Gender National Report, Sweden

Emma Björner, Senior Analyst, IKED

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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 self-defined 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

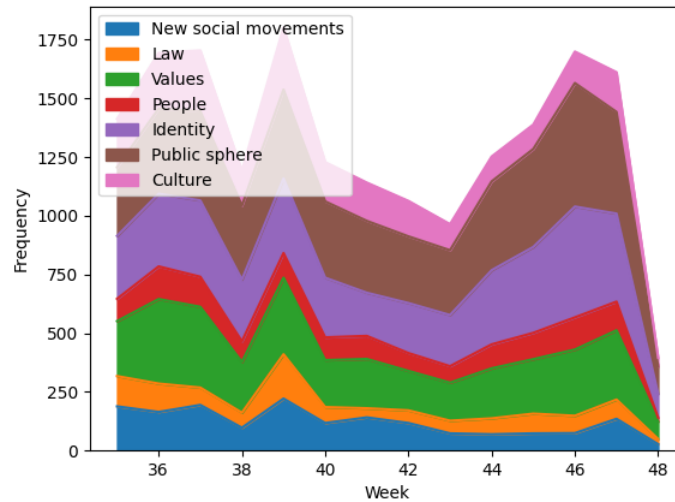### 2.1 Descriptive statistics

Figure 1. Social Media Representations - Distribution among Social Media Representations
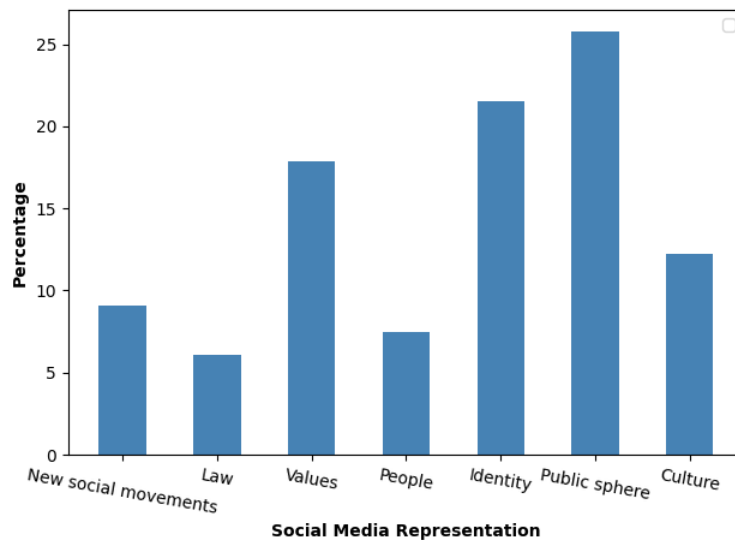
Notes: Created with data from Table 3 presented in Appendix A. N = 18544.

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.
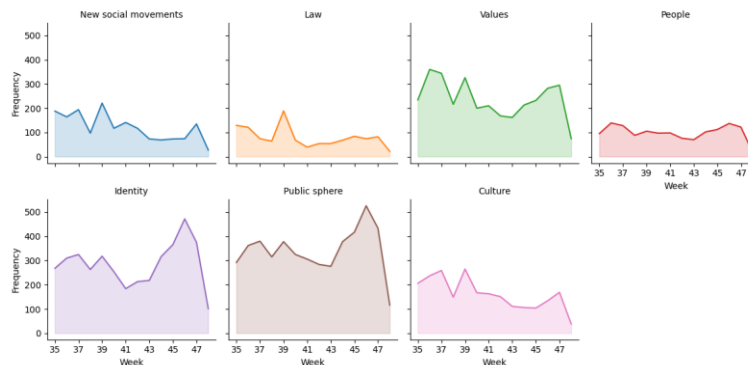
Figure 2. Social Media Representations - Relative importance over time

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.
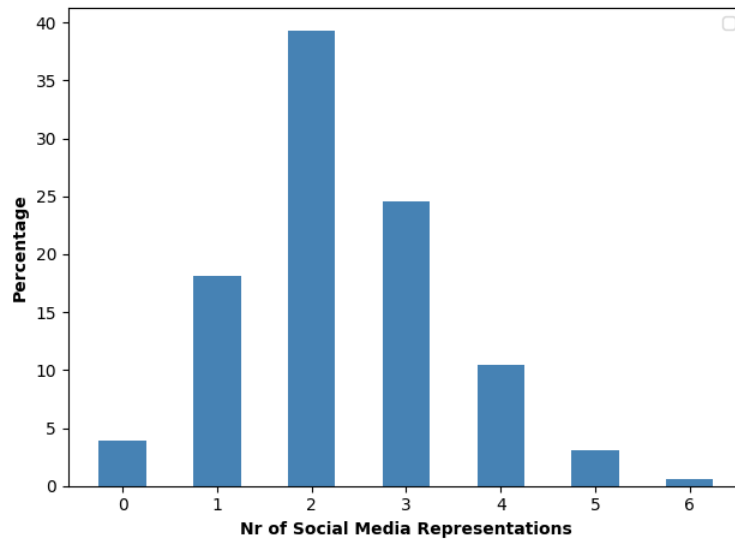
Figure 3. Social Media Representations - Evolution over time

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.

