-0.0788****
		(0.002)	(0.002)
October			0.0142
			(0.01)
November			0.0243
			(0.017)
week			-0.0035**
			(0.002)
N	15165	15165	15165
Pseudo R- squared	0.00	0.25	0.25

Table 32. Coefficient estimates of OLS regressions with Number of Dimensions as dependent variable

Variable	Model 1	Model 2	Model 3

Media	0.4025***	-0.0129	-0.0027
	(0.0334)	(0.0208)	(0.0205)
Twitter		-2.7826***	-2.7358***
		(0.0145)	(0.0149)
Interactions		-0.0000	-0.0000
		(0.0000)	(0.0000)
Followers		0.0000**	0.0000*
		(0.0000)	(0.0000)
Sentiment Score		0.0169***	0.0205***
		(0.0041)	(0.0041)
October			-0.1362***
			(0.0303)
November			-0.0735
			(0.0545)
week			0.0310***
			(0.0056)
Intercept	1.9593***	3.6294***	2.3598***
nan	(0.0144)	(0.0127)	(0.2099)
R-squared	0.0092	0.7323	0.7370
R-squared Adj.	0.0091	0.7322	0.7369
N	15165	15165	15165

Sweden

Authors: Emma Björner

Institution: International Organisation for Knowledge Economy and Enterprise Development

1. Introduction

1.1 Background

To define gender is both difficult and important (Lindqvist, Gustafsson Sendén & Renström, 2021). One reason for this is that the understanding of gender differs between cultures and time periods, and changes over time (Hegarty, Ansara, & Barker, 2018). Gender has been conceptualised as involving the behavioural, psychological, social and cultural aspects of being a man, woman or other gender identity (Haig, 2004). Previous research (e.g. Stoller, 1964) has depicted 'sex' as biological, and described 'gender' as more socially and culturally determined. According to such reasoning, the term gender has cultural or psychological rather than biological connotations (Haig, 2004). Other scholars have however incorporated sex in the definition of gender. For example, Lindqvist et al (2021) has conceptualised gender into four main facets. The first facet is physiological or bodily aspects, namely sex. The second facet is self-defined gender or gender identity. The third facet is legal gender, while the fourth and final facet is social gender in terms of gender expressions and norm-related behaviour. Adding to these four facets is the umbrella term transgender, meaning individuals whose selfdefined gender identity does not correspond with their determined gender at birth (Thanem, 2011). "Transgender individuals can identify within, outside or beyond the traditional dichotomy of woman/man" (Lindqvist et al, 2021, p. 334).

Sweden has been depicted as exceptionally progressive when it comes to gender equality and sexual rights (Kehl, 2020). Gender equality is also at the centre stage in the promotion of the "Progressive Sweden" brand (Jezierska & Towns, 2018). Moreover, Sweden is regarded one of the most progressive nations worldwide when it comes to lesbian, gay, bisexual, transgender and queer (LGBTQ) rights (Åkerlund, 2019). Narratives of the progressive Sweden however overlap with homo-normative and homo-nationalist narratives (Kehl, 2020). And even though Sweden has come far in the development of equal rights, it is still not equal for all. Transgender individuals represent one group that faces discrimination and violence which naturally impacts their health negatively (Åkerlund, 2019). In Sweden and the Nordic, men dominate almost all news categories. In around 30% of the news in Sweden, women are seen, heard, or read about. Furthermore, men and women are represented in gender stereotypical ways. Men more often represent the role of expert and the voice of authority, whereas women more often appear as news subjects and are identified by their family status (Mannila, 2017).

Social media has changed the way news are consumed in Sweden. Nevertheless, traditional media and its news still has an important role among Nordic media consumers (Mannila, 2017). A large proportion of images and narratives that are spread in social media originates from the large mass media outlets. Moreover, major stories circulated in social media often reach the mainstream media (Edström, 2018). In Sweden like elsewhere, news media play a central role in creating possibilities and limitations in relation to identity and rights of transgender individuals (Åkerlund, 2019). Social media platforms have been described as important environments for community- and identity-creation, not least for members of minority groups (Kehl, 2020). Social media has also been depicted as a main platform when portraying the image of Sweden as progressive, with gender equality at the core. Narratives and images include portrayals of Swedish 'superstars in sports' such as superwomen footballers as well as unisex design and gender norm-breaking fashion. Sweden is also depicted as among the most gay-friendly countries in the world (Jezierska & Towns, 2018).

A report on gender equality and media regulation in Sweden (Gunnarsson, 2022) concludes that it is crucial that academia and civil society increase and pay attention to research and

advocacy when it comes to gender equality on social media. Representation of LGBTQ+ has previously been studied mainly in relation to traditional media (Kallur, 2018) and it would consequently be valuable with additional research on representation of LGBTQ+ in social media. Moreover, there is a scarcity of research on the representations of transgender individuals in the media, and there has been calls for research on news media representation of transgender individuals in Sweden, in broadcast news and on social media. Sweden has been depicted as a suitable Sweden context for such research partly due to its progressive values (Åkerlund, 2019).

1.2 Legislation

In Sweden, homosexual relationships were legalized in 1944. However, until 1979 homosexuality was regarded a mental disorder by the National Board of Health and Welfare. In 1987 a ban on discrimination against homosexuals by government offices and businesses was introduced. From 2003, same-sex couples have been able to adopt, and from 2005 lesbian couples have had insemination rights. From May 2009 gender-neutral marriage has been legal in Sweden, following the adoption of a gender-neutral marriage law by the Swedish parliament.

In 1972, it became legal to change gender. From 2009 transgender identity and expressions have been included in the anti-discrimination act. In 2011, prohibition of discrimination based on sexual orientation was added to the Swedish constitution, and since 2019 there is a stronger legal protection against hate crimes for trans people in place, through inclusion in the Freedom of the Press Act, a fundamental law in Sweden.

In Sweden it is forbidden to threat someone or use physical or sexual violence. During the 1990s and 2000s several major changes were made in Swedish legislation with the aim to strengthen the protection of women exposed to violence, sexual abuse, human trafficking, and violence in the name of honour, as well as children witnessing violence. An important change that took place in 1982 was that anyone who has witnessed a crime can report it, not just the person who has been exposed to it. In 1998, the women's rights reform was introduced, tightening the law with regards to men's violence against women. In 1999, the purchase of sex was criminalized.

Sweden's sexual offences legislation was amended in 2018. One key change implies that it is no longer necessary for the offender to have used violence or threat, or taken advantage of the victim's particularly vulnerable situation, to be convicted of offences such as rape. In 2022, some aspects of the criminal law on men's violence against women were tightened, for example by increasing penalties for offences such as gross violation of integrity. According to the Swedish Government, men's violence against women is a priority issue. A ten-year national strategy to prevent and counter men's violence against women was adopted in 2016.

The Gender Equality Act from 1979 states that men and women formally have the same conditions in Swedish social life. A main aim of the act is to promote equal rights for women and men when it comes to work, employment and other working conditions and development opportunities.

1.3 National context

In the period from September 1 to November 30, 2021, some main themes or topics impacted the social media discussions on gender. For example, Sweden got its first female prime minister, men's violence against women was a reoccurring topic, abortion rights in the US and LGBTQ rights in Poland influenced the discussion in Sweden, and the use of "they" was debated. In the beginning of the studied period, the leader of the political party in power, Stefan Löfven of the Social Democrats Party, announced that he would step down. Following that, Magdalena Andersson, was elected the new party leader and later the first female Prime minister of Sweden. In Stefan Löfven's last government statement before stepping down he put forth jobs, climate, welfare and safety as priority areas for the government.

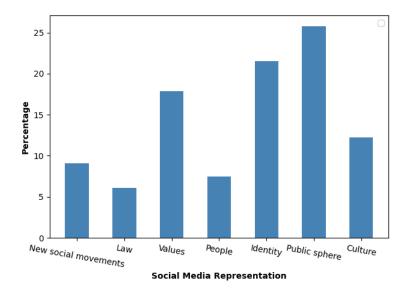
Men's violence against women was another frequently occurring topic in the social media landscape during the period of study, addressed in various ways and by different people and organisations. The celebration of "Orange day", to counter men's violence against women, was apparent in the Swedish media landscape. Work on gender-based violence in the EU Parliament was addressed, and a report proposing to legislate to criminalize gender-based violence throughout the EU was emphasized. Moreover, some addressed the increase in registrations for women's emergency services, emphasizing that we still have a long way to go to come to terms with men's violence against women. Others mentioned and praised the Swedish police's increased resources to tackle men's violence against women. Relatedly, inequality between men and women was also a topic discussed, and Gender Equality Week was recognised.

The ongoing heated discussion on abortion rights in the USA at the time was also apparent in Swedish social media discussions. Both representatives from political parties and individuals took a stance on the issue, with arguments like "I stand up for the right to abortion!" and "Abortion is a human right". Similarly, the threat to LGBTQ people in Poland and discussions of LGBTQ-free zones were also picked up in the Swedish social media landscape. There was also a debate on the use of the word "they" (hen in Swedish) related to a case of a teacher losing her job for not calling a student "they". Events such as West Pride in Gothenburg, Ulricehamn Pride and Malmö Pride also influenced the social media discussions. In the period studied, the Covid-19 pandemic was still very present in society. In the end of September 2021, most restrictions and limitations against the spread of Covid-19 were however removed, due to declining infection numbers and widespread vaccination among the public.

2. Quantitative analysis

2.1 Descriptive statistics

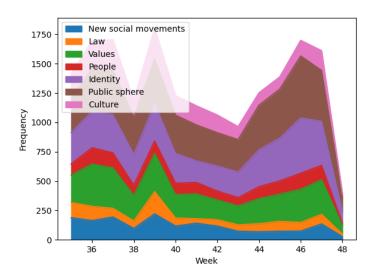
Figure 1. Social Media Representations - Distribution among Social Media Representations



Notes: Created with data from Table 3 presented in Appendix A. N = 18544.

We can conclude from Figure 1 that Public sphere (26%), Identity (22%) and Values (18%) are the most frequently occurring dimensions of social media. Law (6%) and People (8%) are the least occurring dimensions. New social movements (9%) and Culture (12%) are in the middle or in between the most and least frequently occurring dimensions. The fact that Public sphere was a frequently common dimension means that many posts about gender-relevant issues were raised by non-political actors, for example regarding the relationship between citizens and institutions, involvement in decision-making or as an attempt to influence decision-making.

Figure 2. Social Media Representations - Relative importance over time



Notes: Created with data from Table 4 presented in Appendix A. N = 18544.

It is clear from Figure 2 that there is a spike in Social Media Representations in week 36-37 (mid-September), 39 (end of September) and 46-47 (mid-November) 2021. Public sphere, identity and values are the most frequently occurring Social Media Representations during these weeks, as well as during any other week of the analysed period. Topics discussed in September included the right to abortion, HBTQ rights in Poland and Europe, and men's violence towards women. In November, Sweden got its first female prime minister, which can have influenced the peak in number of social media representation about gender towards the mid of November.

New social movements

Law

Values

People

Joba 300 Joba 37 39 41 43 45 47 35 37 39 41 43 45 47 35 37 39 41 43 45 47

Figure 3. Social Media Representations - Evolution over time

Notes: Created with data from Table 4 presented in Appendix A. N = 18544.

Figure 3 shows that there is a spike in all but one (People) Social Media Representations in week 39 that occurred in the end of September and beginning of October 2021. There is also a peak in all but two (Law and People) in weeks 46-47 that occurred in the end of November 2021. The trends of each Social Media Representation are fairly stable over time when considering the other weeks.

40 -35 -30 -25 -20 -15 -

10

Figure 4. Number of Social Media Representations - Distribution among all posts

Notes: Created with data from Table 5 presented in Appendix A. N = 8018.

Nr of Social Media Representations

From Figure 4 we can see that two Social Media Representation occurs in the majority of the posts (39%). Posts belonging to three Social Media Representations is the second most common case, with 25% of the posts. Additionally, the third most common case is to have one Social Media Representation present, which holds true for 18% of the posts. Finally, 10% of the posts have four Social Media Representations.

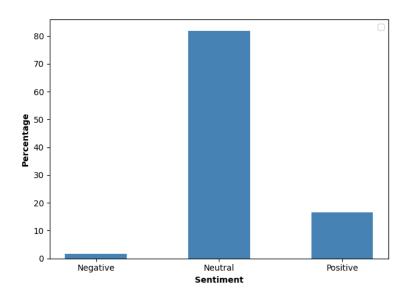


Figure 5. Sentiments - Distribution among all posts

Notes: Created with data from Table 6 presented in Appendix A. N = 8018.

Interestingly, more than 80% of the posts have a neutral sentiment. There are more positive sentiments than negative: around 16% are positive and not even 2% are negative. However, the posts of the analysed sample are not containing many positive nor negative sentiments. As such, many posts conveyed facts or described a story without positive or negative sentiments. Sometimes there was an underlying tone that would lean to a more positive or negative sentiment, but if there were no positive (happy, glad, good, etc.) or negative (sad, bad, worse, etc.) words included in the post it was coded as neutral.

2.2 Comparisons between Europe and Not Europe

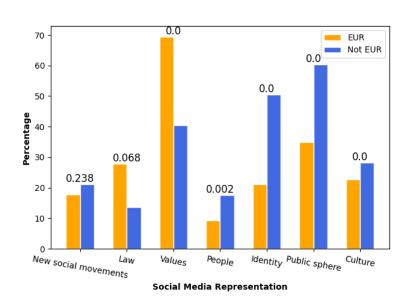
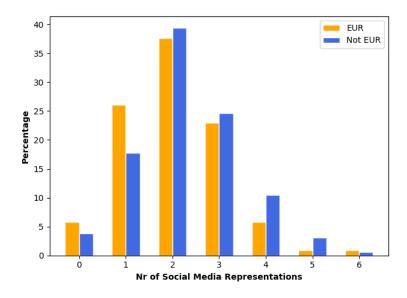


Figure 6. Social Media Representations - % occurrence among Europe and Not Europe posts respectively

Notes: Created with data from Table 7 and Table 8 presented in Appendix B. P value from chi-squared test of equal proportions between Europe and Not Europe in variable above each pair of bars. N = 8018 in each pair of comparison.

Posts not about Europe (18085) are much more frequent than posts about Europe (459) (see Table 7 and Table 8 that show total number of posts at the bottom). Chi-squared tests conclude that there are statistically significant differences in the proportions of five of the Social Media Representations (Values, People, Identity, Public sphere, and Culture) when comparing posts about Europe and not about Europe (p = 0.0 in five of seven cases). Two of the Social Media Representations prove to not be statistically significant since the p-value is larger than 0.05, namely Law (p = 0.068) and New Social Movement (p = 0.238). Moreover, the Social Media Representations of Law and Values occur more often in Europe posts than in Not Europe posts, whereas the other Social Media Representations occur more often in Not Europe posts.

Figure 7. Number of Social Media Representations - % occurrence among Europe and Not Europe posts respectively



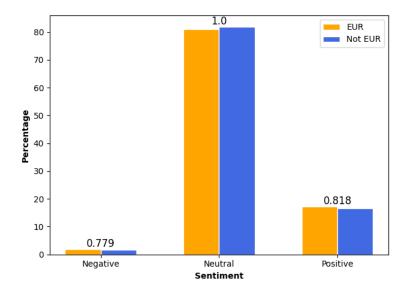
Notes: Created with data from Table 9 and Table 10 presented in Appendix B. N = 8018.

Table 1. Number of Social Media Representations by Europe and Not Europe - Mean, standard deviation (SD) and results from t-test of difference in means

	Europe	Not Europe	Significance	P value
Mean	2.031	2.321	***	0.0001
SD	(1.085)	(1.131)		

From the information in Table 1, we can conclude that there are on average slightly more Social Media Representations among Not Europe posts than Europe posts. The mean values for the Not Europe and Europe posts are 2.32 and 2.03 respectively and a t-test confirms that the difference in means is statistically significant (p = 0.0). Specifically, there are more Europe posts with 0 or 1 Social Media Representation and more Not Europe posts with 2 or more Social Media Representations. This can be seen in Figure 7.

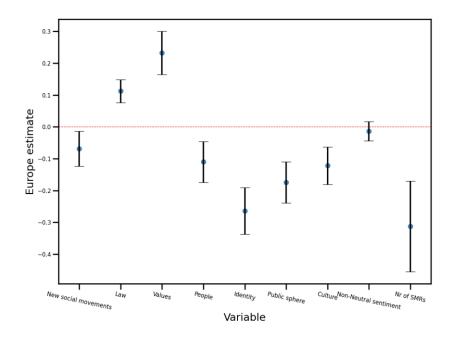
Figure 8. Sentiment - % occurrence among Europe and Not Europe posts respectively



Notes: Created with data from Table 11 and Table 12 presented in Appendix B. P value from chi-squared test of equal proportions between Europe and Not Europe in variable above pair of bars. N = 8018.

Chi-squared tests conclude that there are no statistically significant differences in the proportions of any of the sentiments when comparing posts about Europe and not about Europe (p = 0.779 for Negative, p = 1.0 for Neutral, and p = 0.818 for Positive).

Figure 9. Coefficient estimates Europe



Notes: Coefficient estimates and their 95 % confidence intervals of Europe variable from Model 3 of Table 13, Table 14, Table 15, Table 16, Table 17, Table 18, Table 19, Table 20, Table 21 presented in Appendix B. N = 8018 in each estimation.

The coefficient estimates in Figure 9 show that there are several differences between Europe and Not Europe posts also when controlling for additional variables. Results from Logit regressions confirm that Law and Values are more likely to occur among Europe posts than Not Europe posts. The effects are around 1 and 3 percentage points respectively. At the same time, New Social Movements, People, Identity, Public sphere, and Culture are more likely to be observed in Not Europe posts, with effect sizes of between 1 and 3 percentage points. However, there are no statistically significant differences in the occurrence of Non-Neutral sentiments (Positive and Negative sentiments together) between Europe and Not Europe posts. Finally, results from an OLS regression point to that there are more Social Media Representations present in the Not Europe posts than the Europe posts.

2.3 Comparisons between Media and Not Media

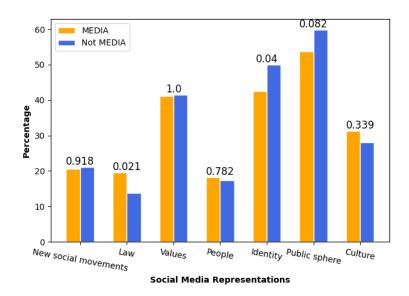
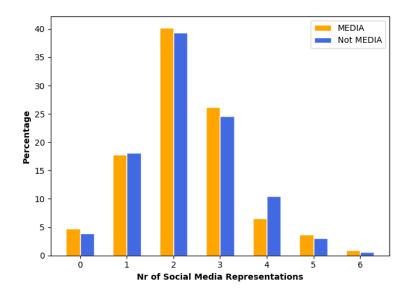


Figure 10. Social Media Representations - % occurrence among Media and Not Media posts respectively

Notes: Created with data from Table 22 and Table 23 presented in Appendix C. P value from chi-squared test of equal proportions between Media and Not Media in variable above each pair of bars. N = 8018 in each pair of comparison.

Posts by Media (486) are less common than posts by Not Media (18058) (See Table 22 and Table 23). Chi-squared tests conclude that there are statistically significant differences in the proportions of the dimensions Law (p = 0.02) and Identity (p = 0.04) when comparing posts about Media and not about Media. Law, People and Culture occur more often in Media posts, while Identity and Public sphere are more frequent among Not Media posts. Finally, there is very little difference between New social movement and Values in terms of Media and Not Media.

Figure 11. Number of Social Media Representations - % occurrence among Media and Not Media posts respectively



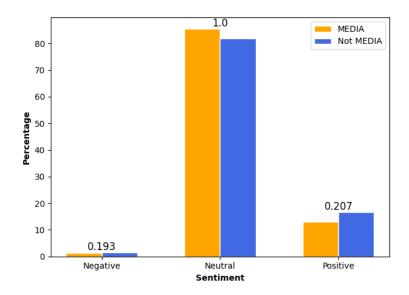
Notes: Created with data from Table 24 and Table 25 presented in Appendix C. N = 8018.

Table 2. Number of Social Media Representations by Media and not Media - Mean, standard deviation (SD) and results from t-test of difference in means

	Media	Not Media	Significance	P value
Mean	2.271	2.3139		0.5839
SD	(1.143)	(1.131)		

From the information in Table 2, we can conclude that there are on average more dimensions of media representation among Not Media posts than Media posts. The mean values for the Not Media and Media posts are 2.31 and 2.27 respectively. According to a t-test the difference in means is not statistically significant (p = 0.58). The dimensions of media representations are fairly similar for Media and Not Media, with some more Not Media posts with 4 dimensions.

