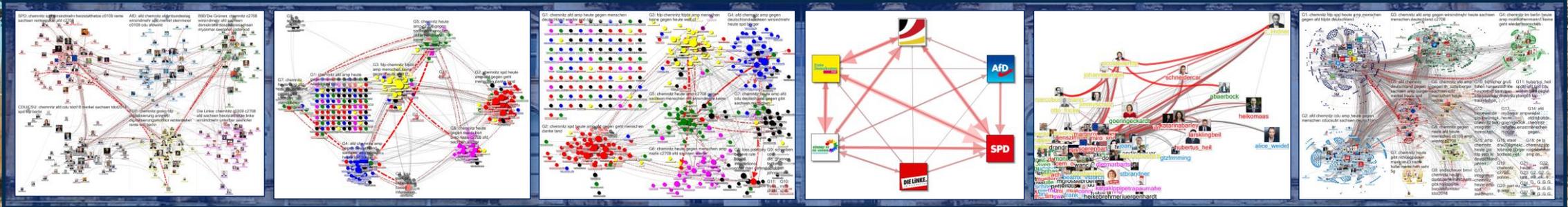# Mapping Political Networks with NodeXL Pro

10 days of tweets from the German Bundestag in review

Oct-03-2018 until Oct-12-2018

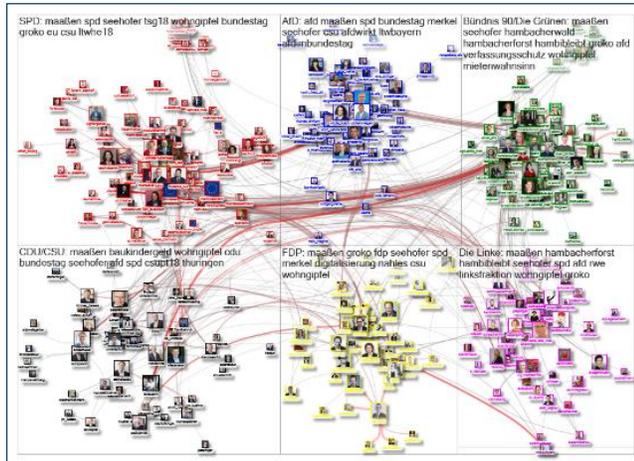# 19. BUNDESTAG: TWITTER USEAGE

Sitzverteilung im 19. Deutschen Bundestag
Stand: Oktober 2017

709 Sitze *

Party	Color	Seats	Twitter users	Twitter users per seat
CDU/CSU	⬛	246	127	52 %
SPD	🟥	153	119	78 %
AfD	🟦	92	85	92 %
FDP	🟨	80	69	86 %
Die Linke	🟪	69	58	84 %
B90/Die Grünen	🟩	67	64	96 %
no affiliation		2	2	100 %
All		**709**	**524**	**74 %**

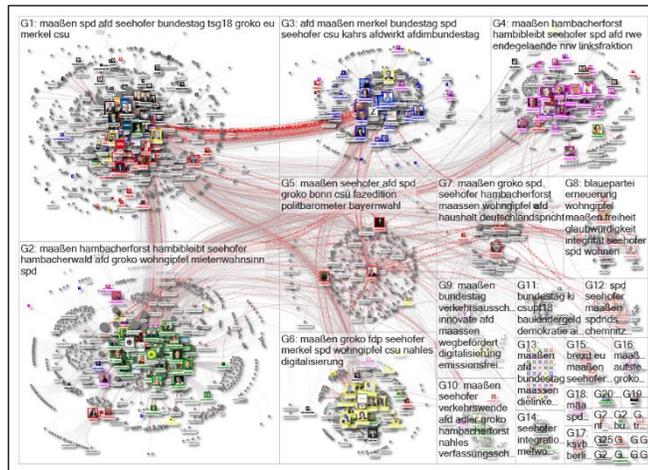https://www.bundestag.de/parlament/plenum/sitzverteilung_19wp

DATA OVERVIEW

Dataset 1: Internal network

Edge data contains only edges between Members of the Bundestag (MdBs) who mention, retweet or reply to another MdB.