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

Notes: Created with data from Table 5 presented in Appendix A. N = 8018.

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**
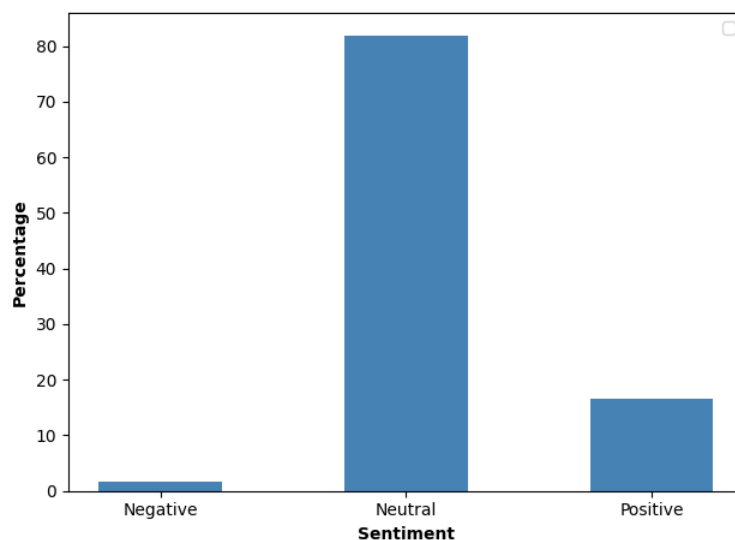
Notes: Created with data from Table 6 presented in Appendix A. N = 8018.

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
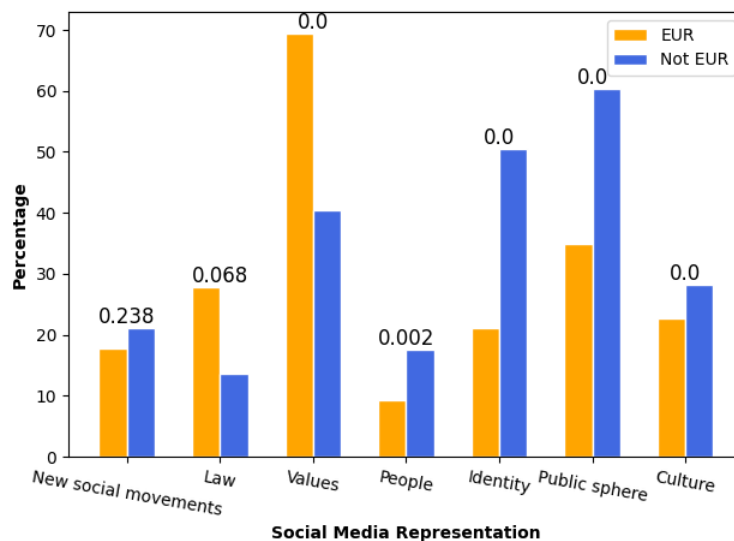
Notes: Created with data from Table 7 and Table 8 presented in Appendix B. P value from chi-squared test of equal proportions between Europe and Not Europe in variable above each pair of bars. N = 8018 in each pair of comparison.

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**
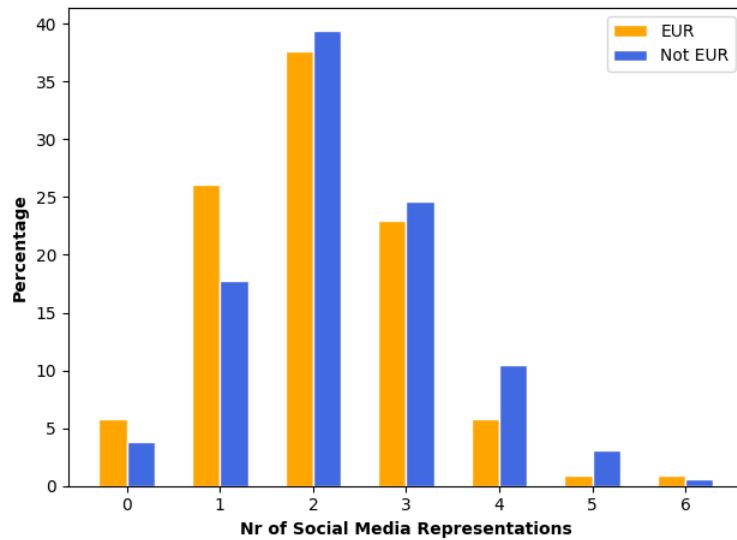
Notes: Created with data from Table 9 and Table 10 presented in Appendix B. N = 8018.