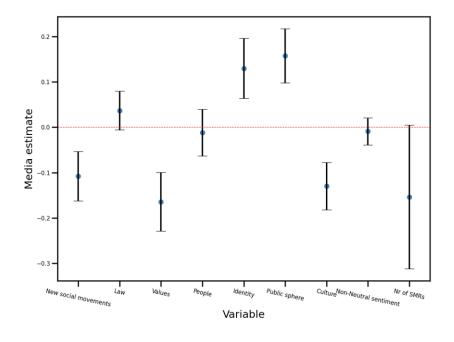
Figure 12. Sentiment - % occurrence among Media and Not Media posts respectively



Notes: Created with data from Table 26 and Table 27 presented in Appendix C. P value from chi-squared test of equal proportions between Media and Not Media in variable above pair of bars. N = 8018.

Chi-squared tests conclude that there are no statistically significant differences of the proportions of any of the sentiments when comparing posts about Media and Not Media (p = 0.193 for Negative, p = 1.0 for Neutral, and p = 0.207 for Positive).

Figure 13. Coefficient estimates Media



Notes: Coefficient estimates and their 95 % confidence intervals of Media variable from Model 3 of Table 28, Table 29, Table 30, Table 31, Table 32, Table 34, Table 35, Table 36. presented in Appendix C. N = 8018 in each estimation.

The coefficient estimates in Figure 13 show that there are several differences between Media and Not Media posts also when controlling for additional variables. Results from Logit regressions confirms that Identity and Public sphere occur more often among the Media posts as compared to the Not Media posts. The effects are around 1 percentage point each. At the same time, New social movements, Values and Culture are more likely to be observed in Not Media posts, with effect sizes of around 1 percentage point each. However, there are no statistically significant differences in the occurrence of Law, People, Non-Neutral sentiments (Positive and Negative sentiments together), nor in the number of dimensions between Media and Not Media posts.

2.4 Illustrative examples

Rätten att få bestämma över sin egen kropp är en mänsklig rättighet.
Rätten till abort är en fråga som angår alla.
Konservativa krafter motarbetar aborträtten här i Sverige, i EU och ute i världen.
Kampen för aborträtten och de andra mänskliga rättigheterna måste vi ta idag och varje dag.
Dela om du håller med!

Stå upp för
aborträtten.
Idag och alla andra dagar.

Figure 14. Illustrative example from Facebook

This illustrative example and post (figure 14) is about the right to abortion and the right over one's own body. It is a member of the political party the Social Democrats (Socialdemokraterna) that takes a

stance in the issue. The discussion ties into ongoing debate in the USA, EU and around the world. The post is coded as Europe and includes Values. (<u>Link to the post.</u>)

Figure 15. Illustrative example from Facebook



This illustrative example and post (figure 15) is about the circulation of and interactions about the news of a teacher who was fired for refusing calling a student "they". (<u>Link to post.</u>) It is coded as Not Europe and includes Identity. The varying views on this topic hints at a context that both is progressive when it comes to gender issues and LGBTQ rights (Kehl, 2020), and at the same time a place that is not equal to all (Åkerlund, 2019).

Figure 16. Illustrative example from Facebook



This illustrative example and post (figure 16) focuses on 'Orange Day' and explains that it is United Nation's day for the abolition of violence against women. The text also sheds light on the fact that one in three women in the world is exposed to violence at some point in their lifetime and that it usually happens in the home by a partner or close relative, concluding that men's violence against women is an extensive social and public health problem in Sweden and in the world. The numbers of women

exposed to sexual violence is also addressed, backed up with figures from WHO. There is a call for action: something must be done and now. Societal norms and values that do not favour equality is also addressed, along with a quote from the director of UN Women in Sweden urging people to pay attention to ones' immediate environment, and to speak up when something is wrong. The acceleration of women's rights and equality is manifested on Orange Day, with buildings in Sweden and around the world lit up in orange colour. The posted is about Europe and including Public sphere. (Link to post.)



Figure 17. Illustrative example from Twitter

The fourth and final illustrative example (figure 17) is a short post commenting the accusations of Swedish politician Hanif Bali regarding inappropriate sexual behavior, and his denial of the charges. The hashtag #metoo is used in the text indicating a connection to sexual abuse or sexual harassment. The post includes Values and Not Media.

(Link to post.)

3. Conclusion

This report aimed to provide an overview of the representation of gender in Swedish media and social media during the autumn of 2021. The findings show that Public sphere was the most frequently occurring dimension of social media, indicating that many non-political actors participated in gender-related discussions. Public sphere and Identity were more apparent in Not Media than in Media posts (figure 10), which makes sense in the way that it was commonly posts by individuals such as non-political actors expressing themselves or their views, at times attempting to influence decision-makers.

It was also interesting to find that many more posts were not about Europe (18085) than about Europe (459). However, some themes discussed were clearly relating to topics and debates outside Sweden, such as the right to abortion (e.g. USA), LGBTQ-rights (e.g. Poland) and men's violence against women (e.g. EU level). Values and Law stood out as a Social Media Representations that were addressed more in posts about Europe compared to in posts about Not Europe. The right to abortion was one of the topics addressed in relation to Europe, value and law. An additional central theme that influenced the Social Media Representations during the period studied include that Sweden got its first female prime minister.

Social media has been described as a main platform for portraying the image of Sweden as progressive, not least when it comes to gender issues (Jezierska & Towns, 2018). From the analysis of Social Media Representations in the present study it is however clear that narratives communicated through social media are far from always progressive. On the contrary, not seldom, social media appears to be an outlet where conservative views that do not support progressive values are voiced. This study offers a desired addition to previous research, through its focus on representation of gender in social media. More research on the representation of gender and LGBTQ+ in social media is however needed, and Sweden offers a suitable context partly due to its progressive values (Åkerlund, 2019).

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5. Appendices

5.1 Appendix A. Tables supporting the section on Descriptive overview

Table 3. Social Media Representations - Frequency and % occurrence among all posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	1690	9.1	21.1
Law	1122	6.1	14.0
Values	3316	17.9	41.4
People	1386	7.5	17.3
Identity	3983	21.5	49.7
Public sphere	4788	25.8	59.7
Culture	2259	12.2	28.2
Total	18544	100.0	231.3

Table 4. Social Media Representations - Frequency by week

Unnamed: 0	New social movements	Law	Values	People	Identity	Public sphere	Culture
35	188	129	234	95	268	292	206
36	164	121	360	139	310	362	237
37	194	74	344	128	325	380	259
38	97	64	216	88	263	315	149
39	221	189	326	105	318	378	265
40	117	68	200	97	254	325	167
41	141	39	210	98	184	306	163
42	117	54	168	76	213	284	151
43	73	54	162	70	218	276	111
44	69	68	213	102	316	378	106
45	73	84	232	112	366	417	104
46	74	74	282	137	472	526	134
47	135	82	295	122	375	433	169
48	27	22	74	17	101	116	38
Total	1690	1122	3316	1386	3983	4788	2259

Table 5. Number of Social Media Representations in posts - Frequency and % occurrence among all posts

Nr of Social Count Media Representations % of Posts

0	312	3.9
1	1449	18.1
2	3155	39.3
3	1972	24.6
4	832	10.4
5	247	3.1
6	51	0.6
Total	8018	100.0

Table 6. Sentiment - Frequency and % occurrence among all posts

Sentiment	Count	% of Posts
Negative	130	1.6
Neutral	6567	81.9
Positive	1321	16.5
Total	8018	100.0

5.2 Appendix B. Tables supporting the section on Comparisons - Europe and Not Europe

Table 7. Social Media Representations Europe - Frequency and % occurrence among Europe posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	40	8.7	17.7
Law	63	13.7	27.9
Values	157	34.2	69.5
People	21	4.6	9.3
Identity	48	10.5	21.2
Public sphere	79	17.2	35.0
Culture	51	11.1	22.6
Total	459	100.0	203.1

Table 8. Social Media Representations Not Europe - Frequency and % occurrence among Not Europe posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	1650	9.1	21.2
Law	1059	5.9	13.6

Values	3159	17.5	40.5
People	1365	7.5	17.5
Identity	3935	21.8	50.5
Public sphere	4709	26.0	60.4
Culture	2208	12.2	28.3
Total	18085	100.0	232.1

Table 9. Number of Social Media Representations Europe - Frequency and % occurrence among Europe posts

Nr of Social Media Representations	Count	% of Posts
0	13	5.8
1	59	26.1
2	85	37.6
3	52	23.0
4	13	5.8
5	2	0.9
6	2	0.9
Total	226	100.0

Table 10. Number of Social Media Representations Not Europe - Frequency and % occurrence among Not Europe posts

Nr of Social Media Representations	Count	% of Posts
0	299	3.8
1	1390	17.8
2	3070	39.4
3	1920	24.6
4	819	10.5
5	245	3.1
6	49	0.6
Total	7792	100.0

Table 11. Sentiment Europe - Frequency and % occurrence among Europe posts

Sentiment	Count	% of Posts
Negative	4	1.8

Neutral	183	81.0
Positive	39	17.3
Total	226	100.0

Table 12. Sentiment Not Europe - Frequency and % occurrence among Not Europe posts

Sentiment	Count	% of Posts
Negative	126	1.6
Neutral	6384	81.9
Positive	1282	16.5
Total	7792	100.0

Table 13. Marginal effects of Logistic regressions with New Social Movements as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	-0.0370	-0.0737***	-0.0688**
	(0.029)	(0.028)	(0.028)
Twitter		-0.1792****	-0.1642****
		(0.009)	(0.009)
Interactions		-3.684e-05	-3.437e-05
		(0.0)	(0.0)
Followers		3.668e-09	3.43e-09
		(0.0)	(0.0)
Sentiment Score		-0.0034	-0.0030
		(0.002)	(0.002)
October			0.0787***
			(0.018)
November			0.0497
			(0.032)
week			-0.0164***
			(0.003)
N	8018	8018	8018
Pseudo R- squared	0.00	0.05	0.06

Table 14. Marginal effects of Logistic regressions with Law as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.1077****	0.1088****	0.1121****
	(0.018)	(0.018)	(0.018)
Twitter		-0.0063	0.0036
		(0.008)	(0.008)
Interactions		5.647e-06	6.341e-06
		(0.0)	(0.0)
Followers		2.392e-08	2.067e-08
		(0.0)	(0.0)
Sentiment Score		-0.0295****	-0.0292****
		(0.003)	(0.003)
October			-0.0959****
			(0.017)
November			-0.1226****
			(0.03)
week			0.0061*
			(0.003)
N	8018	8018	8018
Pseudo R- squared	0.00	0.03	0.04

Table 15. Marginal effects of Logistic regressions with Values as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.2895****	0.2299****	0.2321****
	(0.035)	(0.034)	(0.035)
Twitter		-0.2447***	-0.2423****
		(0.01)	(0.01)
Interactions		1.071e-06	1.561e-06
		(0.0)	(0.0)
Followers		-1.873e-08	-2.049e-08
		(0.0)	(0.0)
Sentiment Score		0.0123****	0.0125****
		(0.003)	(0.003)
October			-0.0771****

			(0.022)
November			-0.0461
			(0.039)
week			0.0015
			(0.004)
N	8018	8018	8018
Pseudo R- squared	0.01	0.06	0.06

Table 16. Marginal effects of Logistic regressions with People as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	-0.1041***	-0.1103***	-0.1099***
	(0.033)	(0.033)	(0.033)
Twitter		-0.0237***	-0.0255***
		(0.009)	(0.009)
Interactions		1.33e-05	1.3e-05
		(0.0)	(0.0)
Followers		2.687e-08	2.816e-08
		(0.0)	(0.0)
Sentiment Score		-0.0037	-0.0037
		(0.002)	(0.002)
October			0.0515***
			(0.017)
November			0.0909***
			(0.03)
week			-0.0095***
			(0.003)
N	8018	8018	8018
Pseudo R- squared	0.00	0.00	0.00

Table 17. Marginal effects of Logistic regressions with Identity as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	-0.3295***	-0.2616****	-0.2641****
	(0.04)	(0.038)	(0.037)

Twitter		0.2988****	0.2872****
		(0.01)	(0.01)
Interactions		5.922e-05***	5.84e-05***
		(0.0)	(0.0)
Followers		-1.408e-07	-1.453e-07
		(0.0)	(0.0)
Sentiment Score		-0.0124****	-0.0127****
		(0.003)	(0.003)
October			0.0393*
			(0.022)
November			0.1055***
			(0.039)
week			-0.0045
			(0.004)
N	8018	8018	8018
Pseudo R- squared	0.01	0.08	0.08

Table 18. Marginal effects of Logistic regressions with Public Sphere as dependent variable

Model 1	Model 2	Model 3
-0.2494****	-0.1704****	-0.1743****
(0.033)	(0.033)	(0.033)
	0.3193****	0.3141****
	(0.008)	(0.009)
	8.075e-06	7.763e-06
	(0.0)	(0.0)
	-3.92e-08*	-4.016e-08
	(0.0)	(0.0)
	-0.0060**	-0.0064**
	(0.003)	(0.003)
		0.0676***
		(0.021)
		0.0125
		(0.038)
	-0.2494***	-0.2494**** (0.033) (0.033) 0.3193**** (0.008) 8.075e-06 (0.0) -3.92e-08* (0.0) -0.0060**

week 0.0052

(0.004)

0.10

N 8018 8018 8018

Pseudo Rsquared 0.01

Table 19. Marginal effects of Logistic regressions with Culture as dependent variable

0.10

Variable	Model 1	Model 2	Model 3
Europe	-0.0617*	-0.1262****	-0.1220****
	(0.033)	(0.03)	(0.03)
Twitter		-0.2820****	-0.2680****
		(0.008)	(800.0)
Interactions		-3.937e-05	-3.763e-05
		(0.0)	(0.0)
Followers		-1.924e-09	-2.376e-09
		(0.0)	(0.0)
Sentiment Score		0.0060**	0.0064***
		(0.002)	(0.002)
October			0.0624***
			(0.019)
November			0.0366
			(0.035)
week			-0.0141****
			(0.004)
N	8018	8018	8018
Pseudo R- squared	0.00	0.10	0.11

Table 20. Marginal effects of Logistic regressions with Non-neutral Sentiment as dependent variable

Model 1	Model 2	Model 3
0.0094	-0.0142	-0.0140
(0.025)	(0.015)	(0.016)
	-0.0020	-0.0027
	(0.005)	(0.005)
	3.357e-06	3.454e-06
	0.0094	0.0094 -0.0142 (0.025) (0.015) -0.0020 (0.005)

		(0.0)	(0.0)
Followers		-4.188e-08	-4.208e-08
		(0.0)	(0.0)
Sentiment Score		0.0955****	0.0954***
		(0.001)	(0.001)
October			-0.0135
			(0.01)
November			-0.0174
			(0.017)
week			0.0023
			(0.002)
N	8018	8018	8018
Pseudo R- squared	0.00	0.47	0.47

Table 21. Coefficient estimates of OLS regressions with Number of Social Media Representations as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	-0.2900***	-0.3203***	-0.3128***
	(0.0731)	(0.0724)	(0.0727)
Twitter		-0.1446***	-0.1228***
		(0.0283)	(0.0287)
Interactions		0.0000	0.0000
		(0.0000)	(0.0000)
Followers		-0.0000	-0.0000
		(0.0000)	(0.0000)
Sentiment Score		-0.0307***	-0.0298***
		(0.0066)	(0.0066)
October			0.1282**
			(0.0536)
November			0.1419
			(0.0911)
week			-0.0321***
			(0.0098)
Intercept	2.3210***	2.4431***	3.6641***

nan	(0.0128)	(0.0255)	(0.3623)
R-squared	0.0018	0.0069	0.0117
R-squared Adj.	0.0017	0.0063	0.0107
N	8018	8018	8018

5.3 Appendix C. Tables supporting the section on Comparisons - Media and Not Media

Table 22. Social Media Representations Media - Frequency and % occurrence among Media posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	44	9.1	20.6
Law	42	8.6	19.6
Values	88	18.1	41.1
People	39	8.0	18.2
Identity	91	18.7	42.5
Public sphere	115	23.7	53.7
Culture	67	13.8	31.3
Total	486	100.0	227.1

Table 23. Social Media Representations Not Media - Frequency and % occurrence among Not Media posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	1646	9.1	21.1
Law	1080	6.0	13.8
Values	3228	17.9	41.4
People	1347	7.5	17.3
Identity	3892	21.6	49.9
Public sphere	4673	25.9	59.9
Culture	2192	12.1	28.1
Total	18058	100.0	231.4

Table 24. Number of Social Media Representations Media - Frequency and % occurrence among Media posts

Nr of Social Media Representations	Count	% of Posts
0	10	4.7
1	38	17.8
2	86	40.2
3	56	26.2
4	14	6.5
5	8	3.7
6	2	0.9
Total	214	100.0

Table 25. Number of Social Media Representations Not Media - Frequency and % occurrence among Not Media posts

Nr of Social Media Representations	Count	% of Posts
0	302	3.9
1	1411	18.1
2	3069	39.3
3	1916	24.6
4	818	10.5
5	239	3.1
6	49	0.6
Total	7804	100.0

Table 26. Sentiment Media - Frequency and % occurrence among Media posts

Sentiment	Count	% of Posts
Negative	3	1.4
Neutral	183	85.5
Positive	28	13.1
Total	214	100.0

Table 27. Sentiment Not Media - Frequency and % occurrence among Not Media posts

Sentiment	Count	% of Posts
Negative	127	1.6
Neutral	6384	81.8

Positive 1293 16.6
Total 7804 100.0

Table 28. Marginal effects of Logistic regressions with New Social Movements as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.0054	-0.1050****	-0.1076****
	(0.029)	(0.028)	(0.028)
Twitter		-0.1841****	-0.1694***
		(0.009)	(0.009)
Interactions		-3.324e-05	-3.012e-05
		(0.0)	(0.0)
Followers		5.425e-09	5.176e-09
		(0.0)	(0.0)
Sentiment Score		-0.0041*	-0.0039*
		(0.002)	(0.002)
October			0.0802****
			(0.018)
November			0.0536*
			(0.032)
week			-0.0169****
			(0.003)
N	8018	8018	8018
Pseudo R- squared	0.00	0.05	0.06

Table 29. Marginal effects of Logistic regressions with Law as dependent variable

Variable	Model 1	Model 2	Model 3
Media	0.0504**	0.0356	0.0369*
	(0.021)	(0.022)	(0.022)
Twitter		-0.0067	0.0031
		(0.009)	(0.009)
Interactions		6.131e-06	7.015e-06
		(0.0)	(0.0)
Followers		2.273e-08	1.941e-08

		(0.0)	(0.0)
Sentiment Score		-0.0294***	-0.0291****
		(0.003)	(0.003)
October			-0.0970****
			(0.017)
November			-0.1249****
			(0.03)
week			0.0065**
			(0.003)
N	8018	8018	8018
Pseudo R- squared	0.00	0.03	0.04

Table 30. Marginal effects of Logistic regressions with Values as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.0024	-0.1635****	-0.1644***
	(0.034)	(0.033)	(0.033)
Twitter		-0.2622****	-0.2602****
		(0.01)	(0.01)
Interactions		7.289e-06	7.74e-06
		(0.0)	(0.0)
Followers		-1.692e-08	-1.866e-08
		(0.0)	(0.0)
Sentiment Score		0.0111****	0.0113****
		(0.003)	(0.003)
October			-0.0755***
			(0.022)
November			-0.0427
			(0.039)
week			0.0013
			(0.004)
N	8018	8018	8018
Pseudo R- squared	0.00	0.06	0.06

Table 31. Marginal effects of Logistic regressions with People as dependent variable

Variable	Model 1	Model 2	Model 3
Media	0.0094	-0.0100	-0.0116
	(0.026)	(0.026)	(0.026)
Twitter		-0.0221**	-0.0240**
		(0.009)	(0.009)
Interactions		1.275e-05	1.249e-05
		(0.0)	(0.0)
Followers		2.765e-08	2.894e-08
		(0.0)	(0.0)
Sentiment Score		-0.0038	-0.0038
		(0.002)	(0.002)
October			0.0518***
			(0.017)
November			0.0916***
			(0.03)
week			-0.0097***
			(0.003)
N	8018	8018	8018
Pseudo R- squared	0.00	0.00	0.00

Table 32. Marginal effects of Logistic regressions with Identity as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.0740**	0.1307****	0.1300****
	(0.035)	(0.034)	(0.034)
Twitter		0.3139****	0.3025****
		(0.01)	(0.01)
Interactions		5.02e-05***	4.963e-05***
		(0.0)	(0.0)
Followers		-2.25e-07	-2.293e-07
		(0.0)	(0.0)
Sentiment		-0.0114****	-0.0117****
Score			
		(0.003)	(0.003)

October			0.0380*
			(0.022)
November			0.1027***
			(0.039)
week			-0.0044
			(0.004)
N	8018	8018	8018
Pseudo R- squared	0.00	0.07	0.08

