Social Media, Politics and Journalism
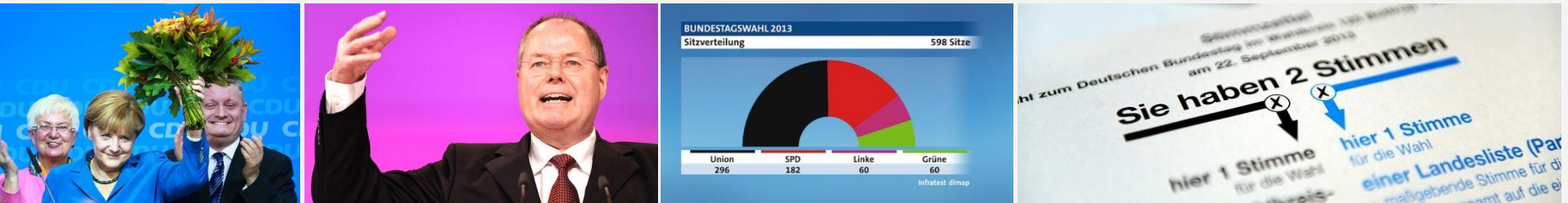
Christian Nuernbergk and Christoph Neuberger
Ludwig-Maximilians-University Munich

Creative Industries Research Seminar

September 26th 2014

Mapping Networked Politics –
The German Election 2013 Case

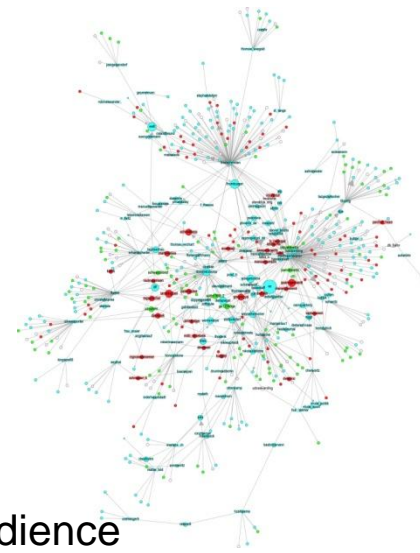Grant: German Academic Exchange Service (DAAD) / Australian Technology Network of Universities (ATN)

January 2013-December 2014

Christian Nuernbergk / Julia Neubarth

► Project: „Mapping Networked Politics"
Theoretical Background

- Emergence of the **Networked Public Sphere**
  - **Decentralized** communication (Benkler, 2006; Ausserhofer and Maireder 2014)
  - Constellations between political actors, journalists and the audience increasingly consist of **multifaceted communications** and effects.
  - **Dynamic social navigation:** attention and selection patterns
  - **Who contributes?** Level of openness, content diversity, and quality

- **Political Communication Online: Adoption of emerging practices**
  - **'Normalization' vs. revolutionary effects** (Larrson and Svensson, 2014; Margolis and Resnick, 2000; Wright 2012).
  - **Participatory potential:** Is political communication on the Internet best understood as **representation or participation?** (Larrsson and Moe, 2013)
  - **strategic communication channels** offering new ways to reach key audiences (Jackson & Lilleker, 2011)

► Project: „Mapping Networked Politics"
Theoretical Background / Empirical Findings

Context of Twitter Usage by Political Actors

- Research focuses mostly on **election campaigns and candidates**
    - Twitter as "bandwagon they need to jump on" (Jackson and Lilleker, 2011)
    - **Strategies** for the use of Twitter: campaign updates/promotion, mobilization, negative campaigning, organization, interaction/dialogue (Glassmann/Straus/Shogan 2011; Grant/Moon/Grant 2010; Meckel et al. 2013; Graham et al. 2013)
    - Influencing media coverage? Journalists in interaction networks (Graham et al. 2013)
    - **Dynamics** of the campaign cycle are mirrored (Bruns and Burgess, 2012; Jürgens and Jungherr, 2011)
    - Missing evidence for contribution to electoral success (Metag and Marcinkowski, 2013)

- **Communication style: "topic-informative" or "personal-interactive"**

    (Thimm/Einspänner/Dang-Anh, 2012; Siri 2013; Glassman/Straus/Shogan 2011; Graham et al. 2013; Golbeck et al. 2010)

► Project: „Mapping Networked Politics"
Theoretical Background / Empirical Findings

Context of Twitter Usage by Political Actors

- Use of Twitter:
  - **Age and party membership** main predictors (Saalfeld and Dobmeier, 2012)
  - Distribution of tweets and engagement in dialogues strongly vary between users (Jungherr, 2014, Graham et al., 2013)

- Inconsistent findings on **party representation**
  - **Powerful offline actors** may also dominate on Twitter

    (Jungherr, 2014; Gibson and Ward, 2009)
  - **Limited organizational resources and smaller party size** may increase the likelihood of social network activity (Saalfeld and Dobmeier, 2012)
  - The (progressive) **Green party** has been found a leading actor across different countries (Graham, Jackson, and Broersma, 2014; Vergeer and Hermans, 2013; Maireder and Ausserhofer, 2013).

► Project: „Mapping Networked Politics"
Theoretical Background / Empirical Findings

The German Context

- 60% of the **parliamentarians on the national level** use Twitter (Meckel et al. 2013)

- Limited reach in Germany, but increasing in 2013: 7% of **German onliners** use Twitter (van Eimeren and Frees, 2013)

- Twitter activities of politicians are often covered by the media

- **Democratic Divide** despite social media: The **majority** of Germans **refuses to participate actively** in online political communication (Emmer/Vowe/Wolling 2011)
  – dominance of younger, male and well educated users
  – participation derives mostly from users who are already very interested in politics (→ Mobilization of supporters)

- Evidence for a **positive development concerning the reception of political information** via Internet (von Pape/Quandt 2010)

Electoral System: Mixed-member system: combines a personal vote in single-member districts with the principle of proportional representation.