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
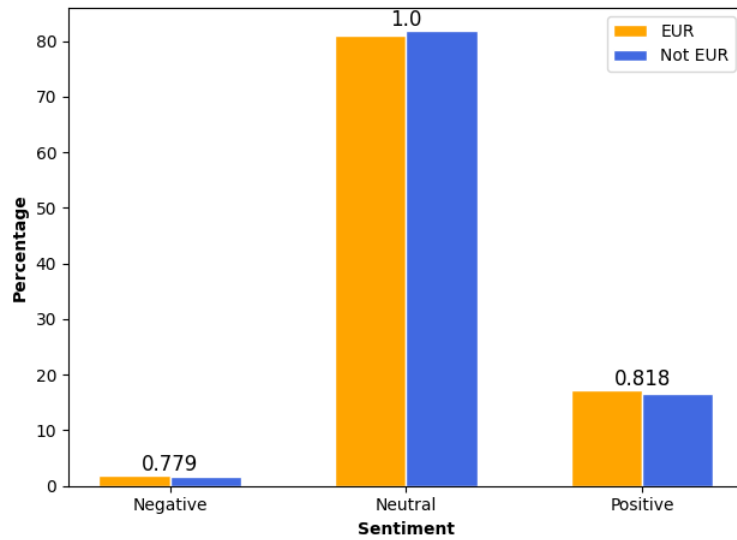
Notes: Created with data from Table 11 and Table 12 presented in Appendix B. P value from chi-squared test of equal proportions between Europe and Not Europe in variable above pair of bars. N = 8018.

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**
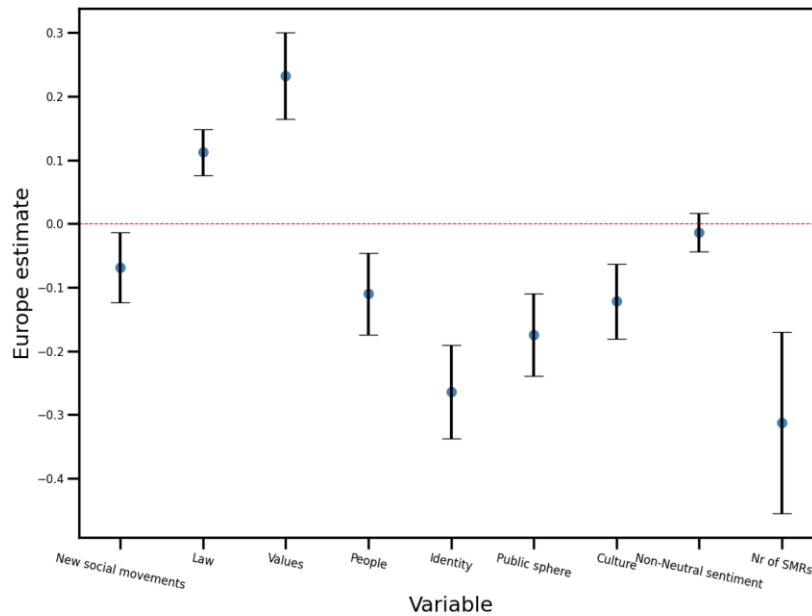
Notes: Coefficient estimates and their 95 % confidence intervals of Europe variable from Model 3 of Table 13, Table 14, Table 15, Table 16, Table 17, Table 18, Table 19, Table 20, Table 21 presented in Appendix B. N = 8018 in each estimation.