Table 33. Marginal effects of Logistic regressions with Public Sphere as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.0603*	0.1551****	0.1577****
	(0.033)	(0.031)	(0.031)
Twitter		0.3348****	0.3301****
		(0.008)	(0.009)
Interactions		3.397e-06	3.127e-06
		(0.0)	(0.0)
Followers		-5.726e-08	-6.544e-08
		(0.0)	(0.0)
Sentiment Score		-0.0049*	-0.0052*
		(0.003)	(0.003)
October			0.0660***
			(0.021)
November			0.0090
			(0.038)
week			0.0055
			(0.004)
N	8018	8018	8018
Pseudo R- squared	0.00	0.10	0.10

Table 34. Marginal effects of Logistic regressions with Culture as dependent variable

Variable	Model 1	Model 2	Model 3
Media	0.0312	-0.1275****	-0.1296****

	(0.03)	(0.027)	(0.027)
Twitter		-0.2872****	-0.2736****
		(0.008)	(0.008)
Interactions		-3.619e-05	-3.408e-05
		(0.0)	(0.0)
Followers		1.024e-09	5.806e-10
		(0.0)	(0.0)
Sentiment Score		0.0050**	0.0054**
		(0.002)	(0.002)
October			0.0643***
			(0.02)
November			0.0416
			(0.035)
week			-0.0147****
			(0.004)
N	8018	8018	8018
Pseudo R- squared	0.00	0.10	0.11

 $Table\ 35.\ Marginal\ effects\ of\ Logistic\ regressions\ with\ Non-neutral\ Sentiment\ as\ dependent\ variable$

Variable	Model 1	Model 2	Model 3
Media	-0.0404	-0.0086	-0.0091
	(0.029)	(0.015)	(0.015)
Twitter		-0.0021	-0.0028
		(0.005)	(0.005)
Interactions		3.323e-06	3.418e-06
		(0.0)	(0.0)
Followers		-3.602e-08	-3.563e-08
		(0.0)	(0.0)
Sentiment Score		0.0955****	0.0954****
		(0.001)	(0.001)
October			-0.0138
			(0.01)
November			-0.0175

			(0.017)
week			0.0023
			(0.002)
N	8018	8018	8018
Pseudo R- squared	0.00	0.47	0.47

Table 36. Coefficient estimates of OLS regressions with Number of Dimensions as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.0429	-0.1494*	-0.1537*
	(0.0790)	(0.0813)	(0.0810)
Twitter		-0.1472***	-0.1257***
		(0.0289)	(0.0294)
Interactions		0.0000	0.0000
		(0.0000)	(0.0000)
Followers		0.0000	0.0000
		(0.0000)	(0.0000)
Sentiment		-0.0316***	-0.0306***
Score			
		(0.0066)	(0.0066)
October			0.1295**
			(0.0537)
November			0.1463
			(0.0912)
week			-0.0328***
			(0.0098)
Intercept	2.3139***	2.4405***	3.6896***
nan	(0.0128)	(0.0262)	(0.3631)
R-squared	0.0000	0.0052	0.0101
R-squared Adj.	-0.0001	0.0046	0.0091
N	8018	8018	8018

Authors: Lutz Peschke, Yasemin Gümüş Ağca, Irmak Dündar, Sezen Günce Yöndem, Seyedehshahrzad Seyfafjehi, Selin Küçükoruç

Institution: Bilkent University Bilim Kenti

Introduction

This report analyzes the nature of approaches towards the gender construct in Turkey as produced and distributed by social media platforms, Facebook and Twitter, and by user-generated media. The time scope of the media posts analyzed for this study spans between September 1 2021 and November 30 2021, the successive period of 12 weeks. The data analyzed for this report is composed of two datasets, gender Europe and gender Not-Europe, both showing 8 dimensions of law, people, culture, values, identity, new social movements, public sphere, and sentiments. Accordingly, the manual coding of these dimensions will seek answers to questions as to whether it is possible to find certain tendencies pointing out a European public sphere or if the coverage demonstrates the domination by the national perspective in Turkey. It will also inquire the differences and similarities between social media and user-generated media and between migration and gender datasets in general.

Background

The inability to eliminate gender-based inequality, which is one of the types of inequality, is one of the obstacles to the development of countries (Özveren & Dama, 2022). Violence against women and femicide remains a major issue in Turkey. The term "honour killings," which is at the root of Turkey's ongoing femicides, is frequently featured in the media and the criminals' defences which reflects the gender inequality imposed by the patriarchal society (Aslan & Kırışkan, 2022). This issue is closely linked with the changing status of women from tradition to modernity and men's stable position in the traditional culture of Turkey (Çetin, 2015). One of the milestones in Turkey's femicide history was 23-year-old Şule Çet's suspicious death in 2018. In the case of Şule Çet, the media was used as a successful tool to reveal the truth and form women's solidarity. With the help of women's organisations, the cause of death revealed not a suicide but a murder (Okray, 2020). Over the years, increased numbers of instances as such brought attention to violence against women and gender discrimination not only for government officials but also for the public conscience in Turkey.

Social media played a significant role in bringing awareness to the problem of femicides since there is a lack of reliance on the Turkish judicial system in society (Bas et al., 2022). Many people who oppose the current government think that the inadequate policy implementations led individuals to find solidarity through online activism. Contemporary issues regarding femicides are located in and shaped by media texts contextualizing gender-based violence and femicide cases. Twitter is one of the most frequently used media platforms for online (hashtag) activism, and in the context of femicides, it became a landscape for women's solidarity in Turkey.

Legislation

Since the foundation years of the Republic in Turkey, important steps have been taken to strengthen the position of women in political and social life. One very important instance is that the women of Turkey have been given the right to vote and be elected, before most of the Western countries. Since the 1980s, with the rise of international women's movements, domestic social awareness of women's rights has started to gradually increase. As a result of this situation, since the second half of the 1990s, the relevant national legislation has been reviewed, and significant progress has been

made in ensuring gender equality by making various legal arrangements (Türkiye Cumhuriyeti Dışişleri Bakanlığı, 2022). Among the legal arrangements made in this direction, the 1998's "Law on the Protection of the Family" has a special importance since Law No. 4320 includes provisions regarding legal remedies that can be resorted to in case one of the spouses or children is exposed to domestic violence by other family members living under the same roof (Mevzuat).

Along with the criticisms brought by women, women from feminist organizations and Turkish women's organizations started to work for a law that explicitly imposes the obligation of the state to prevent, protect and punish violence with the Opuz decision of the European Court of Human Rights in 2009 (Echr, 2009). In 2012, Law No. 6284 on Protection of Family and Prevention of Violence Against Women was adopted and Law No. 4320 was repealed on the grounds that it did not adequately meet today's needs. It can be said that the Law No. 4320 which had 4 articles, was replaced by Law No. 6284, a much inclusive and equitable, 25 articles (Resmi Gazete, 2012). The Law No. 6284 is the domestic reflection of the international treaty Istanbul Convention (Kadının İnsan Hakları Yeni Çözümler Derneği, 2022). According to the European Commission, The Council of Europe, Istanbul Convention is a human rights treaty to prevent and combat violence against women as well as domestic violence, signed by all EU Member States (Council of Europe). After almost 10 years, as a result of the Presidential decision numbered 3718 published in the Official Gazette on March 20, 2021, Istanbul Convention was terminated in Turkey (Resmi Gazete, 2021). Women's organizations in Turkey have been actively trying to bring back the Istanbul Convention back in the Turkish law system, however; no concrete developments were made. Currently, the protection of women and discriminated communities seem to be vague in the Turkish Legislation.

National context

Women's rights issues are appearing more on the Turkish media more than ever in recent years and one of the reasons is the clarity of how common it is for women to receive harm from the outside world, especially because of gender-based violence. As the first country to sign the Istanbul Convention in 2011, most concerns of the current government on regulating the convention were related with LGBTQ+ topics and in those terms, the possibility of receiving damage in the Turkish family structure by protecting LGBTQ+ rights. Even though many women's and LGBTQ+ rights activists along with the political opposition were against the idea of withdrawing from the Istanbul Convention, the Turkish government retreated from it 10 years later, in 2021 (Güneş & Ezikoğlu, 2022). Some of the NGO's which support women equality and empowerment in Turkey are; Mor Çatı Kadın Sığınağı Vakfı (Purple Roof Women's Shelter Foundation), Kadın Adayları Destekleme Derneği (Association of Supporting Women Candidates), Kadının İnsan Hakları-Yeni Çözümler Derneği (Women's Human Rights-New Solutions Association), Kadın Emeğini Değerlendirme Vakfı (Foundation for the Evaluation of Women's Work), Kadınlarla Dayanışma Vakfı (Women's Solidarity Foundation), and last but not least Kadın Cinayetlerini Durduracağız Platformu (We Will Stop Femicide Platform). There are NGO's that support and defend LGBTQ+ communities such as Kaos GL in Ankara and SPoD LGBT in Istanbul which aim to create data on violence, oppression, social exclusion and discrimination based on sexual orientation and gender identity, and to work towards the elimination of all forms of discrimination (SPoD, 2023).

The current government's drawbacks for regulating and ensuring the rights of LGBTQ+ communities gradually became minimal to non-existent in the last few years. The AKP government came to ruling in 2002 and the annual Pride Parades in Turkey, known as the oldest and largest Pride events in all the Balkans and the Middle East, were continued to be allowed between 2003 to 2014 (Kilic, 2021). After protests such as Gezi Protests and other political fluctuations in Turkey, Pride activities were

heavily banned through large cities around the country, starting with the Istanbul Pride bans regulated by the Istanbul Governorate in 2015.

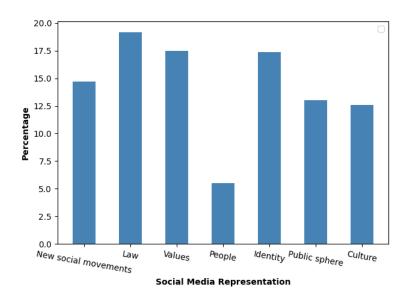
The future of minorities as well as women in Turkish society depend on the political leaders' views and perceptions. With the upcoming presidential elections, different from the previous times, it can be seen that the Turkish political arena is divided into two parts, one being the left wing while the other is the right wing. The elected president's values, thoughts and devotion towards gender issues will determine the next steps for protecting women, children and minority groups.

Quantitative analysis

Descriptive overview

The statistical data in Figure 1 demonstrates that the dimension of law is the most referred aspect while the dimension of people is the least referred aspect of gender in the 400 coded posts. The dimension of law mentioned in these posts addresses legal aspects and rights of gender, and how it describes the specific rights about discrimination based on sexuality, gender, and biological sex. The dimension of people, mentioned in these posts, addresses people's own experiences, or a general experience based on their gender identity. It can be understood from Figure 1 that the legal part of the gender based conversation was given more importance than the personal experiences of people using social media platforms. Users were more prone to comment on legal injustices or relevant subjects than sharing their own experiences as people of their gender (women, men, non-binary and LGBTQIA+ identities). Apart from the most and the least referred aspects, the second most referred aspects are values and identity, which seem to be head-to-head in terms of percentages shown in Figure 1. The dimension of values addresses whether the post is about gender in terms of ideas and beliefs related to gender in/equality, gender im/balance, neutrality/bias, non/discrimination on the basis of gender, in/tolerance, dignity, diversity, freedom (of thought, expression, information, movement, choice), related to gender. The dimension of identity addresses definitions for gender in terms of gender and sexual identity contexts. These two aspects seem to be similar in context and as a result, their percentages are highly close to each other. The other aspect that has a respective high percentage is the dimension of new social movements which address self-organized citizenry including grass-roots social movements and NGOs which work and produce content or thoughts on gender context. Considering the activities of women's organizations in Turkey, it is not unexpected to see a high percentage of new social movements. Another head-to-head percentage instance is between the dimensions of public sphere and culture. The dimension of public sphere addresses the availability of posts which are about gender relevant issues, raised by non-political actors. In other words, the relationship between citizens and institutions, the involvement in decision-making, a non-political actor who tries to influence decision-making constitute the range of this aspect. The dimension of culture is apparent when the post is about gender in terms of artistic expression and cultural production (of any kind); cultural habits and practices (including daily life); cultural institutions, including education, the media, science, and the Church; Lifestyle, when related to gender. It can be said that both these dimensions are close to each other in percentages because they are kind of in a similar context. They both deal with the people's expressions of political values or artistic, sophisticated expressions of gender. In conclusion, for this data set, it is understood that the social media users preferred to express themselves by commenting mostly on legal subjects as well as value and identity related topics rather than posting about their own experiences or others' actions in the gender context.

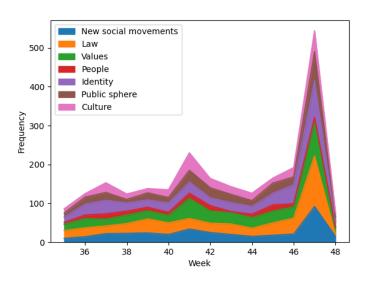
Figure 1. Social Media Representations - Distribution among Social Media Representations



Notes: Created with data from Table 3 presented in Appendix A. N = 2402.

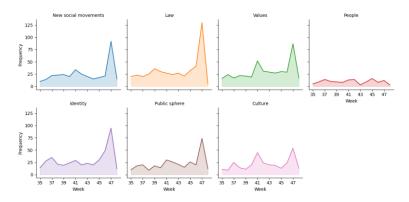
The Figure 2 data reveals various peaks in the appearance of representations, prominently occurring in week 47 (4th week of November). In this specific week all thematic categories of representations show their most dynamic appearance on social media platforms, the most dramatic being the culture dimension. Even though Figure 2 suggests there is a pique for most dimensions in terms of relative importance over time, Figure 3 suggests the dimension of people does not have rapid increase as others in terms of evolution over time.

Figure 2. Social Media Representations - Relative importance over time



Notes: Created with data from Table 4 presented in Appendix A. N = 2402.

Figure 3. Social Media Representations - Evolution over time



Notes: Created with data from Table 4 presented in Appendix A. N = 2402.

Regarding Social Media Representations, Figure 4 data reveals that the posts belonging to one and two Social Media Representations are the most common occurrences, with around 30%. However, posts bearing four or more Social Media Representations remain roughly 15%. Overall, while the majority of the posts have one Social Media Representation, posts belonging to six Social Media Representations remain the least common, with lower than 1%.

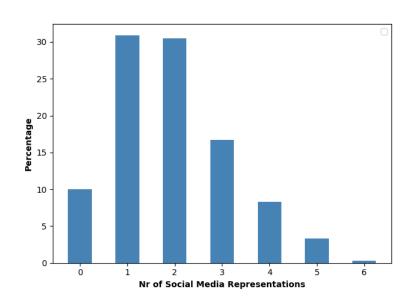
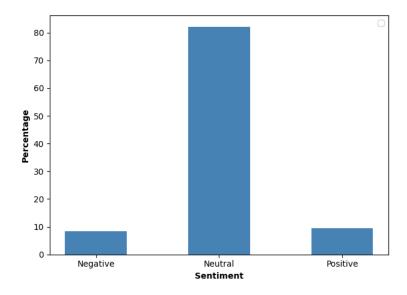


Figure 4. Number of Social Media Representations - Distribution among all posts

Notes: Created with data from Table 5 presented in Appendix A. N = 1241.

Figure 5 demonstrates the type of sentiment related to posts. The data reveals that the majority of the posts (exceeding 80%) have a neutral tone, while positive and negative tones remain few and almost equal in number. It shows that the majority of the posts focused on only one dimension or two dimensions which means the posts examined in this research are focused, but on the other hand, may lack a multi angled perception by social media users.

Figure 5. Sentiments - Distribution among all posts

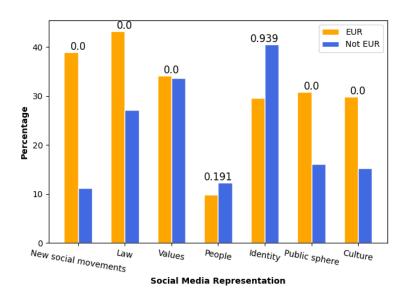


Notes: Created with data from Table 6 presented in Appendix A. N = 1241.

Comparisons between Europe and Not Europe

The statistics in Figure 6 demonstrates that law and new social movements dimensions on the Europe data are the highest while identity and values dimensions on the Not Europe data are the highest among other dimensions. This simple difference suggests a lot for the gender approach of two different society's social media usage. While European posts focus on legal and societal aspects of gender related topics, problems or issues, Turkish posts are more prone to comment about personal traits as the identity and values dimensions suggest. Figure 6 also demonstrates that people dimension on the Europe data is the lowest while new social movements and people dimensions on the Not Europe data are the lowest among other dimensions. It can be said that the people dimension is the lowest for the two data sets because people would rather post about other aspects than to share their personal experiences in terms of the gender context. Even though there is a similarity caused by the lowest occurrence of the people dimension, cultural and political differences may be one of the most important reasons for the other apparent differences in the Figure 6 since Turkish and European perspectives differ from one another.

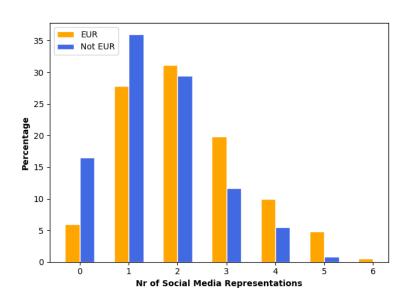
Figure 6. Social Media Representations - % occurrence among Europe and Not Europe posts respectively



Notes: Created with data from Table 7 and Table 8 presented in Appendix B. P value from chisquared test of equal proportions between Europe and Not Europe in variable above each pair of bars. N = 1241 in each pair of comparison.

Figure 7 suggests that social media posts bearing two representations are the most common for European posts while social media posts bearing only one representation is the most common for the Turkish posts. Looking at the general view, the European posts bear more representations compared to the Turkish posts. This may mean while Turkish posts specialize in and focus on a topic at a time while the European posts are more dimensional and do include other topics into one social media post.

Figure 7. Number of Social Media Representations - % occurrence among Europe and Not Europe posts respectively



Notes: Created with data from Table 9 and Table 10 presented in Appendix B. N = 1241.

The t-test compares the means of two separate samples statistically. In a t-test, the significance threshold is traditionally set at p = 0.05 (University of Southampton, 2023). Even though, technically, p values cannot equal 0 (Fonseca, 2023), in the table below it can be seen as 0. This will indicate the

case in which the observed sample is impossible under the null. The null hypothesis is rejected, meaning there is a definite, consequential relationship between the two phenomena (Taylor, 2019).

Table 1 can also be interpreted as the result of the t-test is significant since the result is said to be statistically significant if a p-value reported from a t test is less than 0.05 (University of Southampton, 2023). The data reveal that on average the social media representations presented in Europe-related posts are more than those presented in Not Europe-related posts (2.16 and 1.56 mean values respectively) with the t-test confirming that the difference in means is statistically significant (p= 0).

Table 1. Number of Social Media Representations by Europe and Not Europe - Mean, standard deviation (SD) and results from t-test of difference in means

	Europe	Not Europe	Significance	P value
Mean	2.1651	1.5614	***	0
SD	(1.268)	(1.116)		

Figure 8 shows the sentiments of the European and Not European posts combined. It can be seen that European posts have a tendency to be a bit more positive while Not European posts have a tendency to be a bit more negative. However, when the general view is taken into consideration, both mostly have neutral sentiments. The slight difference may lie in the fact that Turkey is actively struggling to stop gender based violence and social media is a place for people to protest against the violence or policies that failed to protect vulnerable groups. If we also take into account that all posts examined were posted after the cancellation of the Istanbul Convention, it would not be misleading to say social media users would have posts which have negative sentiments on the context of gender.

0.044 EUR 80 Not EUR 70 60 50 40 30 20 0.0 0.13 10 ٥ Negative Neutral Positive Sentiment

Figure 8. Sentiment - % occurrence among Europe and Not Europe posts respectively

Notes: Created with data from Table 11 and Table 12 presented in Appendix B. P value from chisquared test of equal proportions between Europe and Not Europe in variable above pair of bars. N = 1241.

Figure 9 shows the coefficient estimates. A positive coefficient indicates that as the value of the independent variable increases, the mean of the dependent variable also tends to increase. A

negative coefficient suggests that as the independent variable increases, the dependent variable tends to decrease (Frost, 2023). New social movements, law, public sphere, non-neutral sentiments and Nr of SMRs are positive while values, people, identity, and culture are negative. All coefficients whose confidence interval (marked with the vertical lines) does not touch the zero line are significant (Statistics Help, 2020). That is why the only significant data belongs to new social movements, law, and values. Out of the significant ones, new social movements and law are positive while values is negative. New social movements and law are more likely to be reflected in European social media posts. Values are more likely to be reflected in Not - European social media posts.