► **Project: „Mapping Networked Politics"**
representatives: network of interactions, content and general activity

- **How can we describe the interactions and communicative relationships of German and Australian representatives on Twitter?**
- Duration: **2013/2014;** Granted by: DAAD/ATN (with QUT partner Axel Bruns)

Comparative content and network analyses:

- continuous monitoring of all tweets distributed by MdBs since February 2013
- **network analysis** and **comparison of network metrics**
- quantitative **content analysis** of selected weeks

► Research Questions

RQ 1: **What activities dominate the Twitter-usage of German representatives?**

RQ 2: **With which actors do the German representatives interact on Twitter?**

► Substudies: routine phase/election phase on Twitter in Germany

- **complete analysis** of all published Tweets by representatives and their activities (i.e. retweets, @mentions)

- **selected week(s): 20th – 26th of March 2013 / 15th to 21st of September 2013**

- **method: content analysis/network analysis**

- routine activities, half of the week = session period

- software-based generating of a**rchives via Twitter-API** based on a compiled list of Twitter-accounts maintained by German representatives of the Bundestag (= 338 Accounts)

- **N = 11.980 tweets** in the selected time periods

- 16 coders in March, 20 coders in September (two research classes)

► Sample

- **208 actively twittering Members in March**
  (= 34% of all Members of the Bundestag [=MdBs])

- **Sep 15th- 21st: 221 (= 36%)**

- **4392 tweets** in one week;   **20,4 tweets/person** (SD: 36,5)
  7736 tweets   **35,0 tweets/person** (SD: 41,5)

  – comparison to other countries: 416 candidates/UK twittered 29,5 tweets/person
   7 days before the election 2010 (counted pro rata: Graham et al. 2013)

Table 1: Twittering German MdBs by party in March and September 2013

	number of MdBs of this party in the Bundestag	number of active Twitter-accounts of MdBs by fraction		percentage of MdBs of this fraction	
		MAR	SEP	MAR	SEP
CDU/CSU	237	54	57	23	24
SPD	146	43	45	30	31
FDP	93	35	39	38	42
Die Grünen	**68**	**42**	**46**	**62**	**68**
Die Linke	75	34	33	45	44

► Distribution and frequency of tweets by party

- **Imbalanced posting activity** (on avg. per MdB: Mar: M=20.4, Sep: M=35.0)

- **Members of the Green Party** reached highest values on avg. in both time periods (Mar: M=25.2, Sep: **M=50.7**)

- **Conservatives (CDU/CSU**) showed a substantially increased posting rate in September (Mar: M=20.3, Sep: **M=38.1**)

Distribution of seats in the German Bundestag (in %)

38%
12%
11%
15%
24%

- CDU/CSU
- SPD
- FDP
- Die Grünen
- Die Linke
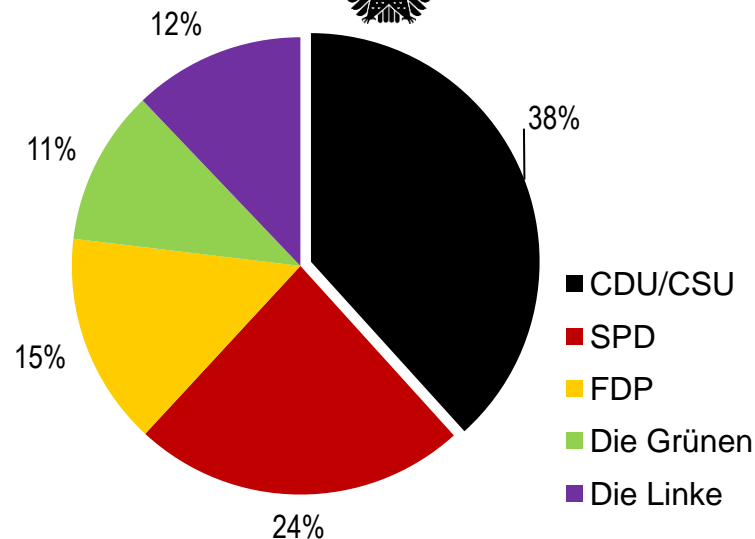
Distribution of MdBs' tweets in September 2013 (in %)

10%
28%
18%
13%
30%
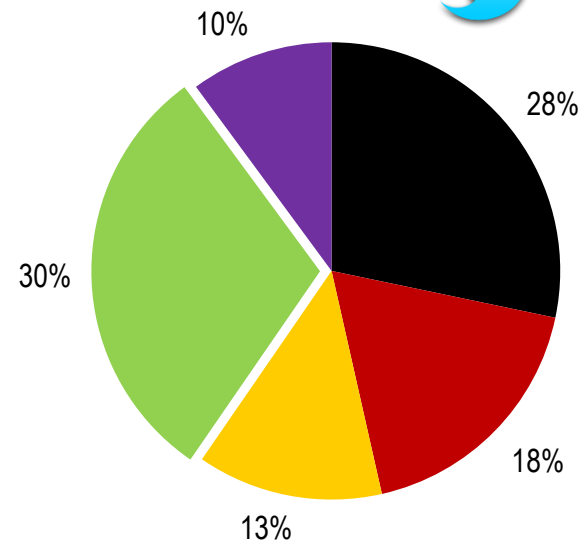
► Rate and distribution of tweets