- Tweets in analysis: 12,591
- Vertices in network: 524
- Edges in network: 13,272

Dataset 2: Full network

Edge data includes edges to all Twitter users mentioned, retweeted or replied to in tweets by MdBs.

- Tweets in analysis: 12,743
- Vertices in network: 4,429
- Edges in network: 23,060

All network data is based on tweets published by Members of the German Bundestag (MdB) between 10/03/2018 and 10/12/2018.

Both datasets were collected with the NodeXL Pro Twitter Users Network importer on 10/12 and 10/13/2018.

The maximum number of collected tweets per user was limited to 1000.

MOST POPULAR BY NUMBER OF FOLLOWERS

Where is Angela Merkel?

She does not have a Twitter account.

Rank		Name (MdB)	Party	Twitter Handle	Followers
1		Martin Schulz	SPD	martinschulz	707,013
2		Sahra Wagenknecht	Die Linke	swagenknecht	391,816
3		Gregor Gysi	Die Linke	gregorgysi	318,389
4		Christian Lindner	FDP	c_lindner	306,693
5		Heiko Maas	SPD	heikomaas	293,770
6		Sigmar Gabriel	SPD	sigmargabriel	263,623
7		Peter Altmaier	CDU/CSU	peteraltmaier	237,956
8		Peter Tauber	CDU/CSU	petertauber	191,369
9		Katrin Göring-Eckardt	B90/Die Grünen	goeringeckardt	133,968
10		Thomas Oppermann	SPD	thomasoppermann	125,907

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TIME SERIES ANALYSIS: JOINED TWITTER DATE

Election Sep-27-2009

Election Sep-22-2013

Election Sep-24-2017
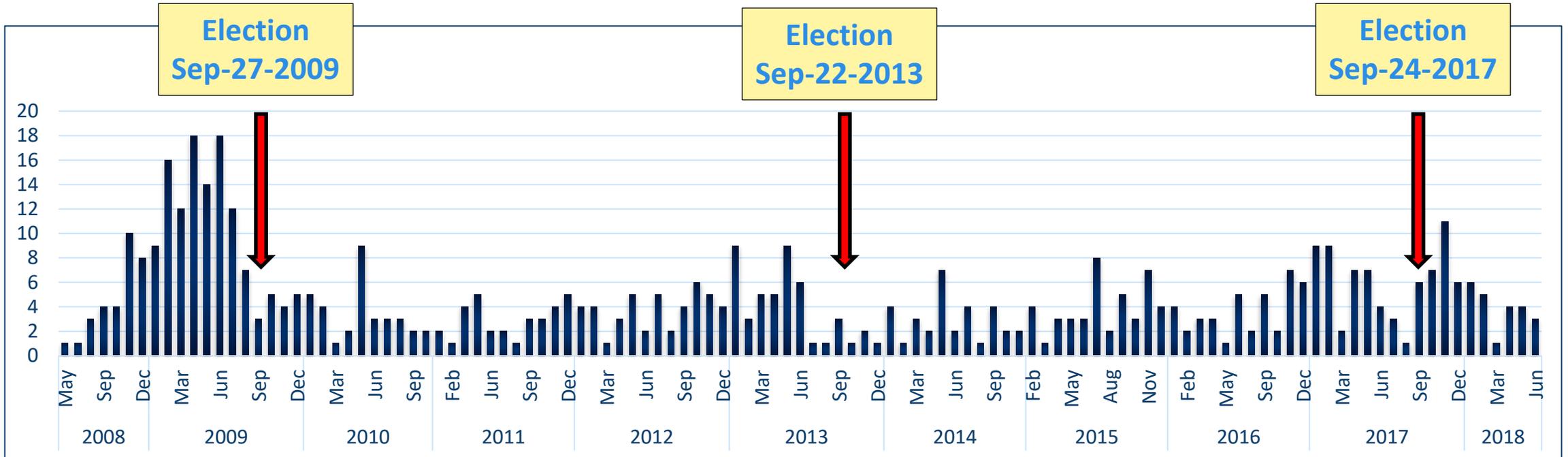
Ranking of the earliest Twitter adopters:

Rank	Name (MdB)	Party	Twitter Handle	Joined Twitter Date
1	Fabio De Masi	Die Linke	fabiodemasi	5/15/2008 11:26
2	Johannes Vogel	FDP	johannesvogel	7/28/2008 12:19
3	Matthias Höhn	Die Linke	matthiashoehn	8/1/2008 5:44
4	Katharina Dröge	B90/Die Grünen	katdro	8/4/2008 13:32
5	Hubertus Heil	SPD	hubertus_heil	8/22/2008 10:14

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TOP TWEETERS

Top Tweeters ranked by the overall number of published tweets:

Rank	Name (MdB)	Party	Twitter Handle	Total Tweets (Overall time)
1	Johannes Kahrs	SPD	kahrs	92,071
2	Anke Domscheit-Berg	Die Linke	anked	84,166
3	Dieter Janecek	B90/Die Grünen	djanecek	37,465
4	Ulrich Kelber	SPD	ulrichkelber	27,739
5	Dorothee Bär	CDU/CSU	dorobaer	26,801
6	Uwe Schummer	CDU/CSU	uweschummer	26,503
7	Sven Kindler	B90/Die Grünen	sven_kindler	25,569
8	Kordula Schulz-Asche	B90/Die Grünen	k_sa	25,459

Top Tweeters ranked by the average number of daily tweets and replies in this analysis:

Rank	Name (MdB)	Party	Twitter Handle	Tweets and Replies per day (10 day-period)
1	Johannes Kahrs	SPD	kahrs	118.9
2	Udo Hemmelgarn	AfD	udohemmelgarn	71.7
3	Jörg Schneider	AfD	schneider_afd	51.6
4	Nicole Höchst	AfD	nicole_hoechst	50.6
5	Oliver Luksic	FDP	olliluksic	22.2
6	Anke Domscheit-Berg	Die Linke	anked	21.0
7	Saskia Esken	SPD	eskensaskia	20.8
8	Stephan Brandner	AfD	stbrandner	15.4

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INTERNAL NETWORK: GROUP BY PARTY

Hashtag	Overall Frequency
#afd	783
#bundestag	398
#hambacherforst	225
#bayern	204
#hambibleibt	196
#spd	174
#csu	172
#unteilbar	140
#groko	139
#tagderdeutscheneinheit	124