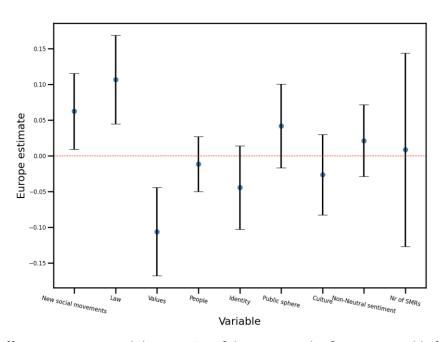


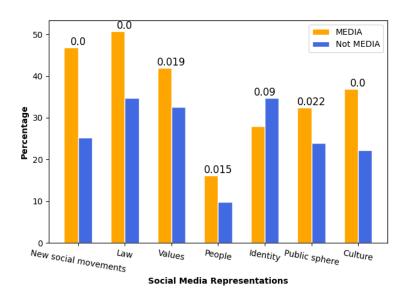
Figure 9. Coefficient estimates Europe

Notes: Coefficient estimates and their 95 % confidence intervals of Europe variable from Model 3 of Table 13, Table 14, Table 15, Table 16, Table 17, Table 18, Table 19, Table 20, Table 21 presented in Appendix B. N = 1241 in each estimation.

Comparisons between Media and Not Media

Figures 10, 11, 12 and 13 show the varieties concerning the difference between Media and Not Media posts. In Figure 10, it can be seen that Not Media crosses over the Media data only in the identity dimension. In all other dimensions which are new social movements, law, values, people, public sphere, and culture, Media data is significantly higher than the Not Media data. Among these dimensions, the most referred one for the Media data is law while the least referred is people. For Not Media data, the most referred dimensions are, head-to-head, law and identity while the least referred one is people. It is a fact that people dimension is the lowest in both Media and Not-Media data.

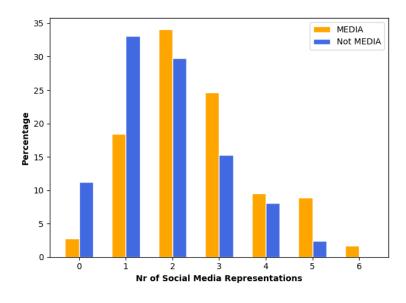
Figure 10. Social Media Representations - % occurrence among Media and Not Media posts respectively



Notes: Created with data from Table 22 and Table 23 presented in Appendix C. P value from chi-squared test of equal proportions between Media and Not Media in variable above each pair of bars. N = 1241 in each pair of comparison.

Figure 11 suggests that social media posts bearing two representations are the most common for Media posts while social media posts bearing only one representation is the most common for the Not Media posts. Posts that have six representations are the most few for both Media and Not Media data. In a wide perspective, Media posts are more dimensional since they mostly bear more than one representation for the majority of the available data. On the other hand, Not Media posts specialize in and focus on a topic at a time.

Figure 11. Number of Social Media Representations - % occurrence among Media and Not Media posts respectively



Notes: Created with data from Table 24 and Table 25 presented in Appendix C. N = 1241.

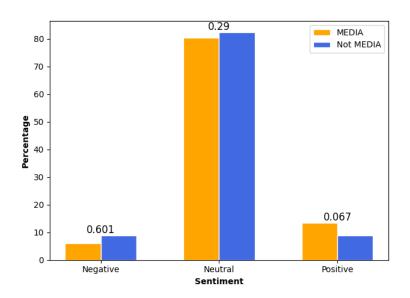
Table 2 can also be interpreted similarly to Table 1. The data reveal that on average the social media representations presented in Media-related posts are more than those presented in Not Media-related posts (2.53 and 1.83 mean values respectively) with the t-test confirming that the difference in means is statistically significant (p= 0).

Table 2. Number of Social Media Representations by Media and not Media - Mean, standard deviation (SD) and results from t-test of difference in means

	Media	Not Media	Significance	P value
Mean	2.5307	1.8352	***	0
SD	(1.312)	(1.207)		

Figure 12 shows the sentiments of the Media and Not Media posts combined. It can be seen that Media posts have a tendency to slightly be more positive while Not Media posts have a tendency to slightly be more negative. However, when the general view is taken into consideration, both mostly have neutral sentiments. The reason for this difference may be because social media users are not bound to media corporations that would possibly lead them in certain ways. They are more independent and choose to post in any way they perceive situations.

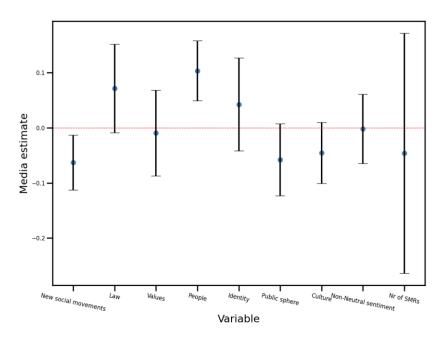
Figure 12. Sentiment - % occurrence among Media and Not Media posts respectively



Notes: Created with data from Table 26 and Table 27 presented in Appendix C. P value from chi-squared test of equal proportions between Media and Not Media in variable above pair of bars. N = 1241.

Figure 13 shows the coefficient estimates. Only two out of nine are significant, that are new social movements and people. People variable is positive as the new social movements variable is negative. People dimension is most likely to appear in Media posts when new social movements dimension is most likely to appear in Not Media posts.

Figure 13. Coefficient estimates Media



Notes: Coefficient estimates and their 95 % confidence intervals of Media variable from Model 3 of Table 28, Table 39, Table 31, Table 32, Table 33, Table 34, Table 35, Table 36. presented in Appendix C. N = 1241 in each estimation.

Illustrative examples

Example 1: Post from the EUR dataset that reflects (based on our experience from the manual coding) the posts represented by the Social Media Representation with the largest coefficient estimate of Europe (Law, see Figure 9).

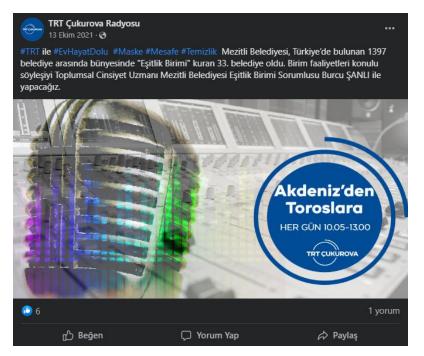


Translation: We Will Stop Femicide Platform: From 25 November 2020 to 25 November 2021, 280 femicides and 200 women died suspiciously.

With our struggle, we will reach the days when no women are killed and women live equally and freely. We will stop the murders of women. (end of translation)

Yol TV is a news channel founded in October 2006 located in Cologne, Germany. The channel broadcasts news and discussion programs. One of their social media extensions is this facebook page where they compile news on different topics. This post in this example suggests the number of women that were killed for one year estimated by the We Will Stop Femicide Platform. The increased numbers of femicide cases are mostly shared by this NGO on a daily basis and the platform is well-trusted by other feminist platforms or some news channels as apparent in this example. The post reflects the law dimension from the posts within this research as it is about the crimes against women, and as a whole, to Turkish society.

Example 2: Post from the Not_EUR dataset that reflects (based on our experience from the manual coding) the posts represented by the Social Media Representation with the smallest coefficient estimate of Europe (Values, see Figure 9).



Translation: Mezitli Municipality became the 33rd municipality among 1397 municipalities in Turkey to establish an "Equality Unit" within its body. We will have an interview on unit activities with Gender Specialist, Mezitli Municipality Equality Unit Officer Burcu ŞANLI. (end of translation)

TRT Çukurova Radio is the radio of the Turkish Radio and Television Corporation, which started its broadcasting life in Mersin on March 3, 1968 and has a broadcast network extending to the regions of Mersin, Adana, Osmaniye and Gaziantep. The radio station gives recent news to its' reach and in this case the news is about Mezitli Municipality and their decision on establishing an Equality Unit. It is announced that an interview will be held with the responsible people, specifically with Burcu Şanlı, the gender expert. Since this news is about an emergence of a unit for equality in terms of gender in a workplace, the sentiment of the post is positive and the post belongs to the values dimension.

Example 3: Post posted by media that reflects (based on our experience from the manual coding) the posts represented by the Social Media Representation with the largest coefficient estimate of Media. (People, see Figure 13).



Translation: Femicide never stops in Gaziantep!

The murders of women in Gaziantep are endless. In the second murder case committed today, a man shot 5 bullets in the head of his 31-year-old wife in front of her children and killed her. A second femicide was committed in Oğuzel, before the mystery of the murder of 41-year-old Neslihan Kaya, a woman who was killed by cutting her throat and stabbing many parts of her body, in an empty field in Gaziantep.

The murder, which was committed in a brutal manner, took place in front of a bread oven in Gaziantep's Oğuzeli district, Oğuzlar quarter. Allegedly, Hasan M., who lives in the Akkent neighborhood, had an argument with his wife, 31-year-old Meral M., in front of his brother's bakery in the district where he came for a visit.

According to the latest information received in the news center, Hasan M., who was arguing with his wife, fired 5 shots at his wife Meral M., who was waiting in the vehicle, in front of her children, and seriously injured her. It was learned that the mother of 2 children, who was taken to Oğuzeli State Hospital by 112 emergency medical teams, could not be saved despite all the interventions and as a result, she died. After the murder, the accused husband Hasan M. was taken into custody, and the unfortunate woman's body was taken to Gaziantep Forensic Medicine Institute for autopsy.

It was stated that the investigation into the murder case is continuing from multiple directions. (end of translation)

Nizip Radio and Television is a news channel located in Gaziantep, Turkey. They mostly do internet journalism as mentioned in their official website. In this example, on their official Facebook page,

they have released news about two local femicide cases. The post reflects local news that happened in a specific community and since these cases were reported by people from the same community, it can be considered as a part of the people dimension for this research. The experiences of or the description of what happened during these femicides are given in a compact way. As this post can be considered as a reporting tool to people since it is a news post, even though the subject is very negative, the sentiment can be considered as neutral.

Example 4: Post posted by not media that reflects (based on our experience from the manual coding) the posts represented by the Social Media Representation with the smallest coefficient estimate of Media. (New social movements, see Figure 13).



Translation: In the new judicial year, we will continue to fight for gender equality in the judiciary as in all areas of life. (end of translation)

This example shows the Lawyer Rights Group Women's Rights Commission's post concerning gender equality before judiciary. This wishful post also touches on the commission's mission. Since this statement is posted by a commission which is not bound to any government organizations, the post is a part of the new social movements dimension. It is also a part of the law dimension since this commission is bound to the Lawyer Rights Group (AHG).

Conclusion

Relying on the coded data shown above, this report has aimed to ask some questions about the possible influence of a "European public sphere" on media representations of gender. It also asks for possible readings which can contribute to the understanding of Europeanization and platformization of news during that process. It can be argued that the coded posts seem to refer to the issue of gender mainly through a national perspective. Although many posts reflect issues or celebration of women, LGBTQ related posts are also included in the data sets. The time scope of the research aligns

with the Covid-19 restrictions and the aftermath of harsh political decisions made against women and LGBTQ+ residing in Turkey. Law, values, and identity dimensions are the most referred out of all for the total of the Turkish data used in this report. It shouldn't be disregarded that many law related posts are about femicides or gender based violence in Turkey and had negative or neutral sentiments. Least referred dimension is the people dimension which means people do not prefer to share their personal experiences, but comment on every other thing more. The legal half of the responsibilities of government is heavily discussed in each data group and it can indicate that the gender based crimes need to be stopped by creating and regulating laws that would protect its citizens.

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Appendices

Appendix A. Tables supporting the section on Descriptive overview

Table 3. Social Media Representations - Frequency and % occurrence among all posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	353	14.7	28.4
Law	461	19.2	37.1
Values	421	17.5	33.9
People	133	5.5	10.7
Identity	419	17.4	33.8

Public sphere	313	13.0	25.2
Culture	302	12.6	24.3
Total	2402	100.0	193.6

Table 4. Social Media Representations - Frequency by week

Unnamed: 0	New social movements	Law	Values	People	Identity	Public sphere	Culture
35	10	20	16	5	14	10	11
36	14	23	24	9	28	18	9
37	22	20	17	14	35	20	25
38	23	25	22	10	21	9	14
39	24	36	21	9	19	18	11
40	20	30	19	8	24	14	20
41	34	27	52	13	29	30	45
42	25	24	31	14	20	26	24
43	20	27	29	3	23	21	20
44	15	21	27	9	20	15	19
45	18	32	30	16	30	26	13
46	21	41	29	8	49	20	24
47	92	130	87	12	95	74	54
48	15	5	17	3	12	12	13
Total	353	461	421	133	419	313	302

Table 5. Number of Social Media Representations in posts - Frequency and % occurrence among all posts

Nr of Social Media Representations	Count	% of Posts
0	124	10.0
1	384	30.9
2	378	30.5
3	207	16.7
4	103	8.3
5	41	3.3
6	4	0.3
Total	1241	100.0

Table 6. Sentiment - Frequency and % occurrence among all posts

Sentiment	Count	% of Posts
Negative	105	8.5

Neutral	1019	82.1
Positive	117	9.4
Total	1241	100.0

Appendix B. Tables supporting the section on Comparisons - Europe and Not Europe

Table 7. Social Media Representations Europe - Frequency and % occurrence among Europe posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	300	18.0	39.0
Law	333	20.0	43.3
Values	262	15.7	34.1
People	75	4.5	9.8
Identity	228	13.7	29.6
Public sphere	237	14.2	30.8
Culture	230	13.8	29.9
Total	1665	100.0	216.5

Table 8. Social Media Representations Not Europe - Frequency and % occurrence among Not Europe posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	53	7.2	11.2
Law	128	17.4	27.1
Values	159	21.6	33.7
People	58	7.9	12.3
Identity	191	25.9	40.5
Public sphere	76	10.3	16.1
Culture	72	9.8	15.3
Total	737	100.0	156.1

Table 9. Number of Social Media Representations Europe - Frequency and % occurrence among Europe posts

Nr of Social Media Representations	Count	% of Posts
0	46	6.0
1	214	27.8
2	239	31.1
3	152	19.8
4	77	10.0

5	37	4.8
6	4	0.5
Total	769	100.0

Table 10. Number of Social Media Representations Not Europe - Frequency and % occurrence among Not Europe posts

Nr of Social Media Representations	Count	% of Posts
0	78	16.5
1	170	36.0
2	139	29.4
3	55	11.7
4	26	5.5
5	4	0.8
Total	472	100.0

Table 11. Sentiment Europe - Frequency and % occurrence among Europe posts

Sentiment	Count	% of Posts
Negative	55	7.2
Neutral	621	80.8
Positive	93	12.1
Total	769	100.0

Table 12. Sentiment Not Europe - Frequency and % occurrence among Not Europe posts

Sentiment	Count	% of Posts
Negative	50	10.6
Neutral	398	84.3
Positive	24	5.1
Total	472	100.0

Table 13. Marginal effects of Logistic regressions with New Social Movements as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.3004****	0.0626**	0.0624**
	(0.027)	(0.028)	(0.027)
Twitter		-0.4048****	-0.4003****
		(0.021)	(0.021)
Interactions		-6.854e-05**	-6.71e-05**
		(0.0)	(0.0)
Followers		-2.204e-08	-1.976e-08

		(0.0)	(0.0)
Sentiment Score		0.0107**	0.0107**
		(0.005)	(0.005)
October			-0.0283
			(0.046)
November			-0.0832
			(0.084)
week			0.0137
			(0.009)
N	1241	1241	1241
Pseudo R- squared	0.08	0.29	0.29

Table 14. Marginal effects of Logistic regressions with Law as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.1635****	0.1167****	0.1070***
	(0.027)	(0.031)	(0.032)
Twitter		-0.1199****	-0.1125****
		(0.032)	(0.032)
Interactions		1.527e-05	1.344e-05
		(0.0)	(0.0)
Followers		-8.176e-09	-2.75e-09
		(0.0)	(0.0)
Sentiment Score		-0.0222***	-0.0206***
		(0.007)	(0.007)
October			-0.0788
			(0.061)
November			-0.0182
			(0.109)
week			0.0112
			(0.011)
N	1241	1241	1241
Pseudo R- squared	0.02	0.03	0.04

Table 15. Marginal effects of Logistic regressions with Values as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.0038	-0.1015***	-0.1062***
	(0.028)	(0.032)	(0.032)
Twitter		-0.2101****	-0.2037****
		(0.031)	(0.031)
Interactions		-5.059e-05	-4.907e-05
		(0.0)	(0.0)
Followers		-4.22e-09	-7.172e-10
		(0.0)	(0.0)
Sentiment Score		0.0025	0.0027
		(0.006)	(0.006)
October			-0.0543
			(0.058)
November			-0.1106
			(0.105)
week			0.0195*
			(0.011)
N	1241	1241	1241
Pseudo R- squared	0.00	0.03	0.04

Table 16. Marginal effects of Logistic regressions with People as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	-0.0248	-0.0139	-0.0114
	(0.018)	(0.019)	(0.019)
Twitter		0.0003	-0.0022
		(0.022)	(0.022)
Interactions		-2.887e-05	-2.866e-05
		(0.0)	(0.0)
Followers		-2.55e-08	-2.919e-08
		(0.0)	(0.0)
Sentiment Score		-0.0149***	-0.0147***
		(0.005)	(0.005)
October			0.0033
			(0.038)

November			0.0385
			(0.069)
week			-0.0091
			(0.007)
N	1241	1241	1241
Pseudo R- squared	0.00	0.02	0.03

Table 17. Marginal effects of Logistic regressions with Identity as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	-0.1056****	-0.0319	-0.0444
	(0.026)	(0.03)	(0.03)
Twitter		0.1296****	0.1430****
		(0.032)	(0.031)
Interactions		1.017e-05	8.521e-06
		(0.0)	(0.0)
Followers		2.042e-08	2.525e-08
		(0.0)	(0.0)
Sentiment Score		-0.0220***	-0.0207***
		(0.007)	(0.007)
October			-0.2229****
			(0.059)
November			-0.1837*
			(0.102)
week			0.0255**
			(0.011)
N	1241	1241	1241
Pseudo R- squared	0.01	0.03	0.05

Table 18. Marginal effects of Logistic regressions with Public Sphere as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.1545****	0.0452	0.0419
	(0.026)	(0.03)	(0.03)
Twitter		-0.2183****	-0.2145****
		(0.029)	(0.028)
Interactions		-2.683e-05	-2.676e-05

		(0.0)	(0.0)
Followers		-4.019e-08	-3.649e-08
		(0.0)	(0.0)
Sentiment Score		-0.0010	-0.0005
		(0.005)	(0.005)
October			-0.0145
			(0.051)
November			-0.0376
			(0.093)
week			0.0105
			(0.01)
N	1241	1241	1241
Pseudo R- squared	0.03	0.07	0.07

Table 19. Marginal effects of Logistic regressions with Culture as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.1546****	-0.0265	-0.0265
	(0.026)	(0.029)	(0.029)
Twitter		-0.2826****	-0.2851****
		(0.026)	(0.026)
Interactions		-3.999e-05	-3.963e-05
		(0.0)	(0.0)
Followers		2.329e-08	2.382e-08
		(0.0)	(0.0)
Sentiment Score		0.0349****	0.0347***
		(0.006)	(0.006)
October			0.0721
			(0.048)
November			0.0469
			(0.086)
week			-0.0017
			(0.009)
N	1241	1241	1241

Table 20. Marginal effects of Logistic regressions with Non-neutral Sentiment as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.0364	0.0161	0.0213
	(0.023)	(0.026)	(0.026)
Twitter		-0.0181	-0.0219
		(0.024)	(0.024)
Interactions		1.909e-05	2.051e-05
		(0.0)	(0.0)
Followers		-1.224e-08	-1.592e-08
		(0.0)	(0.0)
Sentiment Score		0.0149*	0.0135*
		(0.008)	(0.008)
October			0.0347
			(0.046)
November			-0.0330
			(0.084)
week			-0.0016
			(0.009)
N	1241	1241	1241
Pseudo R- squared	0.00	0.01	0.02

Table 21. Coefficient estimates of OLS regressions with Number of Social Media Representations as dependent variable

Variable	Model 1	Model 2	Model 3
Europe	0.6037***	0.0378	0.0085
	(0.0687)	(0.0694)	(0.0693)
Twitter		-1.1981***	-1.1705***
		(0.0781)	(0.0763)
Interaction	ns	-0.0002***	-0.0002***
		(0.0000)	(0.0000)
Followers		-0.0000	-0.0000
		(0.0000)	(0.0000)
Sentiment Score	:	-0.0039	-0.0006

		(0.0153)	(0.0151)
October			-0.3186**
			(0.1427)
November			-0.3329
			(0.2506)
week			0.0674***
			(0.0255)
Intercept	1.5614***	2.5658***	-0.0300
nan	(0.0513)	(0.0838)	(0.9359)
R-squared	0.0553	0.2262	0.2442
R-squared Adj.	0.0546	0.2231	0.2393
N	1241	1241	1241