Percentage of twittering MdBs who publish … per week

Chart legend: March 2013, Sep 13

- 1 tweet: 9% (March 2013), 2% (Sep 13)
- 2-9 tweets: 40% (March 2013), 26% (Sep 13)
- 10-49 tweets: 43% (March 2013), 52% (Sep 13)
- 50-99 tweets: 6% (March 2013), 14% (Sep 13)
- 100 or more tweets: 2% (March 2013), 6% (Sep 13)

…composed 56% of all MdBs' tweets in September
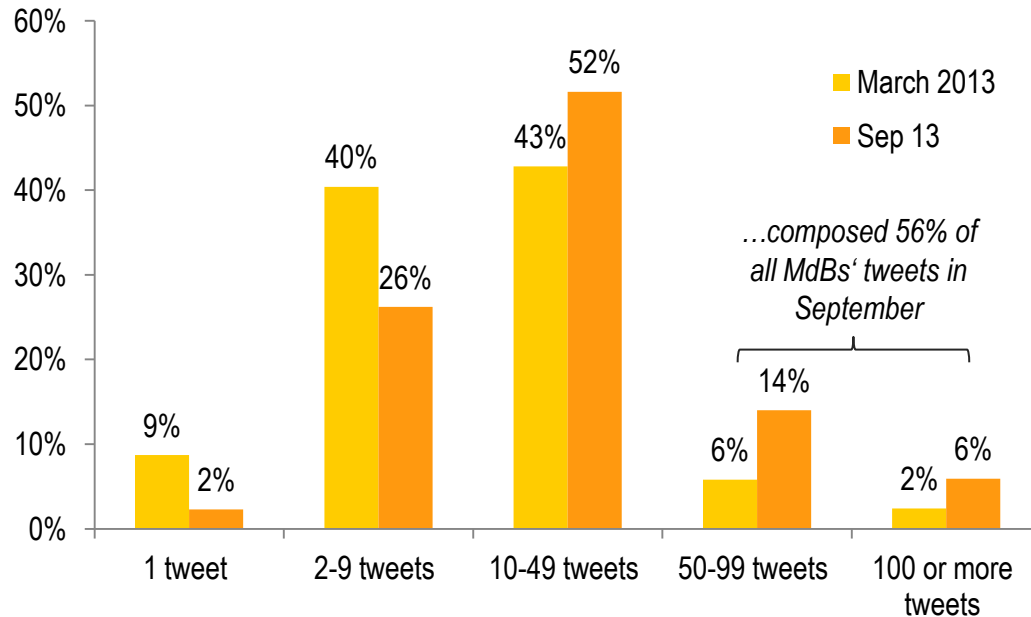
- Percentage of tweets from
    - **'directly' elected MdBs** from single-member districts   46%
    - **Fraction Members with special functions** (i.e. spokesman):   11%
    - head of commissions or deputies: 8%

► results RQ1: Twittering Behavior

- **Communicative reference/context of tweet content** (n=2902) / (n=4671)

    - publicly relevant communication: Mar: 81% *vs.* Sep: 94%

    - private-only communication: Mar: 18% *vs.* Sep: 4%

    - Both periods differ significantly (Cramer-V=.241, p<.001, Chi-square=439.5, df=2)

- **Self-composed tweets containing publicly relevant communication** (n=2317) / (n=4311)

    - containing references to politics: Mar: 90% *vs.* Sep: 94%

        - **references to a specific policy field:**   Mar: 72% *vs.* Sep: 23%

Table 4: References to specific policy fields in self-composed tweets (in%)

	CDU/CSU		SPD		FDP		Die Grünen		Die Linke		Total	
	MAR	SEP	MAR	SEP	MAR	SEP	MAR	SEP	MAR	SEP	MAR	SEP
Self-composed tweets	*n*=360	*n*=1004	*n*=430	*n*=715	*n*=308	*n*=574	*n*=508	*n*=1021	*n*=274	*n*=465	*n*=1880	*n*=3779
containing political communication* with **reference to a policy field**	65.6	12.4	58.8	16.2	71.8	21.8	81.5	37.9	86.1	26.5	72.3	23.2

Tests for independence: MAR [between parties] *Cramer-V*=.225, *p*<.001, *Chi-square*=94.8, *df*=4; SEP [between parties] *Cramer-V*=.238, *p*<.001, *Chi-square*=213.4, *df*=4
Between periods: *Phi*=-.474, *p*<.001, *Chi-square*=1275.3, *df*=1

*Only tweets which also showed publicly relevant communication were considered for the analysis.

► results RQ1: Election Campaigning in Tweets

- MdBs' tweets most often provided **information on party-related activities** and events.

- In September, the number of tweets containing **mobilization efforts clearly went up**

Table 5: Forms of political campaigning and voter interaction (in %)

	MAR	SEP
Political campaigning (e. g. for party-related events, activities or information) (*Phi*=.202, *p*<.001, *Chi-square*=276.7, *df*=1)	*n*=2371	*n*=4441
	19.5	**39.3**
Political mobilization (e. g. call for votes, demonstrations and further participation) (*Phi*=.112, *p*<.001, *Chi-square*=86.2, *df*=1)	*n*=2380	*n*=4476
	3.4	**9.7**
Call for party-related donations (n.s.)	*n*=2389	*n*=4501
	0.1	0.1
Internal communication with reference to election campaigning (e. g. hints for team members and associated supporters) (n.s.)	*n*=2360	*n*=4489
	1.9	2.1
Dialogue with citizens and voters (e. g. feedback call, call for ideas etc.) (*Phi*=-.050, *p*<.001, *Chi-square*=17.3, *df*=1)	*n*=2338	*n*=4473
	9.1	**6.3**
Negative campaigning (n.s.)	*n*=2380	*n*=4471
	4.2	3.6

*Only tweets which also showed publicly relevant communication were considered for the analysis.