https://nodexlgraphgallery.org/Pages/Graph.aspx?graphID=171261
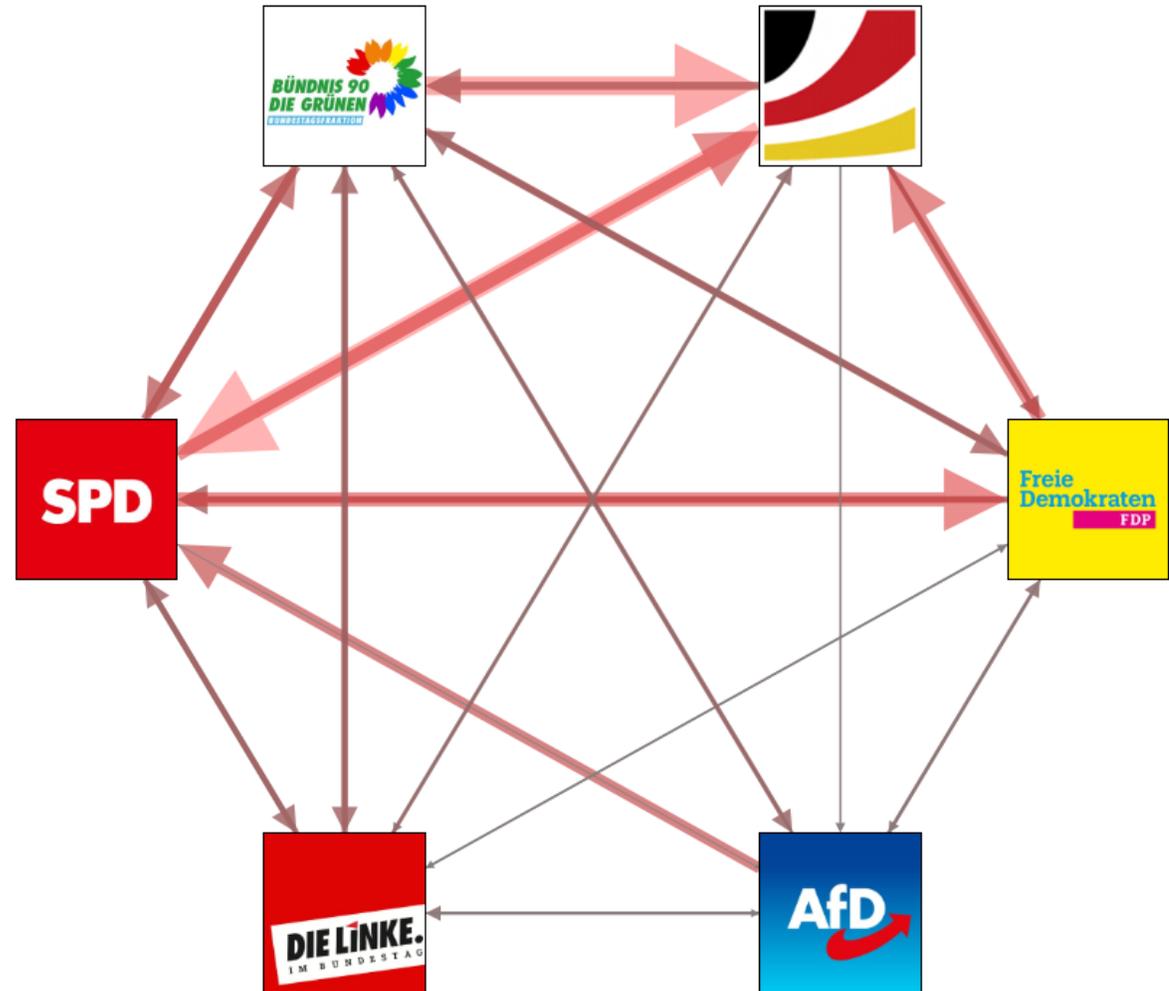
7
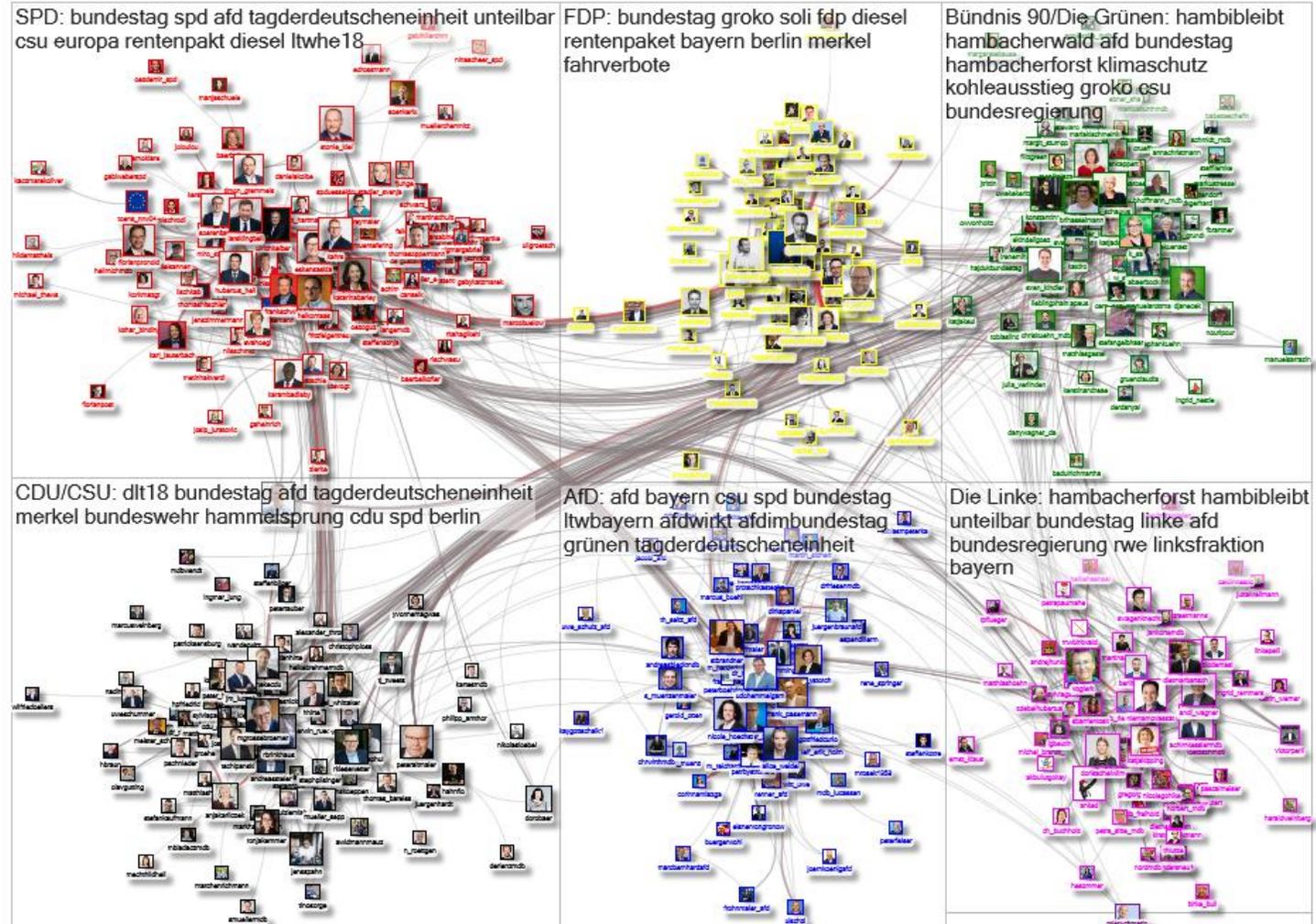
INTERNAL NETWORK: PARTY INTERACTION