Appendix C. Tables supporting the section on Comparisons - Media and Not Media

Table 22. Social Media Representations Media - Frequency and % occurrence among Media posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	84	18.5	46.9
Law	91	20.1	50.8
Values	75	16.6	41.9
People	29	6.4	16.2
Identity	50	11.0	27.9
Public sphere	58	12.8	32.4
Culture	66	14.6	36.9
Total	453	100.0	253.1

Table 23. Social Media Representations Not Media - Frequency and % occurrence among Not Media posts

Social Media Representation	Count	% of Social Media Representations	% of Posts
New social movements	269	13.8	25.3
Law	370	19.0	34.8
Values	346	17.8	32.6
People	104	5.3	9.8
Identity	369	18.9	34.7
Public sphere	255	13.1	24.0

Culture	236	12.1	22.2
Total	1949	100.0	183.5

Table 24. Number of Social Media Representations Media - Frequency and % occurrence among Media posts

Nr of Social Media Representations	Count	% of Posts
0	5	2.8
1	33	18.4
2	61	34.1
3	44	24.6
4	17	9.5
5	16	8.9
6	3	1.7
Total	179	100.0

Table 25. Number of Social Media Representations Not Media - Frequency and % occurrence among Not Media posts

Nr of Social Media Representations	Count	% of Posts
0	119	11.2
1	351	33.1
2	317	29.8
3	163	15.3
4	86	8.1
5	25	2.4
6	1	0.1
Total	1062	100.0

Table 26. Sentiment Media - Frequency and % occurrence among Media posts

Sentiment	Count	% of Posts
Negative	11	6.1
Neutral	144	80.4
Positive	24	13.4
Total	179	100.0

Table 27. Sentiment Not Media - Frequency and % occurrence among Not Media posts

Sentiment	Count	% of Posts
Negative	94	8.9
Neutral	875	82.4

Positive 93 8.8

Total 1062 100.0

Table 28. Marginal effects of Logistic regressions with New Social Movements as dependent variable

Variable	Model 1	Model 2	Model 3
Media	0.1895****	-0.0645**	-0.0632**
	(0.031)	(0.026)	(0.026)
Twitter		-0.4503****	-0.4447***
		(0.018)	(0.018)
Interactions		-8.003e-05***	-7.791e-05***
		(0.0)	(0.0)
Followers		-1.531e-08	-1.34e-08
		(0.0)	(0.0)
Sentiment Score		0.0096*	0.0098*
		(0.005)	(0.005)
October			-0.0204
			(0.047)
November			-0.0600
			(0.085)
week			0.0115
			(0.009)
N	1241	1241	1241
Pseudo R- squared	0.02	0.29	0.29

 $Table\ 29.\ Marginal\ effects\ of\ Logistic\ regressions\ with\ Law\ as\ dependent\ variable$

Variable	Model 1	Model 2	Model 3
Media	0.1519****	0.0745*	0.0715*
	(0.037)	(0.041)	(0.041)
Twitter		-0.1506****	-0.1384***
		(0.031)	(0.031)
Interactions		2.006e-05	1.84e-05
		(0.0)	(0.0)
Followers		-1.95e-08	-1.292e-08
		(0.0)	(0.0)
Sentiment Score		-0.0220***	-0.0203***

		(0.007)	(0.007)
October			-0.0863
			(0.062)
November			-0.0285
			(0.111)
week			0.0129
			(0.012)
N	1241	1241	1241
Pseudo R- squared	0.01	0.03	0.04

Table 30. Marginal effects of Logistic regressions with Values as dependent variable

Variable	Model 1	Model 2	Model 3
Media	0.0893**	-0.0109	-0.0093
	(0.036)	(0.04)	(0.04)
Twitter		-0.1647****	-0.1566****
		(0.029)	(0.03)
Interactions		-5.247e-05	-5.095e-05
		(0.0)	(0.0)
Followers		-6.832e-10	2.519e-09
		(0.0)	(0.0)
Sentiment Score		0.0027	0.0028
		(0.006)	(0.006)
October			-0.0516
			(0.059)
November			-0.1115
			(0.106)
week			0.0189*
			(0.011)
N	1241	1241	1241
Pseudo R- squared	0.00	0.02	0.03

Table 31. Marginal effects of Logistic regressions with People as dependent variable

Variable	Model 1	Model 2	Model 3
Media	0.0549**	0.1039****	0.1034***
	(0.022)	(0.028)	(0.028)

Twitter		0.0498**	0.0462*
		(0.025)	(0.025)
Interactions		-1.171e-05	-1.06e-05
		(0.0)	(0.0)
Followers		-4.888e-08	-5.397e-08
		(0.0)	(0.0)
Sentiment Score		-0.0135***	-0.0133***
		(0.005)	(0.005)
October			-0.0011
			(0.038)
November			0.0249
			(0.069)
week			-0.0079
			(0.007)
N	1241	1241	1241
Pseudo R- squared	0.01	0.03	0.04

Table 32. Marginal effects of Logistic regressions with Identity as dependent variable

Variable	Model 1	Model 2	Model 3
Media	-0.0708*	0.0428	0.0425
	(0.04)	(0.044)	(0.043)
Twitter		0.1583****	0.1771****
		(0.032)	(0.031)
Interactions		1.129e-05	9.312e-06
		(0.0)	(0.0)
Followers		1.633e-08	2.229e-08
		(0.0)	(0.0)
Sentiment Score		-0.0214***	-0.0201***
		(0.007)	(0.007)
October			-0.2226****
			(0.059)
November			-0.1873*
			(0.102)
week			0.0255**

(0.011)

N	1241	1241	1241
Pseudo R- squared	0.00	0.03	0.05

Table~33.~Marginal~effects~of~Logistic~regressions~with~Public~Sphere~as~dependent~variable

Variable	Model 1	Model 2	Model 3
Media	0.0782**	-0.0575*	-0.0579*
	(0.033)	(0.034)	(0.033)
Twitter		-0.2557****	-0.2502****
		(0.025)	(0.025)
Interactions		-3.221e-05	-3.17e-05
		(0.0)	(0.0)
Followers		-3.364e-08	-3.05e-08
		(0.0)	(0.0)
Sentiment Score		-0.0016	-0.0010
		(0.005)	(0.005)
October			-0.0108
			(0.05)
November			-0.0252
			(0.093)
week			0.0096
			(0.01)
N	1241	1241	1241
Pseudo R- squared	0.00	0.07	0.07

Table 34. Marginal effects of Logistic regressions with Culture as dependent variable

Variable	Model 1	Model 2	Model 3
Media	0.1298****	-0.0457	-0.0454
	(0.03)	(0.028)	(0.028)
Twitter		-0.2829***	-0.2854***
		(0.023)	(0.023)
Interactions		-4.508e-05	-4.474e-05
		(0.0)	(0.0)
Followers		2.979e-08	3.022e-08
		(0.0)	(0.0)

Sentiment Score		0.0343****	0.0341****
		(0.006)	(0.005)
October			0.0748
			(0.047)
November			0.0539
			(0.086)
week			-0.0024
			(0.009)
N	1241	1241	1241
Pseudo R- squared	0.01	0.18	0.19

 $\textit{Table 35. Marginal effects of Logistic regressions with \textit{Non-neutral Sentiment as dependent variable} \\$

Variable	Model 1	Model 2	Model 3
Media	0.0189	-0.0060	-0.0021
	(0.03)	(0.032)	(0.032)
Twitter		-0.0272	-0.0322
		(0.022)	(0.022)
Interactions		1.912e-05	2.059e-05
		(0.0)	(0.0)
Followers		-1.194e-08	-1.587e-08
		(0.0)	(0.0)
Sentiment Score		0.0148*	0.0135*
		(0.008)	(0.008)
October			0.0345
			(0.046)
November			-0.0321
			(0.084)
week			-0.0015
			(0.009)
N	1241	1241	1241
Pseudo R- squared	0.00	0.01	0.02

Table 36. Coefficient estimates of OLS regressions with Number of Dimensions as dependent variable

Variable Model 1 Model 2 Model 3

Media	0.6955***	-0.0427	-0.0461
	(0.1046)	(0.1151)	(0.1113)
Twitter		-1.2289***	-1.1885***
		(0.0786)	(0.0774)
Interactions		-0.0002***	-0.0002***
		(0.0000)	(0.0000)
Followers		-0.0000	-0.0000
		(0.0000)	(0.0000)
Sentiment Score		-0.0043	-0.0010
		(0.0153)	(0.0150)
October			-0.3165**
			(0.1427)
November			-0.3268
			(0.2511)
week			0.0669***
			(0.0256)
Intercept	1.8352***	2.6115***	0.0092
nan	(0.0370)	(0.0667)	(0.9425)
R-squared	0.0385	0.2262	0.2444
R-squared Adj.	0.0377	0.2230	0.2395
N	1241	1241	1241

Conclusions

The goal of the work package is partly to analyse how Europe is represented through the topic of gender in a representative sample from 10 different European countries. To achieve this, social media discussions from Facebook and Twitter were downloaded from European countries and a theoretical framework of social media representations was developed. The theoretical framework was operationalised so that a smaller part of the downloaded data could be manually coded by partners in each of the 10 European countries. Thereafter, machine learning models were trained on the manually coded data to automatically code, among others, the social media representations and sentiments present in the all the downloaded posts.

The introduction of this report taught us that we have three types of legislations in place in the EU. There are legislations based on equal treatment, specific policies in place for the advancement of women, and there is gender mainstreaming. Further on, it shows us how most of the research in relation to gender and media is not necessarily about social media. However, still a lot of it talks about

representation. The earliest research is focused on advertisement, but more recent work starts to focus on social media. With regards to social media, topics like gendered cyber violence and body positivity/neutrality are researched. This first one has been researched in relation to Europe. However, most of the research lacks a general European perspective, this is something we want to provide with this report.

To conclude this report, we come back to the initial research questions we aimed to talk about. The first three are about the social media representations and the last three talk about sentiments in relation to gender. To start, we have a look at the first research question. Are there similar debates about gender across Europe - can we find hints of a 'European public sphere' - or is coverage dominated by the non-European perspective? When looking at Figure 3 we see how gender is represented in the participating European countries on social media in discussions about Europe and in non-European discussions. This figure shows us that, even though there are differences amongst the countries, we can recognise a hint of a 'European public sphere'. This hint also immediately ties in with the second research question, namely: are there similar debates about gender across Europe when the perspective is European compared to when it is not? On average, the countries all talk more about Law and Values in their social media posts when discussing Europe compared to not Europe. This might be due to the fact that there are discussions on European scale about how the legislative system can best promote gender equality. An other part of this 'European sphere' is that identity is something more often talked in posts not about Europe than posts about Europe.

Next we can look at the data about how gender is represented by media and non-media. It needs to be noted that here there is less of 'European public sphere' hint. Multiple countries are quite from the average when it comes to which social media representations are most prevalent in media and not media posts. However, the data does tell us something about the third research question: are there similar debates about gender when the content is published by media compared to when it is not? The data shows us that the difference is less prevalent than when looking at the Europe estimates. However, there are some small differences. Media posts about gender more often represent People than non-media posts. On the contrary, Values is more often used among the non-media posts.

Moving on to our last three questions, we focus on the data about sentiments. To answer our fourth research question (are sentiments towards gender similar across Europe?), we can review Figure 5. We see that in relation to posts about Europe, gender is for all countries represented more positively than the posts not about Europe. There are on average also fewer neutral posts. In relation to these European posts, most countries have mostly posts with a positive sentiment and the posts with a neutral sentiment occur the least. Not only are these averages suggesting a hint of a common European sentiment towards gender, they also show us an answer to the fifth research question. To the question whether sentiments differ depending on whether the discourse of the posts is about Europe or not, we can say that posts with Europe discussions are on average more positive and less neutral.

Lastly, we can look at the sentiment gender is being talked about by media and non-media. It needs to be noted that here, there is less of a general 'European sphere' to be noticed. When looking at the averages, we see that they don't align across all countries. However, the data can teach us something about our sixth research question. Are sentiments related to gender different depending on whether the content is published by media or not? Content of media on average appears to speak about gender more neutral. Countries such as Bulgaria, Czech Republic, Spain and Greece are exceptions to this. With regards to negative and positive sentiments we can see that there is respectively no difference and a higher amount of non-media posts to be found.

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Appendix

Ethical approval:



Evaluation by the Ethics Committee of the UOC

Exp.: CE22- PR23

Dr. Marta Aymerich, president of the Ethics Committee of the Universitat Oberta de Catalunya

CERTIFIES

That the Committee has evaluated the addenda submitted by Francisco Lupiáñez Villanueva for the project already approved that is entitled "EUMEPLAT: European Media Platforms: assessing positive and negative externalities for European Culture", and considers that

- The ability of the researchers and their collaborators, and the facilities and resources available are adequate to carry out the study.
- The established experimental protocol ensures the integrity and dignity of the participants.
- The protocol is adequate to the objectives of the study and the possible risks and discomfort for participants are adequate given the expected benefits.
- The procedure for obtaining informed consent of participants, including the information sheet, and the procedure for the recruitment of subjects are adequate.
- The researchers of the project will ever respect the obligations derived from the Organic Law 3/2018 on Personal Data Protection and Digital Rights, General Regulation on Data Protection (UE) 2016/679 and the current complementary legislation.

Having met on July 26, 2022, and having considered the ethical implications concerning human experimentation and the processing of personal data, this committee APPROVES the execution of the aforementioned project.

For the record, I sign this document in Barcelona, July 26, 2022.

Signed:



Dr. Marta Aymerich, Av. Tibidabo, 39-43 08035 Barcelona – Spain Tel. +34 93 253 23 00 Fax +34 93 417 64 95 This document provides a detailed description of how to manually code the columns of WP4. From now on, we refer to a Facebook post or Twitter Tweet as a post.

Unit to be coded:

You should only assess the context of the **TEXT** of the post.

Examples below include pictures, and link texts, that are vital to understanding the dimensions.

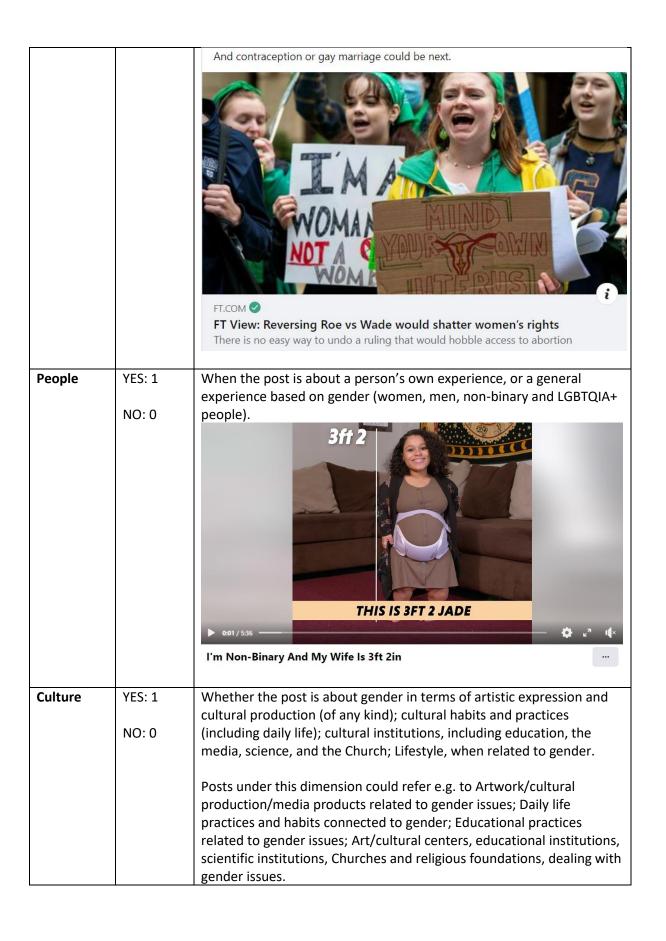
Columns:

Each column can be given any of the allowed values regardless of the answers in the other columns.

IMPORTANT: No cells can be left blank. All the cells of the codebook must be filled with an allowed value.

Table 4. Operational definitions used for categories of manual coding

Values	Description
YES: 1	A post is on topic if the context of the text is directly or indirectly related to human gender.
NO: 0	I.e., when a post is about the characteristics of femininity and masculinity and the division of humans based on these. This includes, among others, gender identities such as being a man, woman, non-binary, LGBTQ, etc., as well as related discussions on social and cultural roles and behaviours.
	If the context of the text is not directly or indirectly related to human gender, then the post is off topic. For example, if a post is about grammatical, or aninmal gender.
YES: 1 NO: 0	When the post deals with the legal aspects and rights of gender, and how it describes the specific rights on discrimination based on sexuality, gender, and biological sex.
	YES: 1 NO: 0





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Vertaling weergeven



Values YES: 1

NO: 0

Whether the post is about gender in terms of Ideas and beliefs related to gender in/equality, gender im/balance, neutrality/bias, non/discrimination on the basis of gender, in/tolerance, dignity, diversity, freedom (of thought, expression, information, movement, choice), related to gender.



gender-based Rights and Responsibilities in Quran Watch it on YouTube: https://youtu.be/tiLLzHUL8WY

...

Despite the ban, British Cycling says they're committed to inclusivity. TRANSGENDER WOMEN NO LONGER **ALLOWED TO COMPETE AT BRITISH FEMALE CYCLING EVENTS** Identity If YES: 1 Definition for gender, being a man, woman, non-binary, LGBTQ. Is something mentioned and then you can crossbow what is mentioned. If NO: 0 This is in terms of gender and sexual identity. The singer came out as non-binary last year 💚 Demi Lovato Quietly Updates Their Pronouns On Instagram Demi Lovato has quietly updated the pronouns they wish to be addressed by. T If YES: 1 **New social** Self-organized citizenry including grass-roots social movements and movement NGOs. Movements that have targeted the structures, cultural If NO: 0 practices, and interactional norms that sustain gender inequality. Further, movements that are not oriented specifically around gender issues are also shaped by gender as a central feature of social structure, culture, and everyday life.

"It was a historic night for women in film. Jane Campion, the revered New Zealandborn Australian director, became the third female film-maker ever and the second in a row to win best director in the 94-year history of the Academy Awards.

Director Sian Heder won the night's top gong, taking home best picture and best adapted screenplay, for Coda – just her second feature-length film and the first win for Apple. And earlier in the night, Ariana DeBose became the first queer woman of colour to win best supporting actress. At just 20, Billie Eilish won for best original song, and costume designer Jenny Beavan picked up her third Oscar for her work on Cruella.

But in the end a night of momentous achievements was overshadowed by an act of violence between two men"



Public If YES: 1 sphere

If NO: 0

When a post is about gender relevant issues, raised by non-political actors. Particularly, the relationship between citizens and institutions, the involvement in Decision-making, a non-political actor who tries to influence decision-making.

A woman ran onto the red carpet at the Cannes Film Festival, to protest against sexual violence in Ukraine.

https://bbc.in/3LtXkFL

Sentiment POSITIVE: 2

When the sentiment of the post is predominantly positive. Words such as glad, happy, good, better, etc. appear in the post. If the sentiment is more positive than negative, it should be coded as positive.

Happy #NonBinaryDay! Today and everyday we celebrate the wide range of people worldwide who identify as non-binary. You are valid, and beautiful, and we love you! HAPPY NON-BINARY PEOPLE'S DAY! **NEUTRAL:** When the sentiment of the post is predominantly neutral. Typically, the post conveys facts or describes a story without any positive or negative sentiments. The legislation would ban discussing sexual orientation and gender identity in primary school classrooms. B B C NEWS BBC.COM White House slams new Florida 'Don't Say Gay' law **NEGATIVE** When the sentiment of the post is predominantly negative. Words such : 0 as sad, bad, worse, disappointed, miserable, etc appear in the post. When the sentiment is more negative than positive, it should be coded as negative.

Mae Martin described the BBC story as "bad journalism" which is "contributing to a culture of hysteria that makes life scarier for trans/ non-binary people in this Mae Martin joins protest at BBC headquarters against infamous antitrans article Europe YES: 1 The post is about Europe when it makes a reference to either the institutions of the EU, or any kind of interaction between at least TWO European countries (see list below). NO: 0 If a geographical area that includes at least two European countries is mentioned, such as "southern Europe", the post is about Europe. If a post mentions two regions that pertain to different European countries and which are smaller than countries, the post is about Europe. For example, if a post mentions Rome and Prague, it is coded as being about Europe. A post is NOT about Europe if only ONE European country is mentioned If the geographical area fundamentally transcends Europe (e.g., the Mediterranean, Eurasia, ...).

The European countries (for this operational definition) are:

Albania, Andorra, Austria, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary,

Iceland, Ireland, Italy, Kosovo, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Monaco, Moldova, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Russia, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom, Vatican City State.