► results RQ2: Network Interaction

Table 6: @mentions and retweets in MdBs' tweets by parties

	@Mentions [1] MAR		@Mentions [1] SEP		Retweets MAR		Retweets SEP	
	In %	abs.	In %	abs.	In %	abs.	In %	abs.
CDU/CSU	52.4	453	42.6	739	21.2	232	20.2	440
SPD	60.9	560	40.1	472	10.5	108	16.1	226
FDP	35.1	149	27.5	217	21.2	114	20.9	209
Die Grünen	**54.9**	428	**45.3**	657	**26.4**	279	**37.8**	880
Die Linke	26.6	123	29.9	197	11.8	62	15.3	119
Total	**49.7**	1713	**39.3**	2282	**18.7**	795	**24.4**	1874

[1] Only self-composed tweets were considered for the analysis.
Tests for independence:
@mentions: Between periods: *Phi*=-.101, *p*<.001, *Chi-square*=94.8, *df*=1; Retweets: Between periods: *Phi*=.067, *p*<.001, *Chi-square*=53.3, *df*=1

- **Differences by party and period** were found regarding the use of **Twitter operators**.

- **Most apparent @mention-partners** (Mar: n=2295, Sep: n=2875): **other political actors**
  (Mar: 49%, Sep: 45%), **'normal' citizens** (Mar: 35%, Sep: 37%), **journalists/newsrooms**
  (Mar: 9%, Sep: 14%) (Difference between parties: Mar: Cramer-V=.136, p<.001, Sep: Cramer-V=.164, p<.001)

- **Retweet-partners** (Mar: n=774, Sep: n=1912): **other political actors** (Mar: 62%, Sep: 61%),
  journalists/newsrooms (Mar: 16%, Sep: 16%), **'normal' citizens** (Mar: 13%, Sep: 18%)

  (Difference between parties: Mar: Cramer-V=.108, p<.01, Sep: Cramer-V=.109, p<.001)

► results RQ2

Table 7: Network characteristics of retweet and @mention networks during March and September (with MdBs-only subnetworks)

	Nodes	Ties	Dyad Reciprocity	Density	Avg. Weighted Degree	Components	Connected-ness	Diameter
RETWEETS								
MAR: all	**494**	644	0.014	0.003	1.634	466	0.056	11
SEP: all	**948**	1450	**0.006**	0.002	2.135	917	0.028	14
MAR: MdBs-only	117 [1]	182	0.052	0.017	1.983	89	0.193	11
SEP: MdBs only	123 [1]	231	0.041	0.020	2.463	92	0.154	13
@MENTIONS (only self-initiated)								
MAR: all [2]	**986**	1308	0.046	0.002	2.388	932	0.055	10
SEP: all [2]	**1452**	1897	**0.026**	0.001	2.096	1406	0.028	10
MAR: MdBs-only [2]	115 [1]	251	0.301	0.034	3.870	61	0.404	9
SEP: MdBs-only [2]	121 [1]	270	0.216	0.033	3.959	75	0.265	9

[1] without isolates (degree <1)

[2] Mentions within retweets not included, unless author tweeted them directly
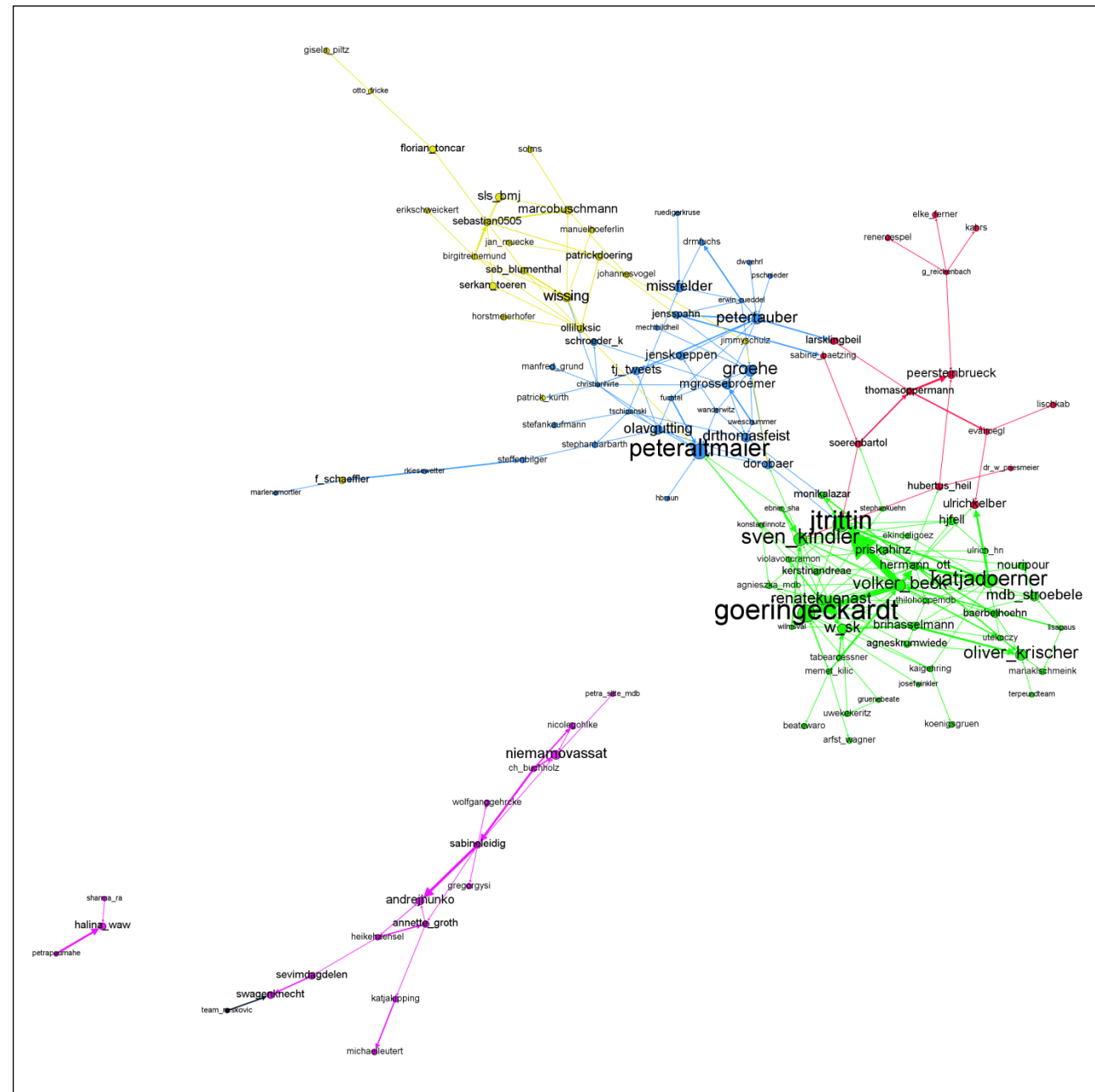
Comparative network analysis