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
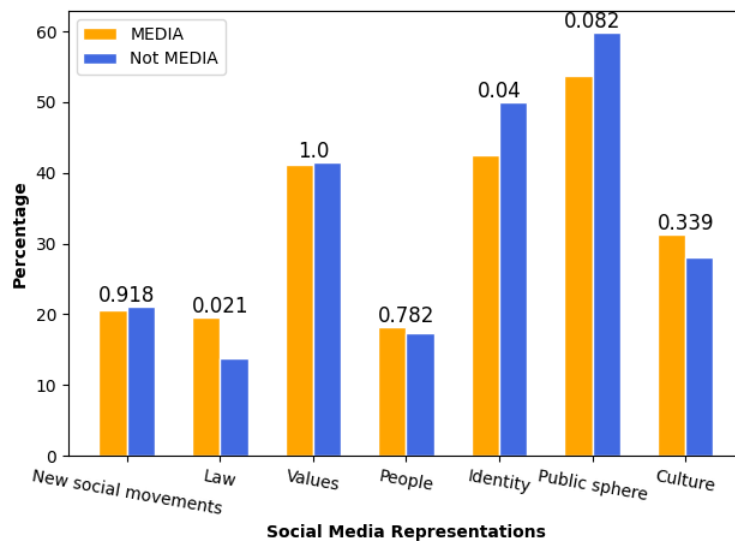
Notes: Created with data from Table 22 and Table 23 presented in Appendix C. P value from chi-squared test of equal proportions between Media and Not Media in variable above each pair of bars. N = 8018 in each pair of comparison.

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.

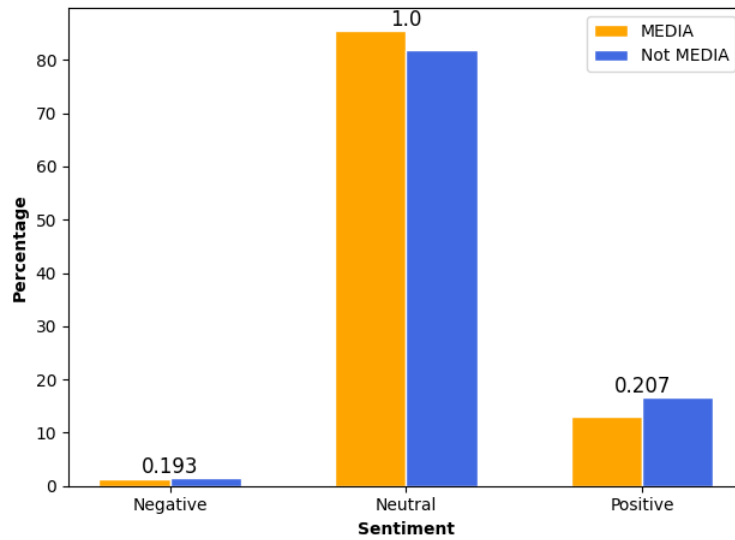**Figure 11. Number of Social Media Representations - % occurrence among Media and Not Media posts respectively**
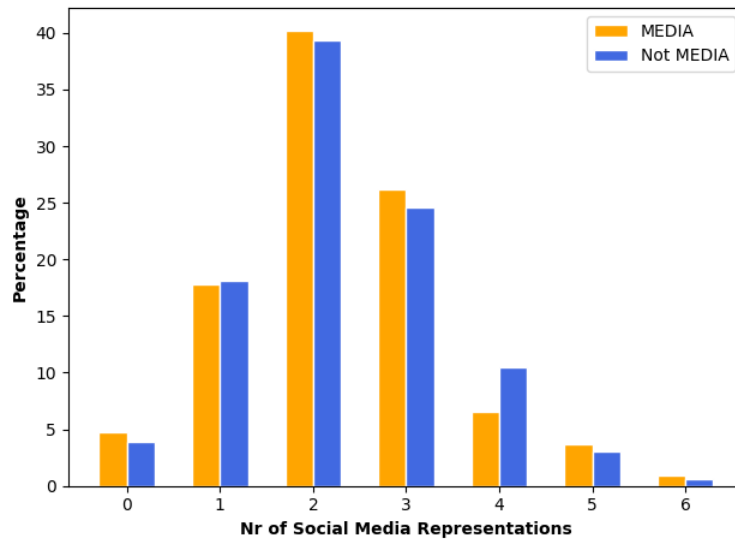
Notes: Created with data from Table 24 and Table 25 presented in Appendix C. N = 8018.