Lexicons Keywords

The following is an overview of all keywords used for each language for the categories of Gender and Europe.

language theme keywords

Bulgariangender

Джендър,Европейски институт за равенство между половете,Женски,Комисията на Европейския парламент по правата на жените и равенството между половете (FEMM,ЛГБТ,ЛГБТ+,Насилие базирано на джендър,Насилие базирано на пола,Неравенство,Нон байнъри,Полови връзки,Прайд,Феминизъм,асистирано оплождане,включване,включващ,джендър баланс,джендър

неутрален, идентификация, име, инвитро, интерджендър, куиър, мъжки, не двоичен, огласяване на пола, пол, полова неутралност, права на жените, признаване на пола, равенство, равни възможности, равни права, разкриване на пола, репродуктивни права, самоопределяне, сексуални права, сексуално

насилие, трансджендър, транссексуален, флуидност, хетеросексуален, цисджендър, #МеТоо, Полово разнообразие, неравенство между половете, полово неравенство, равенсство на половете, равно заплащане, фемицид

Bulgarian Europe

#ДеннаЕвропа,#ЕС,#Европа,#Европейсисъвет,#Европейсказеленасделка,Брексит,Брюксел,Договор за ЕС,ЕС,ЕС закони,Евродепутат,Еврозона,Европа,Европейска комисия,Европейска сигурност,Европейска центраална банка,Европейски директиви,Европейски регулации,Европейски съвет,Европейски съд,Европол,Евроскептик,Еврпейска политика,Еврпейско законодателство,Еврпейско управление,Меркел,Съвет на Европа,Управление на Европа,Фронтекс,Шенген,държава-член,държави-членки,държавна помощ,евро,евро зона,евро субсидии,евро фондове,евродепутати,евродепутатски,еврокомисар,европейска валута,европейска директива,европейски,европейски директиви,европейски закон,европейски субсидии,европейски фондове,евроскептицизъм,единен европейски пазар,строгост,фон дер Лайен

Czech gender

nebinární (osoba), Evropský institut pro rovnost žen a mužů, Feminní, nerovnoprávnost, Komise Evropského parlamentu pro práva žen a genderovou rovnost, bisexualita, bisexuál, bisexuální, bisexuálové, cisgender, cisgender člověk, coming out, diskriminace, diskriminaci, diskriminační, disociativní porucha identity, femicida, femicidou, femicidě, feminacistkou, feminacistky, feminismus, feministické hnutí, feministka, feministkou; feminacistka, feministky, feminita, gay, gayové, gender gap, genderovou diverzitou, genderovou diverzitu, genderovou neutralitu, genderovou rozmanitost, genderovou rozmanitostí, genderová diverzita, genderová inkluzivita, genderová neutralita, genderová příjmová nerovnost, genderová rovnoprávnost, genderová rozmanitost, genderová vyváženost, genderové diverzitě, genderové neutrality, genderové neutralitě, genderové násilí, genderově nasilí, genderově podmíněné

násilí, heterosexuálita, heterosexuál, heterosexuální, heterosexuálové, homosexuálita, homosexuál, homosexuální, homosexuálové, identita, inkluze, inkluzivní, intersexuál, intersexuální, intersexuálové, lesba, lesbická, lesbický, lesby, maskulinita, maskulinní, mezinárodní den

žen,mužský,nebinarita,nebinární,nerovnoprávnostmi,nerovnoprávností,nerovnost,nerovnosti,nerovnosti,nerovností,pocho dy hrdosti,potrate,potratech,potratem,potratová,potratové,potratu,potraty,pride pochod,pride pochody,práva žen,právo na sebeurčení,příjmová propast mezi muži a ženami,reprodukční

práva,rovnoprávnost,rovnoprávnosti,rovnoprávností,rovnost,rovnosti,rovná práva,rovné příležitosti,sebeurčení,sexulně motivovaném násilí,sexuální menšiny,sexuální násilí,sexuální práva,sexuálně motivované násilí,sexuálně motivovaným násilím,stejnopohlavní manželství,stejnopohlavním manželstvíntosická maskulinita,transgender,transsexuál,ženský,#MeToo,genderové role,genderovými rolemi,rovnoprávnost,stejný plat,zabití žen,zájmeno

Czech Europe

#EU,#EUgreendeal,#Evropa,#Evropská

unie,#denevropy,Brexit,Brusel,Bruselu,ECB,Erasmus,Erasmus+,Europol,Evropa,Evropané,Evropskou unií,Evropská centrální banka (Evropskou centrální bankou,Evropská komise,Evropská pohraniční a pobřežní stráž,Evropská unie,Evropské centrální bance,Evropské centrální banky),Evropské unie,Evropské unii,Evropský soudní

dvůr, Frontex, Merkelovou, Merkelová, Merkelové, Rada Evropské unie, brexitem, brexitu, diktát EU [EU Dictate], diktát Evropské unie, eurem, euro, europoslance, europoslancem, europoslance, europoslanecký, euroskeptici, euroskepticismus, eu roskepticích,euroskeptik,euroskeptika,euroskeptikem,euroskeptikovi,euroskeptiků,eurozóna,eurozónou,eurozóny,eurozóně, euru,eury,evropskou,evropskou bezpenočstí,evropskou dohodu,evropskou politikou),evropskou smlouvu,evropskou vládou,evropskou vládu,evropská,evropská bezpečnost,evropská dohoda,evropská legislativa,evropská nařízení,evropská politika (evropskou politiku, evropská regulace, evropská smlouva, evropská směrnice, evropská vláda, evropské, evropské bezpečnosti, evropské dotace, evropské hranice, evropské nařázení, evropské právo, evropské vládě, evropské zákony (evropských zákonů, evropského, evropském; Evropan, evropskému, evropský, evropský komisař (komisařů, evropský zákon (evropského zákonu, evropských dotacích, evropských zákonech, evropským zákonem), evropskými dotacemi, evropskými zákony), hranice Evropy [European borders], hraniční kontrola, jednotný evropský trh, komisaři), komisařích, kontrola na hranicích [border patrol],migrace [migration],migrantech,migranti (migranty,migrants],migrantům),migrační krize,nařízení EU, pevnost Evropa [fortress Europe], pevnosti Evropa, pevností Evropa, pohraniční kontrola, politika úspornosti, pomoc od státu (pomoci od státu,pomocí od státu),reffugee crisis,schengen,schengenském prostoru),schengenskému prostoru, schengenský prostor (schengenského prostoru, směrnice EU, soudní dvůr Evropské unie, uprchlická krize [migration crisis,uprchlíci,vnitřní trh,von der Leyenovou,von der Leyenová,von der Leyenové,úspornost,členské státy,členský stát,členských státech,členským státem,členskými státy

Flemish - Belgium gender

Cisgender, Commissie Vrouwenrechten en Gendergelijkheid, EIGE, Europees Instituut voor gendergelijkheid, FEMM, Feminisme, Feminist, Gelijke mogelijkheden, Gelijke rechten, Gelijkheid, Gender, Gender inclusief, Gender neutraal, Gender neutrality, Gender relaties, Gender reveal, Gendere balans, Genderfluïde, Gendergerelateerd geweld, Genderideologie, Genderinclusiviteit, Genderneutraal, Identiteit, Identiteitsstoornis, Inclusie, Intergender, LGBT, LGBTQ, LGTB, LGTBI, LGTBIQ, Menstruatieverlof, Non-binair, Ongelijkheid, Pride, Queer, Recht op abortus, Reproductieve rechten, Seksistisch geweld, Seksueel geweld, Seksuele rechten, Transgender, Transseksueel, Voornaamwoord, Vrouwenrechten, Zelfbeschikking, abortus, gender balans, genderfluid, geslacht, huiselijk geweld, inclusief, inclusiviteit, mannelijk, mesntruatie, regenboog, regenboogvlag, sexe, sexen, sexes, vrouwelijk, #MeToo, Gender gap, Genderdiversiteit, Gendergelijkheid, Loonkloof, femicide, gelijk loon, loon kloof, vrouwenmoord, werkgelegenheidskloof

Flemish - Belgium europe

#EU,#Europa,#Europadag,#EuropeDay,#EuropeseUnie,#eugreendeal,Boris,Brexit,Brussel,Draghi,ECB,EP-leden,EP-lid,EU,EU commissaris,EU-hof,EU-beleid,EU-commissaris,EU-richtlijn,EU-verdrag,EU-verordening,EU-wetgeving,Eengemaakte Europese Markt,Europa,Europees,Europees beleid,Europees bestuur,Europees recht,Europees verdrag,Europese Centrale Bank,Europese Commissie,Europese Raad,Europese munteenheid,Europese subsidies,Europese veiligheid,Europese wetgeving,Europol,Frontex,Hof van Justitie van de Europese Unie,Macron,Merkel,Schenge,Schengen,Straatsburg,austerity,euro,eurocommissaris,europarlement,europarlementarier,europeaan,europeanen,europees parlement,europese,europese fondsen,europese richtlijn,europese steunfondsen,europese unie,euroscepticisme,eurosceptisch,eurozone,interne markt,lidstaat,lidstaten,staatssteun,von der Leyen,vrij verkeer

German gender

Ausschuss für die Rechte der Frauen und die Gleichstellung der Geschlechter des Europäischen Parlaments, Chancengleichheit, EIGE, Einbeziehung, Einbindung, Europäische Institut für Gleichstellungsfragen, FEMM, Feminazi, Feminismus, Feministi, Feministin, Fortpflanzungsrechte, Frauenrechte, Gender-fluid, Gendersternchen, Geschlecht, Geschlechterbalance, Geschlechterbeziehungen, Geschlechtergleichgewicht, Geschlechteri nklusivität, Geschlechterneutralität, Geschlechtsenthüllung, Geschlechtsneutralität, Gleichberechtigung, Gleiche Rechte, Gleichheit, Gleichstellung, Identitätstörung, Inklusion, LGBT, LGBTQ, LGBTQ, LGBTQIA+, LGTBIQ, Pronomen, Reprodukti onsrechte, Selbstbestimmung, Stolz, Transmenschen, Ungleichheit, cisgender, gender star, geschlechterinklusiv, geschlechterneutral, geschlechtlich fließend, geschlechtsspezifische Gewalt, geschlechtsspezifische Rechte, gleiche Rechte, intergeschlechtlich, männlich, nicht-binär, queer, sexistische Gewalt, sexuelle Gewalt, sexuelle Rechte, transgender, transpeople, transsexuell, weiblich, zissexuell, #MeToo, Beschäftigungsgefälle, Femizid, Geschlechtergefälle, Geschlechtervielfalt, Gleichstellung, Lohngefälle, gleiches Gehalt

German europe

#EU,#Europa,#EuropeDay,#EuropäischeUnion,#eugreendeal,Austerität,Binnenmarkt,Brexit,Brüssel,Bürokratie,EU, EU-Abkommen,EU-Gericht,EU-Kommisar,EU-Kommissarin,EU-Politik,EU-Rat,EU-Recht,EU-Richtlinie,EU-Verordnung,EU-Vertrag,EU-Vorschrift,EZB,Euro,Europa,Europarat,Europäische Kommission,Europäische Regierungsführung,Europäische Subventionen, Europäische Zentralbank, Europäischer Rat, Europäisches
Regieren, Euroraum, Euroskeptiker, Euroskeptizismus, Eurozone, Frontex, MdEP, Merkel, Mitglied des Europäischen
Parlaments, Mitgliedsstaat, Mitgliedsstaaten, Schengen, Sparmaßnahmen, Staatshilfen, Vertragsverletzung, europäisch, europäische Fördermittel, europäische Gesetzgebung, europäische Mittel, europäische Richtlinie, europäische Sicherheit, europäische Währung, europäisches Recht, von der Leyen

Greek gender

cis,cisgender,coming out,pride,Άρρεν,Ίσα δικαιώματα,Ίσες ευκαιρίες,Αρσενικό,Επιτροπή Δικαιωμάτων των Γυναικών και Ισότητας των Φύλων,Ευρωπαϊκό Ινστιτούτο για την Ισότητα των Φύλων, Θυληκό, Θύλη, ΛΟΑΤ, ΛΟΑΤΚΙ, ΛΟΑΤΚΙ+, Σεξουαλικά δικαιώματα, Φύλο, άδεια λοχείας, άδεια μητρότητας, άδεια πατρότητας, άφυλο, έμφυλα στερεότυπα, έμφυλη βία, έμφυλη ταυτότητα, ίσα δικαιώματα, ίσες ευκαιρίες, αδελφή, ακαθόριστο φύλο, αμφί, αμφίφυλο, αμφίφυλα, αμφι, αμφισεξουαλικοί, αμφισεξουαλικός, αναπαραγωγικά δικαιώματα, ανισορροπία μεταξύ των φύλων, ανισότητα, αντιμετώπιση των φύλων με ουδετερότητα, αντωνυμία (δεικτική), αντωνυμίες, απελευθερωμένο από το φύλο, αποκάλυψη φύλου, απροσδιόριστη ταυτότητα φύλου, αρχή της ουδετερότητας των φύλων,αρχής της ίσης μεταχείρισης ανδρών και γυναικών ,αρχής της ίσης μεταχείρισης κατά την πρόσβαση στην αγορά εργασίας, αυτοπροσδιορισμός, βία βασιζόμενη στο φύλο, βία με βάση το φύλο, γκέι, διάκριση λόγω φύλου,διακρίσεις λόγω φύλου,διακρίσεων λόγω φύλου,δικαίωμα αναπαραγωγής,δικαιώματα των γυναικών,δυσμενής μεταχείριση λόγω εγκυμοσύνης,επαμφοτερίζων,επαναπροσδιορισμός των έμφυλων ρόλων ,ετεροφυλοφιλικός,ισορροπία μεταξύ των φύλων,ισότητα,κουηρ,κουιρ,λεσβία,μεταξύ των φύλων,μη έμφυλο,μη- καθορισμένο φύλο,μηδυαδικό,ουδέτερο ως προς το φύλο,ουδετερότητα έναντι των δύο φύλων,παρέλαση υπερηφάνειας,παρενόχληση,πράιντ,σεξιστική βία,σεξιστική επίθεση,σεξουαλικός προσανατολισμός,συμπερίληψη,σχέσεις μεταξύ των φύλων,ταυτότητα φύλου,τρανς,τρανσέξουαλ,υιοθέτηση ποσοστώσεων επί τη βάσει του φύλου, υποβοηθούμενη αναπαραγωγή, φεμινισμός, φεμινιστικό κίνημα, φεστιβάλ υπερηφάνειας, χωρίς αποκλεισμούς των φύλων,χωρίς αποκλεισμούς ως προς το φύλο,#ΜεΤοο,Ίσος μισθός,έμφυλες διακρίσεις,ανισότητες μεταξύ των φύλων,γυναικοκτονία,διαφορά μεταξύ των φύλων,διαφοροποίηση των φύλων,ισότητα των φύλων, μισθολογικό χάσμα, ποικιλότητα ως προς το φύλο, χάσμα αμοιβών, χάσμα μισθών, ψαλίδα μεταξύ των φύλων

Greek europe

#40ΕλλάδαΕΕ,#ΕΕ,#ΕU,#EuropeDay2021,#eugreendeal,#ΕυρωπαικήΈνωση,#Ευρώπη, 'ευρωπαϊκοί πόροι', 'ευρωπαϊκό νόμισμα', Brexit, Conventions, Digital Act, EKT, EU, Euro, Europol, Frontex, Treaties, competition, von der Leyen, Βρυξέλλες, ΕΕ, Επίτροπος, Ευρωβουλευτές, Ευρωβουλευτής, Ευρωπαϊκή Επιτροπή, Ευρωπαϊκή Κεντρική Τράπεζα, Ευρωπαϊκό Δικαστήριο, Ευρωσκεπτικισμός, Ευρώ, Ευρώπη, Ημερα της Ευρώπης, Κοινή Αγορά', Κοινή Ευρωπαϊκή Αγορά', Κομισιόν, Λιτότητα, Μέρκελ, Ουρ. Φ.Ντ. Λαϊεν, Ούρσουλα φον ντερ Λάιεν, Σένγκεν, Συμβουλίου της ΕΕ, Συμβούλιο της ΕΕ, Συνθήκες ΕΕ, ανταγωνισμός, επίτροποι, επίτροπος, ευρωμεουλευτών, ευρωζώνη, ευρωπαϊκά κονδύλια', ευρωπαϊκές, ευρωπαϊκές επιδοτήσεις', ευρωπαϊκές συνθήκες, ευρωπαϊκή, ευρωπαϊκή διακυβέρνηση, ευρωπαϊκή νομοθεσία, ευρωπαϊκή οδηγία, ευρωπαϊκή πολιτική, ευρωπαϊκή συνθήκη, ευρωπαϊκής ασφάλειας, ευρωπαϊκής πολιτικής ασφάλειας, ευρωπαϊκός, ευρωπαϊκός, ευρωσκεπτικιστές, ευρωσκεπτικιστής, ευρώ, ζώνη του Ευρώ, κανονισμός της ΕΕ, κοινοτική νομοθεσία, κράτη - μέλη, κράτος - μέλος, κρατη-μελη, κρατος-μελος, νομοθετική ρύθμιση της ΕΕ, οδηγίες, χώρα - μέλος, χώρες - μέλη

Italian gender

Auto-determinazione, Cisgneder, Diritti delle donne, Diritti di riproduzione, Diritti sessuali, Disuguaglianza, EIGE [poco usato], FEMM [poco usato], Femmidicio, Femminile, Femminismo, Femministe, Gay Pride, Gender balance, Gender fluid, Gender neutrality, Gender-inclusive, Genere, Identità di genere, Inter-gender, LGBT, LGBTQ, LGBTQ+. LGBTQIA, Mansplaining, Morti bianche, Neutralità di genere, Non-binary, Outing, Pari opportunità, Parità di diritti, Pride, Pronome, Queer, Schwa, Transgender, Uguaglianza, Uguaglianza di diritti, Uguaglianza di genere, Uguali, Violenza di genere, Violenza maschile, coming out [usati in modo improprio], eguaglianza, eguaglianza di diritti, eguaglianza di genere, eguaglianza giuridica, eguali oportunità, femminicida, femminicidio, gender balance, gender neutrality, genderneutral, inclusione, inclusività, inclusività di genere, inclusivo, maschile, metoo, nazifemministe, neutralità di genere, non binario, pari, patriarcale, patriarcato, quote rosa, relazioni di genere, schwa, transessuale, uguaglianza agiuridica, women's rights, #MeToo, Diversità di genere, Gender gap, diversità sessuale, eguaglianza di genere, femminicidio, grass ceiling, pari retribuzione, soffitto di cristallo, uquaglianza di genere

Italian europe

#EU,#Europa,#EuropeDay,#UnioneEuropea,#eugreendeal,#greendeal,Angela,BCE,Banca Centrale Europea,Brexit,Bruxelles,Commissione Europea,Comunità Europea,Consiglio Europeo,Consiglio d'Europa,Corte europea,Direttiva europea,EU,Eu,Euoscettici,Euro,Europa,Euroscetticisimo,Frontex,Governance europea,Governo europeo,ItalExit,Legislazione europea,Merkel,No Euro,No-Euro,Norma europea,Policy europee,Politiche europee,Regolamentazione europea,Schengen,Trattto europeo,Unione Europea,Ursula,Von der Leyen,aiuti di stato,aiuti europei,austerità,direttiva europea,europarlamentare,eurozona,finanziamento europei,fondi europei,frugali,linee-guida

europee, mercato comune, mercato unico, moneta unica, normativa europea, parlamentare europeo, regolamentazione europea, sostegni, sovvenzioni statali, stati membri, sussidi, valuta unica

Portuguese gender

Autodeterminação, Cisgénero, Desigualdade, Direitos das mulheres, Direitos iguais, Direitos reprodutivos, Direitos sexuais, EIGE, Equilíbrio de género, FEMM, Feminino, Feminismo, Feminista, Género, Género fluido, Identidade, Igualdade de direitos, Igualdade de oportunidades, Inclusivo em termos de géneros, Inclusão, Inclusão de género, Intergénero, LGBT, LGBTQIA+, LGTBIQ, Masculino, Neutralidade de género, Não-binário, Oportunidades iguais, Orgulho, Pronome, Queer, Relações de género, Revelação de género, Transgénero, Violência de género, Violência sexista, Violência sexual, feminazi, gender-neutral, neutro em termos de género, transexual, transtorno de Identidade, #MeToo, Diferença de género, Diversidade de género, Igualdade de género, Pagamento equivalente, diferença salarial, discriminação profissional, disparidade de pagamento, feminicídio