Fig. 1: Retweet Network with MPs-only, **September 2013** (Label: all,
Algorithm: Yifan Hu;
Colours: blue: CDU/CSU, red: SPD,
yellow: FDP, green: Die Grünen,
purple: Die Linke)

► results RQ2: Homophily pattern

Table 8: @mention and retweet homophily (based on E-I group indices)

	@mentions (MdBs only)		Retweets (MdBs only)	
	March	**September**	**March**	**September**
	E-I-Index (*n*=115)	E-I-Index (*n*=121)	E-I-Index (*n*=117)	E-I-Index (*n*=123)
Group level				
CDU/CSU	0.000	-0.106	-0.477	-0.704
SPD	0.106	0.091	-0.500	-0.529
FDP	0.500	0.200	-0.083	-0.763
Die Grünen	-0.429	-0.258	-0.687	-0.872
Die Linke	-0.333	-0.622	-0.750	-0.949
Network level				
E-I index	**-0.088**	**-0.144**	**-0.514**	**-0.793**
E-I index (*expected*)	0.583	0.571	0.597	0.557
External ties	176	190	84	46
Internal ties	210	254	262	398

In-group orientation

- ▪ The **E-I index** is calculated following Krackhardt and Stern's formula (Krackhardt and Stern, 1988) and **measures the ratios between group external and internal ties** for each individual actor, subgroups as well as the whole network. The index ranges from -1 to +1.

- ▪ An E-I index close to -1 indicates that the group is totally focused on itself. A ratio near to +1 indicates that the group is totally focused outside itself.

► results RQ2

Summary of other comparable approaches (network analysis)

- **Group densities**

  - In both selected weeks, members of the Green party were the most active @mention-group. They also shared the most group-internal relations.

- **Group centralities (by fractions)**

  - The different *centrality calculations* show that the distribution of @mentions is concentrated to some extent on prominent network actors (SPD ↑ Grüne ↑ Linke ↓)

- **Network levels of indegree and outdegree centralization**

  - the increased activity in the last week of campaigning in September also affected the level of network centralization in retweet and @mention networks

    - The outdegree centralization in the September retweet and @mention networks decreases (→ broader subset of more active contributors)

- **Individual users' centrality ranks**

  - Leading candidates more central in September

► Conclusion

- **Main functions** of twitter usage by MdBs: **information and interaction**

- Representatives tend to hold their **own public conversations** on Twitter – citizens are not their primary partners of interaction

- **Leading party** concerning Twitter use: **Green Party**

- **Specific types of usage differ between parties and positions** (i.e. interactivity patterns; spokesperson vs. average member)

- **Dynamics of the campaign cycle: Networks** exhibit clear **election-related activity dynamics**

- Further research should clarify cohesion and the evolution of network patterns

- Analysis of **further periods** as well as the **comparison of different countries** concerning network metrics and types of actors helps to identify overarching patterns and campaign strategies

Journalism and Social Media
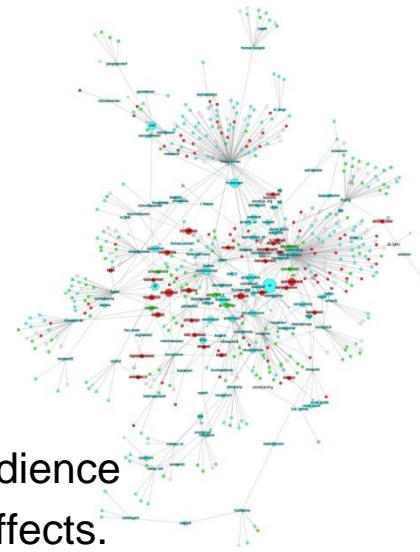## The Federal Press Conference on Twitter

Grant: Media Authority North Rhine-Westphalia (LfM)

February 2014-July 2014

► Project: „The Federal Press Conference on Twitter"
Theoretical Background

- Emergence of the **Networked Public Sphere**
  - Constellations between political actors, journalists and the audience increasingly consist of **multifaceted communications** and effects.
    - Openness of interaction networks (Lawrence, Molyneux, Coddington und Holton (2013)
    - Reestablish relationships with audiences (Singer et al, 2011)

- **'Normalizing New Media'** (Singer, 2005)
  - Journalism as usual? (Lasorsa, Lewis and Holton, 2012)
    - One-way publishing; little adoption of the affordances of multi-way communication (Domingo et al., 2008)

- **Journalism practice in social media** (Lasorsa, Lewis and Holton, 2012)
  - expressing personal opinions,
  - sharing the gatekeeping role
  - providing a semblance of accountability and transparency to their professional work (e.g. background information about the news process)

► Research Questions

RQ: What do journalists share on Twitter and with whom do they interact?