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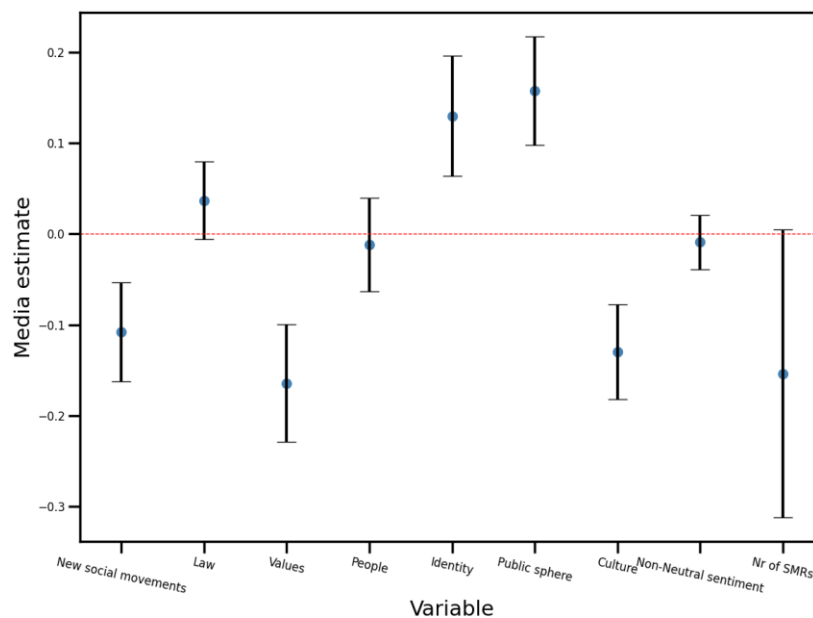
Figure 12. Sentiment - % occurrence among Media and Not Media posts respectively

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

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

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. (Link to the post.)

Figure 15. Illustrative example from Facebook
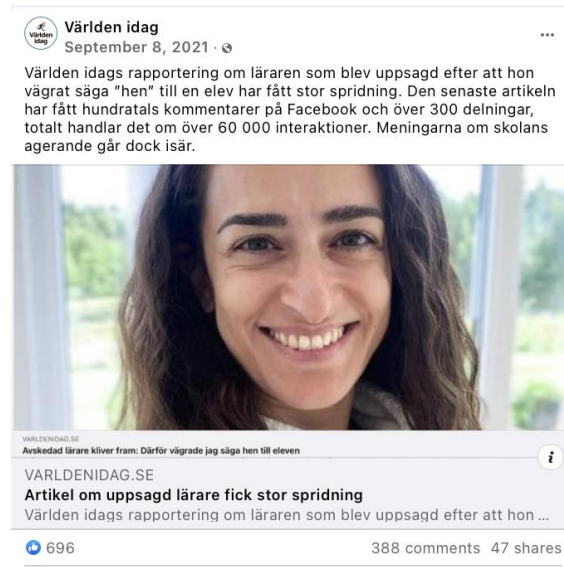
This illustrative example and post (figure 15) is about the circulation of and interactions about the news of a teacher who was fired for refusing calling a student "they". ([Link to post.](#)) It is coded as Not Europe and includes Identity. The varying views on this topic hints at a context that both 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. Sweden offers a special context not least in the light of what is commonly perceived as its progressive values (Åkerlund, 2019).

4. References

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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 Media Representations	Count	% 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. Comparisons - Europe and Not Europe

Table 7. Social Media Representations Europe - Frequency and % occurrence, 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, 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, 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, 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)

Variable	Model 1	Model 2	Model 3
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***

Variable	Model 1	Model 2	Model 3
		(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

Variable	Model 1	Model 2	Model 3
Europe	-0.2494****	-0.1704****	-0.1743****
	(0.033)	(0.033)	(0.033)
Twitter		0.3193****	0.3141****
		(0.008)	(0.009)
Interactions		8.075e-06	7.763e-06
		(0.0)	(0.0)
Followers		-3.92e-08*	-4.016e-08
		(0.0)	(0.0)
Sentiment Score		-0.0060**	-0.0064**
		(0.003)	(0.003)
October			0.0676***
			(0.021)
November			0.0125
			(0.038)
week			0.0052
			(0.004)
N	8018	8018	8018
Pseudo R-squared	0.01	0.10	0.10

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

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)	(0.008)
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

Variable	Model 1	Model 2	Model 3
Europe	0.0094	-0.0142	-0.0140
	(0.025)	(0.015)	(0.016)
Twitter		-0.0020	-0.0027
		(0.005)	(0.005)
Interactions		3.357e-06	3.454e-06
		(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 Comparisons - Media and Not Media

Table 22. Social Media Representations Media - Frequency and % occurrence, 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, 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, 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, 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, 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, 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***

Variable	Model 1	Model 2	Model 3
		(0.0)	(0.0)
Followers		-2.25e-07	-2.293e-07
		(0.0)	(0.0)
Sentiment Score		-0.0114****	-0.0117****
		(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 Score		-0.0316***	-0.0306***
		(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