Portuguese europe

#EU2021PT,#Europa,#EuropeDay,#UE,#diadaeuropa,#eugreendeal,#istoéEuropa,#uniaoeuropeia,BCE,Brexit,Brux elas,Europol,Frontex,PRR,Plano de Recuperação e Resiliência,UE,ajudas do estados,ajudas estatais,austeridade,banco central europeu,comissária europeia,comissário europeu,comissão europeia,conselho da UE,conselho europeu,diretiva,diretiva europeia,estado membro,estados membros,estados-membros,euro,eurocepticismo,eurocéptico,eurocépticos,eurodeputada,eurodeputadas,eurodeputado,eurodeputados,europa,europeias,europeu,europeus,fundos europeus,governação europeia,governo europeu,legislação europeia,lei europeia,lei europeias,leis europeias,mercado europeu,mercado interno,mercado único,merkel,moeda europeia,política europeia,presidência portuguesa,regulamento europeu,schengen,segurança europeia,subsídios europeus,tratado europeu,tribunal de justiça,troika,trubinal europeu,von der Leyen,zona euro

Spanish gender

Feminismo, Feminista, Balance de género, Derechos reproductivos, Derechos sexuales, Desigualdad, FEMM, Femenino, Género, IEIG, Idgualdad de oportunidades, Igualdad de derechos, Inclusión de género, Intergénero, LGBT, LGBTQIA+, LGTB, LGTBIQ, Masculino, Neutralidad de género, Nobinario, Orgullo, autodeterminación, cisgénero, derechos de las mujeres, feminazi, género fluido, género neutro, identidad, igualdad, igualdad de derechos, igualdad de opportunidades, inclusión, ley trans (trans law), neutralidad de género, perspectiva de género, pronombre, queer, relaciones de género, revelación de género, transexual, transgénero, transtorno de identidad, violencia de género, violencia machista, #MeToo, Igualdad de género, brecha de género, brecha salarial, diversidad de género, feminicidio, igualdad de salarios

Spanish europe

#EU,#Europe,#EuropeDay,#EuropeanUnion,#UniónEuropea,#eugreendeal,BCE,Banco Central Europeo,Boris Johnson,Brexit,Bruselas,Charles Michel,Comisario europeo,Comisión Europea,Consejo europeo,Corte europea,Directiva europea,Draghi,Estado Miembro,Euro,Europa,Europarlamentario,Europea,Europol,Eurozona,Fondos Europeos,Frontex,Gobernanza europea,Legislación europea,Ley Europea,Macron,Mercado Interior de la Unión Europea,Mercado interior,Merkel,Moneda europea,Next Generation EU,Política europea,Regulación europea,Schengen,Seguridad europea,Tratado europeo,Tribunal Europeo,UE,austeridad,ayuda estatal,ayuda pública,beneficiario neto (net recipient),directiva europea,euroesceptico,europeo,euroscetticismo,países frugales (frugal countries),receptor neto,troika (troika),von der Leyen

Swedish gender

EIGE,FEMM,Feminin,Feminism,HBT,HBTIQ,HBTQ,HBTQ+,HTB,HTBIQ,HTBQ,Icke-binär,Kön,Könsrelaterat våld,LGBT,LGBTQ,LGBTQ+,LGBTQIA,LGTB,LGTBI,Maskulin,Pride,abort,autonomi,cisgender,genus,genuskillnad,genusk illnader,genusmångfald,genusneutral,genusrelaterad,genusrelaterat,genusrelation,genusrelationer,genusskillnad,genusskil lnader,hen,homosexuell,identitet,identitetsstörning,inkluderande,inklusion,jämlikhet,jämställdhet,komma ut,kvinnors rättigheter,könsbaserat våld,könsneutral,könsrelation,könsrelationer,lika möjligheter,lika rättigheter,mellan könen,ojämlikhet,pronomen,relatiooner mellan könen,reproduktionsrättigheter,sexistiskt väld,sexuella rättigheter,sexuellt våld,själv-bestämmande,transgender,#MeToo,icke jämställt,jämställdhet mellan könen,kvinnomord,könsskillnader,lika lön,mångfald mellan könen

Swedish europe

#Europeday,#Eu,#Europe,#EuropeanUnion,#eugreendeal,Boris,Brexit,Brussel,ECB,ECB:s,ECD,EU,EU direktiv,EU direktiv EU Direktivet,EU domstolen,EU regelverk,EU-bidrag,EU-fonder,EU-fördrag,EU-insatser,EU-institution,EU-institutionerna,EU-kommissionären,EU-kommissionen,EU-kommissionäre,EU-kommissionärer,EU-

kommissionärerna,EU-lag,EU-lagar,EU-medborgare,EU-medel,EU-parlamentariker,EU-parlamentet,EU-politik,EU-politikerna,EU-rätten,EU-rådet,EU:s,EUs,EUs bidragsfonder,EUs inre marknad,EUs lagar,EUs regelverk,EUs stödpaket,Euro,Europa,Europas,Europeiska Centralbanken,Europeiska centralbanken,Europeiska rådet,Europol,Européer,Eurozonen,Frontex,Inre marknaden,Kommissionen,MEP,Macron,Merkel,Schengen,brexit,eu-valuta europeisk valuta,euro,euro-skepticism,euro-skeptiker,europeisk,europeisk säkerhet,europeiska,europeiskt ledarskap,europeiskt

styre,europé,européer,eurozon,eurozonen,eurozonens,kommissionen,medlemsland,medlemsländer,paneuropeisk (paneuropean),schengen,statsbidrag,svångremspolitik,von der Leyen,åtstramning,åtstramningspolitik

Turkish gender

Akışkan cinsiyet, Avrupa Cinsiyet Eşitliği Enstitüsü, Cinsel sömürü, Cinsiyet, Cinsiyet ayrımına düşmeyen, Cinsiyet dahil, Cinsiyet dengesi, Cinsiyet eşitsizliği, Cinsiyet ifşası, Cinsiyet ilişkileri, Cinsiyet tarafsızlığı, Cinsiyet şiddeti, Cinsiyete dayalı şiddet, Cinsiyetler arası, Cinsiyetçi söylem, Cinsiyetçi şiddet, Dahil etme, Dişi, Equal pay, Eşit fırsatlar, Eşit haklar, Eşit ücret, Eşitlik, Eşitsizlik, Feminizm, Fırsat eşitliği, Gender discrimination, Hak eşitliği, Hate speech, Homoseksüel, Hüviyet, Kadın Hakları ve Cinsiyet Eşitliği komitesi, Kadın hakları, Kadın hakları savunuculuğu, Kadınsı, Kapsama, Kendi kaderini tayin etme, Kimlik, LGBT, LGBT'li birey, Nefret söylemi, Onur, Onur yürüyüşü, Othering, Reproductive health, Sexist discourse, Sexual exploitation, Toplumsal cinsiyet ayrımcılığı, Toplumsal cinsiyet eşitliği, Trans birey, Trans cinsiyet, Transseksüel olmayan, Zamir, cinsiyet gözeten, cinsiyet hakları, dışlama, eril, erkeksi, Çift olmayan, Ötekileştirme, Özerklik, Özgür irade, Üreme hakları, Üreme sağlığı, İkili cinsiyet sisteminin dışında, #MeToo, Cinsiyet ayrımı, Cinsiyet eşitliği, Cinsiyet eşitsizliği, cinsiyet çeşitliliği, eşit ödeme, kadın cinayeti

Turkish europe

9 Mayıs,AB,AB Komisyonu,AB sınırları,AB Üyesi Devletler,AB'nin Başkenti,Almanya,Alım gücü (purchasing power),Avrupa,Avrupa (Europe),Avrupa Birliği,Avrupa Birliği Yasal Düzenlemesi,Avrupa Birliği anlaşması,Avrupa Birliği politikaları,Avrupa Günü,Avrupa Kararnamesi,Avrupa Merkez Bankası,Avrupa Yeşil Anlaşması,Avrupa güvenliği,Avrupa heyeti,Avrupa hukuku,Avrupa konseyi,Avrupa pazarı,Avrupa yardımı/fonları,Avrupa yasası,Avrupa yönetişimi,Avrupa İnsan Hakları mahkemesi,Avrupa şüpheciliği,Batı şüpheciliği,Batıdan gelen ödenekler,Beyin göçü (brain drain),Brexit,Brüksel,Frontex,Genç işsizlik (youth unemployment),Kadın hakları (women's rights),MV,Merkel,Milletvekili,Onur Ayı (Pride month),Onur yürüyüşü (Pride Parade),Schengen,SuTP (Syrians Under Temporary Protection),Ursula von der Leyen,Vekil,Yasak (restriction),avro,devlet yardımı,fon,heyet üyeleri,hoşgörüsüzlük,iltica (asylum-refuge),kadın,kadın cinayetleri,kadın hakları,kararname,kurul,meclis,mevzuat,müktesebat,mülteci,sertlik,tahammülsüzlük,tüzük,ulusal yardım,Üye Devlet,çevre anlaşması,İstanbul Sözleşmesi,İstanbul Sözleşmesi (Istanbul Convention),Şanselör,şiddet (violence)

Newsmedia

The following TwitterHandles are interpreted as newsmedia.

Country	Twitterhandle	Country	Twitterhandle	Country	Twitterhandle
PORTUGAL	@JornalNoticias	ITALY	@Avvenire_Nei	GREECE	@espressonews_gr
PORTUGAL	@Radio_Comercial	ITALY	@qn_lanazione	GREECE	@tovimagr
PORTUGAL	@SICNoticias	ITALY	@qn_carlino	GREECE	@StarChannelGr
PORTUGAL	@cmjornal	ITALY	@Radio24_news	GREECE	@GreeknewsGr
PORTUGAL	@dntwit	ITALY	@giornalissimo	GREECE	@imerisiagr
PORTUGAL	@SPORTTVPortugal	ITALY	@dagospia3	GREECE	@pronewsgr
PORTUGAL	@tvi24pt	ITALY	@Affaritaliani	GREECE	@leftgr
PORTUGAL	@Publico	ITALY	@corrieremilano	GREECE	@Newsgr1
PORTUGAL	@noticiaaominuto	ITALY	@webecodibergamo	GREECE	@inewsgr
PORTUGAL	@abolapt	ITALY	@qnazionale	GREECE	@dikaiologitika
PORTUGAL	@observadorpt	ITALY	@UrbanPost_It	CZECH	@iDNEScz
PORTUGAL	@Record_Portugal	ITALY	@ilsussidiario	CZECH	@novinkycz
PORTUGAL	@ojogo	ITALY	@TheItalianTimes	CZECH	@blesk_cz
PORTUGAL	@expresso	ITALY	@virgilio_it	CZECH	@Aktualnecz
PORTUGAL	@CMTVNoticias	GERMANY	@tagesschau	CZECH	@SeznamZpravy
PORTUGAL	@SolOnline	GERMANY	@derspiegel	CZECH	@RESPEKT_CZ
PORTUGAL	@Visao_pt	GERMANY	@BILD	CZECH	@Hospodarky

PORTUGAL	@RTPNoticias	GERMANY	@dwnews	CZECH	@EuroZpravycz
PORTUGAL	@TSFRadio	GERMANY	@zeitonline	CZECH	@echo24cz
PORTUGAL	@ojeconomico	GERMANY	@welt	CZECH	@E15news
PORTUGAL	@Renascenca	GERMANY	@SZ	CZECH	@infocz_web
PORTUGAL	@JNegocios	GERMANY	@ZDFheute	CZECH	@lidovky
PORTUGAL	@dnoticiaspt	GERMANY	@sternde	CZECH	@Tydencz
PORTUGAL	@dinheiro_vivo	GERMANY	@RTLde	CZECH	@denikcz
PORTUGAL	@revistaSABADO	GERMANY	@ntvde	CZECH	@DReferendum
PORTUGAL	@TimeOutLisboa	GERMANY	@rtl_aktuell	CZECH	@A2larm
PORTUGAL	@antena1rtp	GERMANY	@faznet	BELGIUM	@HLN_BE
PORTUGAL	@itwitting	GERMANY	@FOCUS_TopNews	BELGIUM	@een
PORTUGAL	@NoticiasMagazin	GERMANY	@tazgezwitscher	BELGIUM	@RTBFinfo
PORTUGAL	@asbeiras	GERMANY	@de_rt_com	BELGIUM	@vrtnws
PORTUGAL	@Lusa_noticias	GERMANY	@handelsblatt	BELGIUM	@lesoir
SPAIN	@el_pais	GERMANY	@Tagesspiegel	BELGIUM	@lavenir_net
SPAIN	@LaVanguardia	GERMANY	@morgenpost	BELGIUM	@destandaard
SPAIN	@EspanaDiarioES	GERMANY	@netzpolitik	BELGIUM	@7sur7
SPAIN	@elmundoes	GERMANY	@tonline	BELGIUM	@Play4_be
SPAIN	@telecincoes	GERMANY	@ndr	BELGIUM	@demorgen
SPAIN	@abc_es	GERMANY	@dpa	BELGIUM	@vivacite
SPAIN	@HuffPost	GERMANY	@heiseonline	BELGIUM	@gva
SPAIN	@publico_es	GERMANY	@rponline	BELGIUM	@sudpresseonline
SPAIN	@A3Noticias	GERMANY	@WAZ_Redaktion	BELGIUM	@hbvl
SPAIN	@elconfidencial	GERMANY	erbb24	BELGIUM	@Knack
SPAIN	@20m	GERMANY	@RND de	BELGIUM	@lapremiere
SPAIN	@okdiario	GERMANY	ecapitalMagazin	BELGIUM	@cinetelerevue
SPAIN	@europapress	GERMANY	@ndpolitik	BELGIUM	@BrusselsTimes
SPAIN	@elperiodico	GREECE	@GreekReporter	BELGIUM	@lecho
SPAIN	@elespanolcom	GREECE	@newsbombgr	BELGIUM	@tijd
SPAIN	@noticias cuatro	GREECE	@ANT1TV	BELGIUM	@metrobelgique
SPAIN	@informativost5	GREECE	@protothema	BELGIUM	@Jobat
SPAIN	@eldiarioes	GREECE	@NewsItFeed	BELGIUM	@HLN
SPAIN	@larazon_es	GREECE	@vice_gr	BELGIUM	@DeGentenaar
SPAIN	@El_Plural	GREECE	@News247gr	BELGIUM	@AntenneCentreTV
SPAIN	@_infoLibre	GREECE	@CNNgreece	BELGIUM	@LaGazette_be
SPAIN	@expansioncom	GREECE	@Real_gr	BELGIUM	@metrobelgie
SPAIN	@elEconomistaes	GREECE	@Kathimerini gr	BELGIUM	@GRENZECHOnet
SPAIN	@diariARA	GREECE	@TOPONTIKI	BELGIUM	@moustiquemag
SPAIN	@EFEnoticias	GREECE	@TheTOC_gr	SWEDEN	@Expressen
ITALY	@fanpage	GREECE	@skaigr	SWEDEN	@Aftonbladet
ITALY	@Corriere	GREECE	@ertofficial_	SWEDEN	@expressenstory
ITALY	@fattoquotidiano	GREECE	@in gr	SWEDEN	@SportExpressen
ITALY	@notizieit	GREECE	@Contragr	SWEDEN	@dagensnyheter
ITALY	@LaRepubblica_it	GREECE	@iefimerida	SWEDEN	@metromode_se
ITALY	@MediasetTgcom24	GREECE	@newsbeast	SWEDEN	@GoteborgsPosten
ITALY	@Agenzia Ansa	GREECE	@enikos_gr	SWEDEN	@SvD
ITALY	@LaStampa	GREECE	@HuffPostGreece	SWEDEN	@ExpressenNoje
ITALY	@Lastampa @HuffPostItalia	GREECE	@zougla_online	SWEDEN	@dagensindustri
IIALI	withir ostitalia	GNLLCE	@zougia_orinitie	SVVLDEIN	@uagensilluusti1

ITALY	@ilmessaggeroit	GREECE	@typosthes	SWEDEN	@AftonbladetNoje
ITALY	@mattinodinapoli	GREECE	@ta_nea	SWEDEN	@GTnyheter
ITALY	@ilgiornale	GREECE	@EFSYNTAKTON	SWEDEN	@Kvallsposten
ITALY	@leggoit	GREECE	@ThePressProject	SWEDEN	@ABDebatt
ITALY	@RaiNews	GREECE	@apokalyptikodel	SWEDEN	@AftonbladetBoom
ITALY	@tpi	GREECE	@parapolitika	SWEDEN	@ExpressenDebatt
ITALY	@ilpost	GREECE	@protagongr	SWEDEN	@AftonbladetK
ITALY	@espressonline	GREECE	@capitalgr	SWEDEN	@bladetledare
ITALY	@chenews_it	GREECE	@newpostgr	SWEDEN	@AftonbladetPlus
ITALY	@TgLa7	GREECE	@LastNewsGr	SWEDEN	@ExpressenLedare
ITALY	@Adnkronos	GREECE	@ethnosgr	SWEDEN	@ExpressenKultur
ITALY	@Gazzettino	GREECE	@insomniagr	SWEDEN	@Folkbladet_news
ITALY	@Linkiesta	GREECE	@tvxs	SWEDEN	@Folkbladet
ITALY	@UnioneSarda	GREECE	@naftemporikigr		
ITALY	@ilsecoloxix	GREECE	@stokokkino1055		

Sentiment Lexicons

The sentiment lexicons for each language are too large to show in this appendix, as both positive and negative word-sets generally contain well over 1000 items per language. The sentiment lexicons used in this project can be downloaded from https://www.kaggle.com/datasets/rtatman/sentiment-lexicons-for-81-languages?resource=download.

Results of training the Algorithms by language and type

Lines in red indicate generally that no reliable algorithm could be created, either because of absent or sparse source data or because of a too low ROC AUC (<0.7). Purple lines indicate that while the result may seem reasonable the training set may be too small to have a reliable algorithm (possible overfitting).

Table 5. Validation metrics for Machine learning models

Lang	Prediction	Model	ROC AUC	Acc.	Prec.	Recall	Speci.	TP	TN	FP	FN	Train	Test	Base
ES	OnTopic	XGB	0,957	0,8905	0,8788	0,8923	0,8889	58	64	8	7	589	137	726
ES	Values	RF	0,889	0,8594	0,8438	0,8710	0,8485	27	28	5	4	337	64	401
ES	NewSocMov	RF	0,768	0,7000	0,8000	0,6667	0,7500	16	12	4	8	372	40	412
ES	PublicSph	LR	0,818	0,7606	0,8438	0,6923	0,8438	27	27	5	12	330	71	401
ES	People	LR	0,825	0,7377	0,8125	0,5000	0,9143	13	32	3	13	739	61	800
ES	Law	GBT	0,939	0,8630	0,9211	0,8333	0,9032	35	28	3	7	727	73	800
ES	IsEurope	GBT	0,993	0,9816	1,0000	0,9670	1,0000	88	72	0	3	637	163	800
ES	Culture													0
ES	Identity													0
BE	OnTopic	LR	0,955	0,8711	0,8440	0,9200	0,8191	92	77	17	8	825	194	1019
BE	IsEurope	XGB	0,988	0,9816	0,9767	0,9882	0,9744	84	76	2	1	637	163	800
BE	People	LR	0,785	0,7708	0,8235	0,6364	0,8846	14	23	3	8	752	48	800
BE	Law	GBT	0,728	0,6984	0,7143	0,7353	0,6552	25	19	10	9	735	63	798
BE	PublicSph	XGB	0,798	0,7451	0,8333	0,6000	0,8846	15	23	3	10	349	51	400
BE	Values	RF	0,717	0,6341	0,7333	0,5000	0,7895	11	15	4	11	359	41	400