(1) Topical contents, (2) Use for journalistic activities (news presentation, user participation, online research), (3) Interaction partners, and (4) Use of functional operators (RT, #, @mentions)

► Sample and Research Design

- **complete analysis** of all published Tweets by journalists and their activities (i.e. retweets, @mentions)

- **selected week: 8th – 14th of March 2014**

- **method: content analysis/network analysis**

- software-based generation of a**rchives via Twitter-API** based on a compiled list of Twitter-accounts maintained by journalists in the Federal Press Conference (BPK) (= 218 Accounts)

- **N = 1872 tweets** were published by 134 journalists in the selected period

- 4 coders; intercoder reliability: 0.92 (Holsti's method), 0.75 Krippendorff's α (on avg.)

► results RQ1: Twittering Behavior

- **Communicative reference/context of tweet content** (n=1882)

    – **publicly relevant communication:**   90%

    – private-only communication: 5%

- **News beats**

Table 1: Topical focus of journalists' tweet by media type

|	Daily Newspapers (n=672)	Magazines (n=272)	TV/radio (n=603)	Internet-only (n=80)	News agencies (n=37)	Total (n=1.664)
Politics	**55,8**	**43,8**	**66,0**	**41,3**	21,6	**56,1**
Media/Internet	10,6	17,6	11,4	27,5	73,0	14,2
Economics	4,9	4,8	2,0	3,8	0	3,7
Other	28,7	33,8	20,6	27,5	5,4	26,0

Cramer-V=0,185, p<0,001.

- Tweets were often composed in **information-oriented style** (84%, n=1.821).

- **Impartiality and nonpartisanship** considered relevant: Most of the tweets did not disclose their authors' opinions (64%, n=1365).

- **Factual tweets** dominated; irony, satire or jokes were rare (11%, n=1.957)

► results RQ1: Twittering Behavior

- **Expanding potentials for transparency remain untapped**
  - Only very few tweets provided **personal insights** into how stories were crafted or provided context of the development of news coverage
  - Every second tweet contained **hyperlinks**, but **sources** were only rarely mentioned

- **Low audience participation:** opportunities for Twitter users to participate in the news-creation process were not provided
  - No requests of **user material** (fotos or videos) or help in **crowdsourcing** tasks
  - In a few cases journalists requested some **feedback** or help **from their followers** concerning current events (3%, n=2069)

- **Visible conversation about news:** interactive tweets addressed to specific users also contained answers or questions about current news (8%, n=2051)

► **results RQ2: Network Interaction**
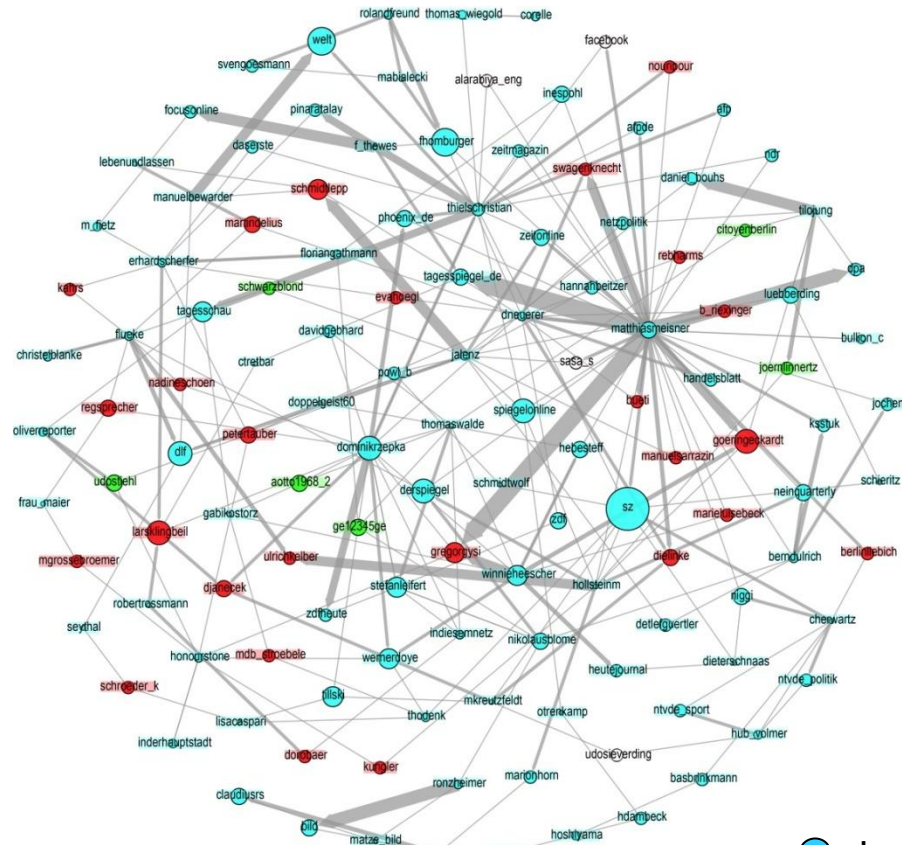
@mentions
(*k*-core, n=130)

○ Journalists

● Politicians

○ Others
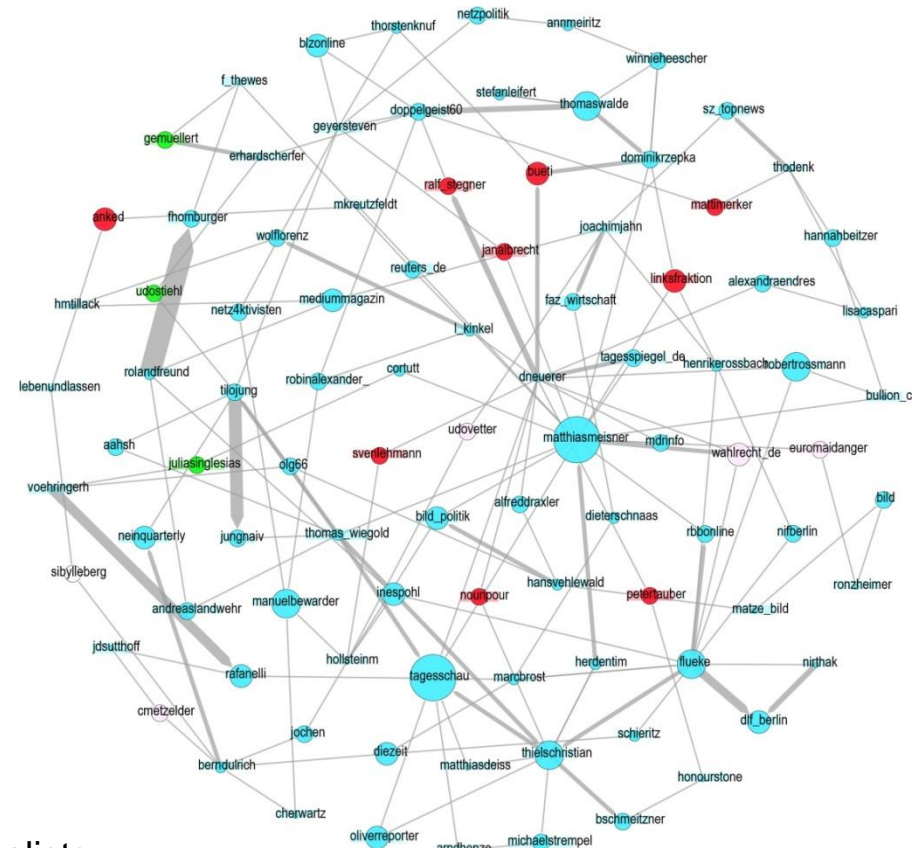
Retweets
(*k*-core, n=95)

► results RQ2: Network Interaction

- **Journalists mainly reply to and retweet their fellow reporters on Twitter**
  - – 'tweeting in a bubble'-pattern
- **Layers of communication mirror different source types**
  - – Reliance on non-affiliated citizens and politicians varies

In-group orientation

Table 2: Actor type of accounts being retweeted by journalists

	Daily newspapers (n=201)	Magazines (n=72)	TV/radio (n=160)	Internet-only (n=23)	News agencies (n=27)	Total (n=483)
Journalistic Actors	64,7	77,8	75,0	87,0	96,3	**72,9**
Political Actors	15,9	1,4	7,5	0	0	**9,3**
‚Ordinary' Citizens	11,9	18,1	13,8	0	0	**12,2**
Other Actors (grouped)	7,5	2,8	3,8	13,0	3,7	**5,6**

Cramer-V=0,163, p<0,001.

Table 3: Actor type of accounts being @mentioned by journalists

|	Daily newspapers (n=411)	Magazines (n=141)	TV/radio (n=358)	Internet-only (n=65)	News agencies (n=24)	Total (n=999)
Journalistic Actors	46,2	65,2	57,3	63,1	75,0	**54,7**
Political Actors	34,1	5,0	21,8	10,8	12,5	**23,5**
‚Ordinary' Citizens	10,2	22,0	15,6	21,5	4,2	**14,4**
Other Actors (grouped)	9,5	7,8	5,3	4,6	8,3	**7,4**

Cramer-V=0,161, p<0,001.

► Conclusion

- What is Twitter: **A vital space** that enables citizens to communicate their views, discuss news and be heard? Or a **strategic communication channel** incorporated by professional actors?

- Twitter allows the oberservation of **conversations** of the political and journalistic elite. Both, journalists and politicians, seem to refer to their peers primarily

  - **Citizens' views are rarely mirrored** by politicians and journalists

  - The majority of German politicians and news elite actors still does not actively contribute to Twitter

  - **Twitter is difficult to interpret** because of **skewed distributions:** among those twittering, varying degrees of posting activity and interactions were found

- The **average political journalist** mostly tweets about publicly relevant communication. He/she reports in a factual, information-oriented style. Transparency is provided only on his/her topics of interest. Occasionally, news are being discussed with specific users

- A fertile ground for stabilizing the **"working relationship":** journalists incorporate politicians into their regular circle of contacts. The purpose of these interactions needs further examination

► Other projects

- **"Topic Dynamic in the Internet Public Sphere":** Funded by the German Research Foundation (DFG) (2012-2016), Christoph Neuberger & Sanja Kapidzic, in cooperation with Stefan Stieglitz, University of Münster, Business informatics