BE	NewSocMov	XGB	0,677	0,6829	0,7692	0,5000	0,8571	10	18	3	10	360	41	401
BE	Culture												0	0
BE	Identity	XGB	0,744	0,6104	0,7619	0,3902	0,8611	16	31	5	25	323	400	723
DE	OnTopic	GBT	0,948	0,8807	0,9177	0,8480	0,9167	145	143	13	26	1395	327	1722
DE	IsEurope	GBT	0,948	0,9167	0,9518	0,8778	0,9556	79	86	4	11	736	180	916
DE	People	GBT	0,772	0,6934	0,7544	0,6056	0,7879	43	52	14	28	661	137	798
DE	Law	LR	0,805	0,7126	0,7222	0,6341	0,7826	26	36	10	15	711	87	798
DE	PublicSph											0	0	0
DE	Values	GBT	0,895	0,7966	0,8214	0,7667	0,8276	23	24	5	7	341	59	400
DE	NewSocMov	GBT	0,830	0,7595	0,8286	0,6905	0,8378	29	31	6	13	321	79	400
DE	Identity	LR	0,817	0,8065	0,8235	0,6087	0,9231	14	36	3	9	338	62	400
DE	Culture	LR	0,835	0,7391	0,7222	0,6500	0,8077	13	21	5	7	354	46	400
IT	OnTopic	GBT	0,983	0,9391	0,9245	0,9423	0,9365	49	59	4	3	487	115	602
IT	IsEurope	GBT	0,973	0,9709	1,0000	0,9425	1,0000	82	85	0	5	690	172	862
IT	People	LR	0,855	0,7688	0,8030	0,6883	0,8434	53	70	13	24	701	160	861
IT	Law	GBT	0,804	0,7586	0,7708	0,7872	0,7250	37	29	11	10	775	87	862
IT 	PublicSph	RF	0,792	0,7833	0,7381	0,9394	0,5926	31	16	11	2	331	60	391
IT	Values	XGB	0,779	0,7368	0,8065	0,7353	0,7391	25	17	6	9	334	57	391
IT 	NewSocMov	LR	0,848	0,7674	0,9167	0,5500	0,9565	11	22	1	9	348	43	391
IT 	Identity	LR	0,835	0,8364	0,8000	0,8889	0,7857	24	22	6	3	336	55	391
IT 	Culture	LR	0,931	0,8605	0,8947	0,8095	0,9091	17	20	2	4	347	43	390
PT	OnTopic	LR	0,949	0,8926	0,9298	0,8548	0,9322	53	55	4	9	568	121	689
PT	IsEurope 	GBT	0,986	0,9451	0,9896	0,9223	0,9836	95	60	1	8	638	164	802
PT	People	LR	0,754	0,6923	0,7647	0,6190	0,7778	13	14	4	8	763	39	802
PT	Law	LR	0,942	0,8810	0,9024	0,8605	0,9024	37	37	4	6	717	84	801
PT	PublicSph	RF	0,844	0,7333	0,7500	0,6429	0,8125	9	13	3	5	370	30	400
PT	Values	RF	0,856	0,7885	0,8636	0,7037	0,8800	19	22	3	8	349	52	401
PT	NewSocMov	LR	0,859	0,7671	0,8182	0,7105	0,8286	27	29	6	11	329	73	402
PT	Identity	LR	0,938	0,8913	0,8696	0,9091	0,8750	20	21	3	2	356	46	402
PT	Culture	LR	0,888	0,8154	0,7917	0,7308	0,8718	19	34	5	7	336	65	401
GR	OnTopic	LR	0,932	0,9013	0,9000	0,8873	0,9136	63	74	7	8	562	714	1276
GR	IsEurope	LR	0,949	0,8920	0,9109	0,9020	0,8784	92	65	9	10	711	176	887
GR	People	LR	0,910	0,8182	0,8871	0,6875	0,9271	55	89	7	25	710	176	886
GR GR	Law PublicSph	LR RF	0,851	0,7711	0,7429	0,7222	0,8085	26	38	9	10	804	83	887
GR	Values	RF	0,639	0,5926	0,5333	0,6667	0,5333	8	8	7	4	381	27	408
GR	NewSocMov	LR	0,873	0,8312	0,8400	0,7000	0,9149	21	43	4	9	331	77	408
GR	Identity	LR	0,962	0,8906	0,9615	0,8065	0,9697	25	32	1	6	344	64	408
GR	Culture	LR	0,875	0,7692	1,0000	0,6250	1,0000	5	5	0	3	395	13	408
SE	OnTopic	GBT	0,984	0,9250	0,9600	0,9231	0,9286	24	13	1	2	368	40	408
SE	IsEurope	GBT	0,929	0,8553	0,9306	0,7882	0,9324	67	69	5	18	611	159	770
SE	People	LR	0,980	0,9817	1,0000	0,9674	1,0000	89	72	0	3	639	164	803
SE	Law	RF	0,773	0,6286	0,8462	0,3143	0,9429	11	33	2	24	732	70	802
SE	PublicSph	LR	0,857	0,7941	0,8800	0,7174	0,8846	66	69	9	26	632	170	802
SE	Values	RF	0,833	0,7600	0,7647	0,7222	0,7949	26	31	8	10	324	75	399
SE	NewSocMov	XGB	0,719	0,7143	0,7500	0,7500	0,6667	21	14	7	7	351	49	400
SE	Identity	RF	0,892	0,8103	0,8636	0,7037	0,9032	19	28	3	8	341	58	399
SE	Culture	LR	0,926	0,8545	0,9167	0,7857	0,9259	22	25	2	6	345	55	400
			0,832	0,7660	0,8000	0,6957	0,8333	16	20	4	7	354	47	401

CZ	OnTopic	GBT	0,920	0,8538	0,9167	0,7971	0,9180	55	56	5	14	637	130	767
CZ	IsEurope	GBT	0,930	0,8901	0,9368	0,8641	0,9241	89	73	6	14	745	182	927
CZ	People	GBT	0,853	0,7630	0,8642	0,6422	0,8922	70	91	11	39	789	211	1000
CZ	Law	LR	0,819	0,7630	0,8871	0,6180	0,9167	55	77	7	34	750	173	923
CZ	PublicSph	RF	0,828	0,7105	0,7778	0,6667	0,7647	14	13	4	7	366	38	404
CZ	Values	RF	0,743	0,7576	0,7619	0,5926	0,8718	16	34	5	11	338	66	404
CZ	NewSocMov	LR	0,710	0,6735	0,7500	0,4091	0,8889	9	24	3	13	355	49	404
CZ	Identity	XGB	0,823	0,7231	0,7391	0,5862	0,8333	17	30	6	12	339	65	404
CZ	Culture	LR	0,817	0,7879	0,7838	0,8286	0,7419	29	23	8	6	338	66	404
TR	OnTopic	RF	0,929	0,8586	0,8780	0,8090	0,9020	72	92	10	17	732	191	923
TR	IsEurope	GBT	0,959	0,9091	0,9175	0,9271	0,8841	89	61	8	7	661	165	826
TR	People	LR	0,759	0,7317	0,7632	0,5472	0,8714	29	61	9	24	701	123	824
TR	Law	RF	0,779	0,7500	0,7671	0,6829	0,8111	56	73	17	26	653	172	825
TR	PublicSph	RF	0,746	0,6703	0,7222	0,5652	0,7778	26	35	10	20	309	91	400
TR	Values	RF	0,788	0,6716	0,7500	0,5294	0,8182	18	27	6	16	333	67	400
TR	NewSocMov	LR	0,812	0,7407	0,7778	0,6829	0,8000	28	32	8	13	319	81	400
TR	Identity	LR	0,727	0,6500	0,7500	0,4839	0,8276	15	24	5	16	340	60	400
TR	Culture	RF	0,865	0,7460	0,8148	0,6667	0,8333	22	25	5	11	367	63	430
BG	OnTopic	XGB	0,928	0,8643	0,9107	0,8361	0,8990	102	89	10	20	901	221	1122
BG	IsEurope	XGB	0,954	0,8617	0,9318	0,8039	0,9302	82	80	6	20	782	188	970
BG	People	LR	0,750	0,6641	0,7317	0,4839	0,8333	30	55	11	32	842	128	970
BG	Law	LR	0,847	0,7938	0,8043	0,7708	0,8163	74	80	18	22	776	194	970
BG	PublicSph	XGB	0,697	0,6389	0,6429	0,5294	0,7368	9	14	5	8	363	36	399
BG	Values	LR	0,880	0,7969	0,7576	0,8333	0,7647	25	26	8	5	336	64	400
BG	NewSocMov	XGB	0,725	0,7500	0,8333	0,5000	0,9286	5	13	1	5	376	24	400
BG	Identity	LR	0,795	0,8077	0,8125	0,6500	0,9063	13	29	3	7	348	52	400
BG	Culture	LR	0,798	0,7273	0,7222	0,7647	0,6875	13	11	5	4	367	33	400

Tables related to analysis:

Table 6. Percentage occurrence of social media representations among all posts for each country

			New social		
Country	Identity	Law	movements	People	Values
BE	21.5	30.2	0	39.5	29.8
BG	7.5	2.4	0	14.6	3.7
CZ	42.8	30.9	10.2	15.2	7.4
DE	26.5	24.5	29.1	74.5	50.9
ES	0	37.9	34.4	25.4	44.3
GR	0	10.3	34.8	45.2	5.5
IT	33.7	16.1	14.7	18.2	55.6
PT	44.9	16.3	22.7	19.2	29.5
SE	45.5	12.3	18.2	14.6	31
TR	25.3	28.5	22.2	8.2	25.5

OLS regressions supporting results of Between country analysis:

Table 7. Results from OLS regressions for assessing difference between Europe and non-Europe discussions with Identity, Law, News social movements, People, or Values as the dependent variable.

Variable	Identity	Law	New social movements	People	Values
BE_EUR	-0.0084	-0.0424	-0.0000	0.1209***	0.2483***
	(0.0257)	(0.0262)	(0.0000)	(0.0305)	(0.0255)
BG_EUR	0.0151	0.2968***	0.0000***	0.3511***	0.1779**
	(0.0609)	(0.0925)	(0.0000)	(0.0821)	(0.0802)
CZ_EUR	-0.0404*	0.0834***	-0.0476***	0.0032	0.2872***
	(0.0233)	(0.0278)	(0.0125)	(0.0210)	(0.0238)
DE_EUR	-0.1407***	0.1306***	0.0324	-0.0163**	0.1732***
	(0.0197)	(0.0208)	(0.0235)	(0.0070)	(0.0206)
ES_EUR	-0.0000***	0.1598***	-0.0123	0.1091***	0.2851***
	(0.0000)	(0.0163)	(0.0141)	(0.0143)	(0.0112)
GR_EUR	0.0000***	0.2020***	-0.1795***	-0.4088***	0.1156***
	(0.0000)	(0.0127)	(0.0141)	(0.0102)	(0.0115)
IT_EUR	-0.0136*	0.0257***	-0.1154***	-0.0091	-0.0111
	(0.0076)	(0.0062)	(0.0051)	(0.0064)	(0.0072)
PT_EUR	-0.1255***	0.0856***	-0.0373*	-0.0587***	0.0967***
	(0.0239)	(0.0212)	(0.0199)	(0.0173)	(0.0236)
SE_EUR	-0.2682***	0.1257***	-0.0300	-0.0696***	0.2170***
	(0.0255)	(0.0265)	(0.0223)	(0.0167)	(0.0234)
TR_EUR	-0.0811***	0.1242***	0.2161***	-0.0193	0.0029
	(0.0210)	(0.0208)	(0.0177)	(0.0141)	(0.0207)
BE	-0.0880***	0.0982***	-0.0873***	0.2878***	0.0180
	(0.0190)	(0.0180)	(0.0113)	(0.0154)	(0.0185)
BG	-0.2283***	-0.1921***	-0.0873***	0.0429***	-0.2201***
	(0.0195)	(0.0163)	(0.0113)	(0.0164)	(0.0175)
CZ	0.1252***	0.0986***	0.0157	0.0577***	-0.1871***
	(0.0174)	(0.0163)	(0.0116)	(0.0120)	(0.0165)
DE	-0.0097	0.0106	0.1972***	0.6543***	0.2205***
	(0.0199)	(0.0180)	(0.0154)	(0.0117)	(0.0195)
ES	-0.3035***	0.1621***	0.2570***	0.1539***	0.1747***
	(0.0169)	(0.0161)	(0.0118)	(0.0119)	(0.0167)
GR	-0.3035***	-0.1251***	0.2788***	0.3985***	-0.2091***
	(0.0169)	(0.0159)	(0.0125)	(0.0126)	(0.0165)
IT	0.0365**	-0.0535***	0.0882***	0.0908***	0.3065***
	(0.0174)	(0.0160)	(0.0118)	(0.0120)	(0.0167)
PT	0.1736***	-0.0642***	0.1481***	0.1112***	0.0208
	(0.0205)	(0.0180)	(0.0150)	(0.0146)	(0.0195)
SE	0.1594***	-0.0884***	0.0955***	0.0545***	0.0514***
	(0.0177)	(0.0161)	(0.0120)	(0.0121)	(0.0168)
Intercept	0.3035***	0.2080***	0.0873***	0.0938***	0.2526***
	(0.0169)	(0.0157)	(0.0113)	(0.0115)	(0.0163)
R-squared	0.2743	0.0896	0.0898	0.1393	0.2453
R-squared					
Adj.	0.2741	0.0893	0.0895	0.1391	0.2451
N	62610	62610	62610	62610	62610

Table 8. Results from OLS regressions for assessing difference between media and non-media with Identity, Law, News social movements, People, or Values as the dependent variable.

Variable	Identity	Law	New social	People	Values
DE MED	0.0202	0.0063	movements	0.0205	0.2222***
BE_MED	-0.0292	0.0063	0.0000***	0.0285	-0.2322***
DC MED	(0.0199)	(0.0211)	(0.0000)	(0.0246)	(0.0170)
BG_MED	0.4752***	0.1800*	-0.0000***	0.2855***	0.0259
67 MED	(0.1109)	(0.1007)	(0.0000)	(0.1048)	(0.0608)
CZ_MED	-0.2744***	0.1211**	-0.0294	0.1982***	0.0868**
DE MED	(0.0384)	(0.0565)	(0.0283)	(0.0539)	(0.0395)
DE_MED	-0.0084	-0.0495**	0.1076***	0.0041	-0.1521***
	(0.0262)	(0.0225)	(0.0282)	(0.0049)	(0.0279)
ES_MED	0.0000***	0.1305***	-0.0121	0.0677***	0.0755***
	(0.0000)	(0.0097)	(0.0084)	(0.0083)	(0.0088)
GR_MED	0.0000***	0.0578***	-0.0990***	-0.0207	0.0458***
	(0.0000)	(0.0138)	(0.0196)	(0.0203)	(0.0122)
IT_MED	-0.0338***	0.0530***	-0.0839***	0.0715***	-0.1404***
	(0.0098)	(0.0085)	(0.0066)	(0.0092)	(0.0100)
PT_MED	-0.1066***	-0.0357*	0.0191	-0.0641***	-0.1918***
	(0.0249)	(0.0190)	(0.0215)	(0.0177)	(0.0199)
SE_MED	-0.0674**	0.0509**	-0.0046	0.0082	-0.0018
	(0.0314)	(0.0241)	(0.0242)	(0.0226)	(0.0256)
TR_MED	-0.0511*	0.1227***	0.1680***	0.0489**	0.0699**
	(0.0274)	(0.0308)	(0.0308)	(0.0221)	(0.0297)
BE	-0.0404***	0.0331**	-0.1970***	0.3145***	0.0977***
	(0.0142)	(0.0145)	(0.0104)	(0.0128)	(0.0144)
BG	-0.1941***	-0.2462***	-0.1970***	0.0666***	-0.2072***
	(0.0142)	(0.0124)	(0.0104)	(0.0136)	(0.0127)
CZ	0.1688***	0.0409***	-0.0951***	0.0755***	-0.1714***
	(0.0116)	(0.0121)	(0.0107)	(0.0078)	(0.0110)
DE	0.0056	-0.0152	0.0794***	0.6694***	0.2850***
	(0.0147)	(0.0142)	(0.0144)	(0.0073)	(0.0147)
ES	-0.2606***	0.0883***	0.1488***	0.1668***	0.1851***
	(0.0110)	(0.0119)	(0.0110)	(0.0077)	(0.0114)
GR	-0.2606***	-0.1677***	0.1572***	0.3781***	-0.1921***
	(0.0110)	(0.0116)	(0.0116)	(0.0085)	(0.0110)
IT	0.0802***	-0.1130***	-0.0397***	0.0986***	0.3298***
	(0.0115)	(0.0115)	(0.0108)	(0.0076)	(0.0113)
PT	0.2100***	-0.0968***	0.0261*	0.1301***	0.0902***
	(0.0158)	(0.0145)	(0.0141)	(0.0113)	(0.0154)
SE	0.1966***	-0.1455***	-0.0149	0.0713***	0.0659***
	(0.0121)	(0.0117)	(0.0111)	(0.0078)	(0.0116)
Intercept	0.2606***	0.2673***	0.1970***	0.0747***	0.2444***
с. сорс	(0.0110)	(0.0112)	(0.0104)	(0.0070)	(0.0108)
R-squared	0.2725	0.0870	0.0838	0.1259	0.2401
R-squared	0.2723	0.0670	0.0030	0.1233	0.2401
Adj.	0.2722	0.0868	0.0835	0.1257	0.2399
N	62610	62610	62610	62610	62610
- -	02010	02010	02010	02010	02010

Table 9. Results from OLS regressions for assessing difference between Europe and non-Europe discussions with Positive, Neutral, and Negative sentiment as the dependent variable.

Variable	Positive	Neutral	Negative
BE_EUR	0.0213	-0.0312	0.0099
	(0.0228)	(0.0275)	(0.0173)
BG_EUR	0.0258	-0.0698	0.0440
	(0.0544)	(0.0745)	(0.0542)
CZ_EUR	0.0344**	-0.0415**	0.0071
	(0.0165)	(0.0186)	(0.0095)
DE_EUR	0.0543***	-0.0435*	-0.0108
	(0.0201)	(0.0223)	(0.0115)
ES_EUR	0.0037	0.0022	-0.0060
	(0.0061)	(0.0127)	(0.0115)
GR_EUR	0.0211***	-0.0078	-0.0133***
	(0.0060)	(0.0073)	(0.0043)
IT_EUR	0.0949***	-0.0787***	-0.0161***
	(0.0070)	(0.0078)	(0.0043)
PT_EUR	0.0454***	0.0028	-0.0482***
	(0.0157)	(0.0197)	(0.0132)
SE_EUR	0.0080	-0.0096	0.0015
	(0.0255)	(0.0265)	(0.0089)
TR_EUR	0.0701***	-0.0357	-0.0344**
	(0.0155)	(0.0220)	(0.0169)
BE	0.0304**	0.0290	-0.0594***
	(0.0122)	(0.0187)	(0.0151)
BG	-0.0211*	0.1155***	-0.0944***
	(0.0122)	(0.0186)	(0.0148)
CZ	-0.0113	0.1010***	-0.0897***
	(0.0103)	(0.0169)	(0.0142)
DE	0.0424***	0.0145	-0.0569***
	(0.0127)	(0.0191)	(0.0153)
ES	-0.0244**	0.0074	0.0170
	(0.0102)	(0.0170)	(0.0144)
GR	-0.0414***	0.1211***	-0.0797***
	(0.0102)	(0.0169)	(0.0143)
IT	0.0370***	0.0045	-0.0415***
	(0.0105)	(0.0171)	(0.0144)
PT	0.0006	0.0087	-0.0093
	(0.0117)	(0.0192)	(0.0162)
SE	0.1137***	-0.0239	-0.0898***
	(0.0109)	(0.0173)	(0.0142)
Intercept	0.0508***	0.8432***	0.1059***
	(0.0101)	(0.0167)	(0.0142)
R-squared	0.0477	0.0289	0.0316
R-squared			
Adj.	0.0474	0.0286	0.0313

Table 10. Results from OLS regressions for assessing difference between media and non-media with Positive, Neutral, and Negative sentiment as the dependent variable.

Variable	Positive	Neutral	Negative
BE_MED	-0.0357**	0.0268	0.0089
	(0.0143)	(0.0190)	(0.0134)
BG_MED	0.0539	-0.0408	-0.0131***
	(0.0801)	(0.0802)	(0.0046)
CZ_MED	-0.0083	-0.0077	0.0160
	(0.0225)	(0.0313)	(0.0225)
DE_MED	-0.1020***	0.0762***	0.0258
	(0.0115)	(0.0201)	(0.0170)
ES_MED	-0.0019	-0.0259***	0.0279***
	(0.0033)	(0.0079)	(0.0074)
GR_MED	-0.0039	-0.0054	0.0093
	(0.0041)	(0.0091)	(0.0082)
IT_MED	-0.0202***	0.0419***	-0.0217***
	(0.0074)	(0.0087)	(0.0052)
PT_MED	-0.0407***	0.0312	0.0095
	(0.0110)	(0.0194)	(0.0167)
SE_MED	-0.0348	0.0371	-0.0023
	(0.0234)	(0.0245)	(0.0082)
TR_MED	0.0465*	-0.0194	-0.0271
	(0.0269)	(0.0319)	(0.0200)
BE	0.0028	0.0398***	-0.0426***
	(0.0115)	(0.0147)	(0.0103)
BG	-0.0581***	0.1335***	-0.0754***
	(0.0110)	(0.0143)	(0.0099)
CZ	-0.0470***	0.1192***	-0.0722***
	(0.0089)	(0.0119)	(0.0088)
DE	0.0307**	0.0145	-0.0452***
	(0.0119)	(0.0150)	(0.0101)
ES	-0.0606***	0.0314***	0.0291***
	(0.0088)	(0.0121)	(0.0092)
GR	-0.0758***	0.1399***	-0.0642***
	(0.0088)	(0.0119)	(0.0089)
IT	0.0265***	-0.0011	-0.0254***
	(0.0091)	(0.0122)	(0.0090)
PT	-0.0175	0.0222	-0.0047
	(0.0110)	(0.0150)	(0.0113)
SE	0.0781***	-0.0059	-0.0722***
	(0.0096)	(0.0125)	(0.0088)
Intercept	0.0876***	0.8239***	0.0885***
	(0.0087)	(0.0117)	(0.0087)
R-squared	0.0419	0.0272	0.0318

R-squared

Adj.0.04160.02690.0315N626106261062610