- **"Analysis of Discourses in Social Media":** Funded by the Federal Ministry of Education and Research (BMBF) (2012-2015), Christoph Neuberger & Ines Engelmann, in cooperation with Manfred Stede, University of Potsdam, Computational linguistics, Stefan Stieglitz, University of Münster, Business informatics, Thorsten Quandt, University of Münster, Communication studies

- **"Federal Election 2013 in Social Media":** Funded by the Konrad Adenauer Foundation and Vodafone Institute (2013), Christoph Neuberger & Jennifer Wladarsch, in cooperation with Stefan Stieglitz, University of Münster, Business informatics

- **"Social Media and Journalism":** Funded by the Media Authority of North Rhine-Westphalia (LfM) (2014), Christoph Neuberger, Susanne Langenohl & Christian Nuernbergk

► Federal election 2013 in social media

Fig. 1 Ratio of items related to different topics over time

in %

NSA-scandal
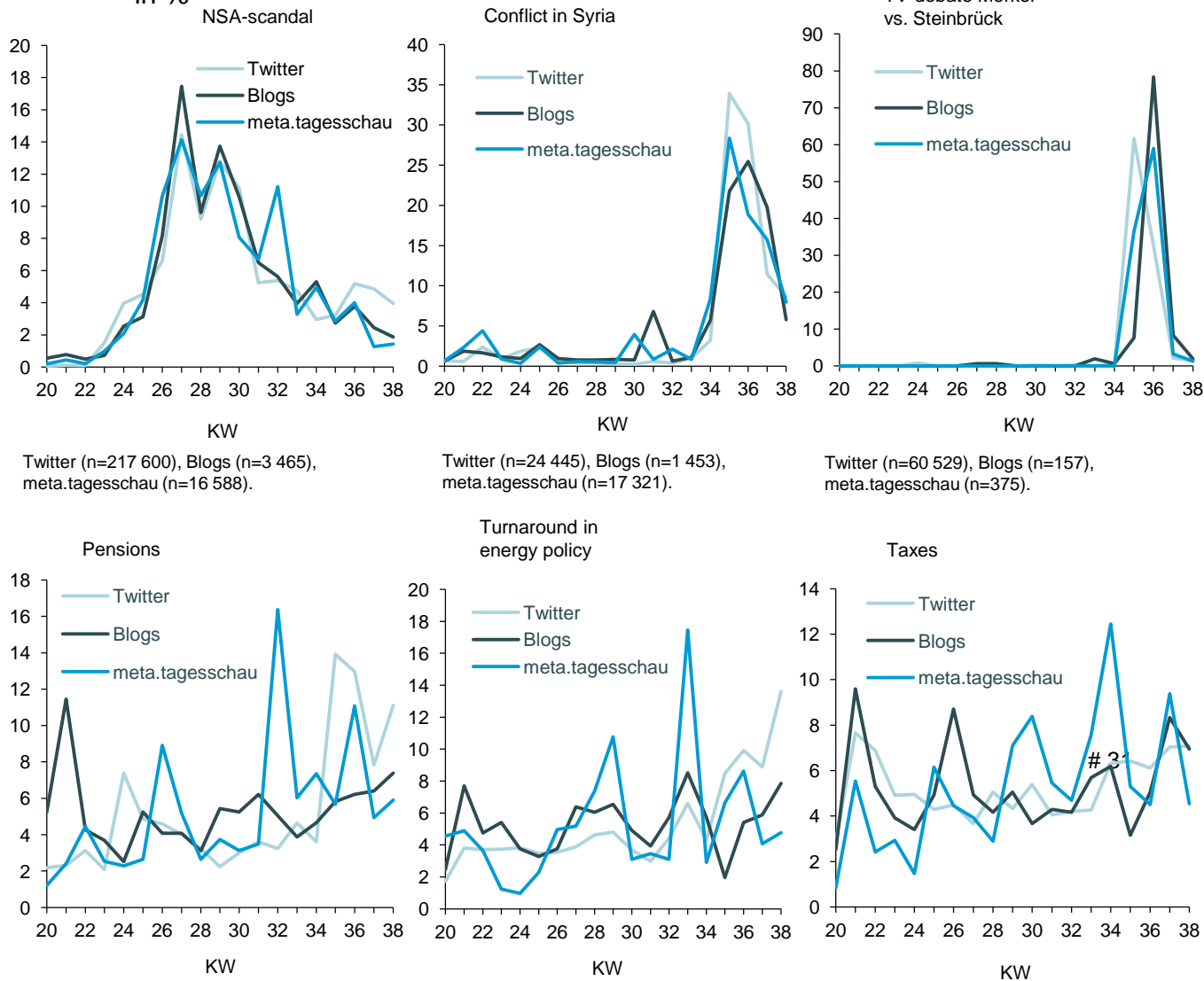
Twitter (n=217 600), Blogs (n=3 465), meta.tagesschau (n=16 588).

Conflict in Syria

Twitter (n=24 445), Blogs (n=1 453), meta.tagesschau (n=17 321).

TV-debate Merkel vs. Steinbrück

Twitter (n=60 529), Blogs (n=157), meta.tagesschau (n=375).

Pensions

Basis: Twitter (n=11 455), Blogs (n=515), meta.tagesschau (n=830).

Turnaround in energy policy

Basis: Twitter (n=65 818), Blogs (n=611), meta.tagesschau (n=1 449).

Taxes

Basis: Twitter (n=53 709), Blogs (n=792), meta.tagesschau (n=2 112).

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Thank you for your attention

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