Members of the **CDU** and the **SPD** are in the center of the current discussions.

Members of **Die Linke** do not interact much with members of other parties.

Members of the **AfD** are mostly ignored by members of all other parties.

INTERNAL NETWORK: GROUP METRICS

	Vertices	Reciprocated Vertex Pair Ratio	Average Geodesic Distance	Graph Density	Sentiment List: Positive Word Percentage (%)	Sentiment List: Negative Word Percentage (%)
SPD	94	11,4 %	2.77	2,7 %	6.38 %	1.91 %
CDU/CSU	87	5,8 %	2.75	**2,0 %**	6.63 %	1.74 %
FDP	66	18,8 %	2.44	4,3 %	5.06 %	2.58 %
B90/Die Grünen	64	23,8 %	2.19	**8,1 %**	5.43 %	2.40 %
AfD	62	14,7 %	2.13	5,8 %	5.09 %	2.91 %
Die Linke	57	14,8 %	2.11	7,5 %	5.19 %	2.78 %

Low graph density suggests that the **CDU/CSU** is more fragmented than the other parties.

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INTERNAL NETWORK: GROUP BY CLUSTER

Clustering algorithm:
Clauset-Newman-Moore

Members of **CDU/CSU** and **SPD** are clustered into one large group (G1), while all other parties each form one dominant group cluster: **FDP** in G2, **B90/Die Grünen** in G3, **Die Linke** in G4 and **AfD** in G5.

https://nodexlgraphgallery.org/Pages/Graph.aspx?graphID=171251
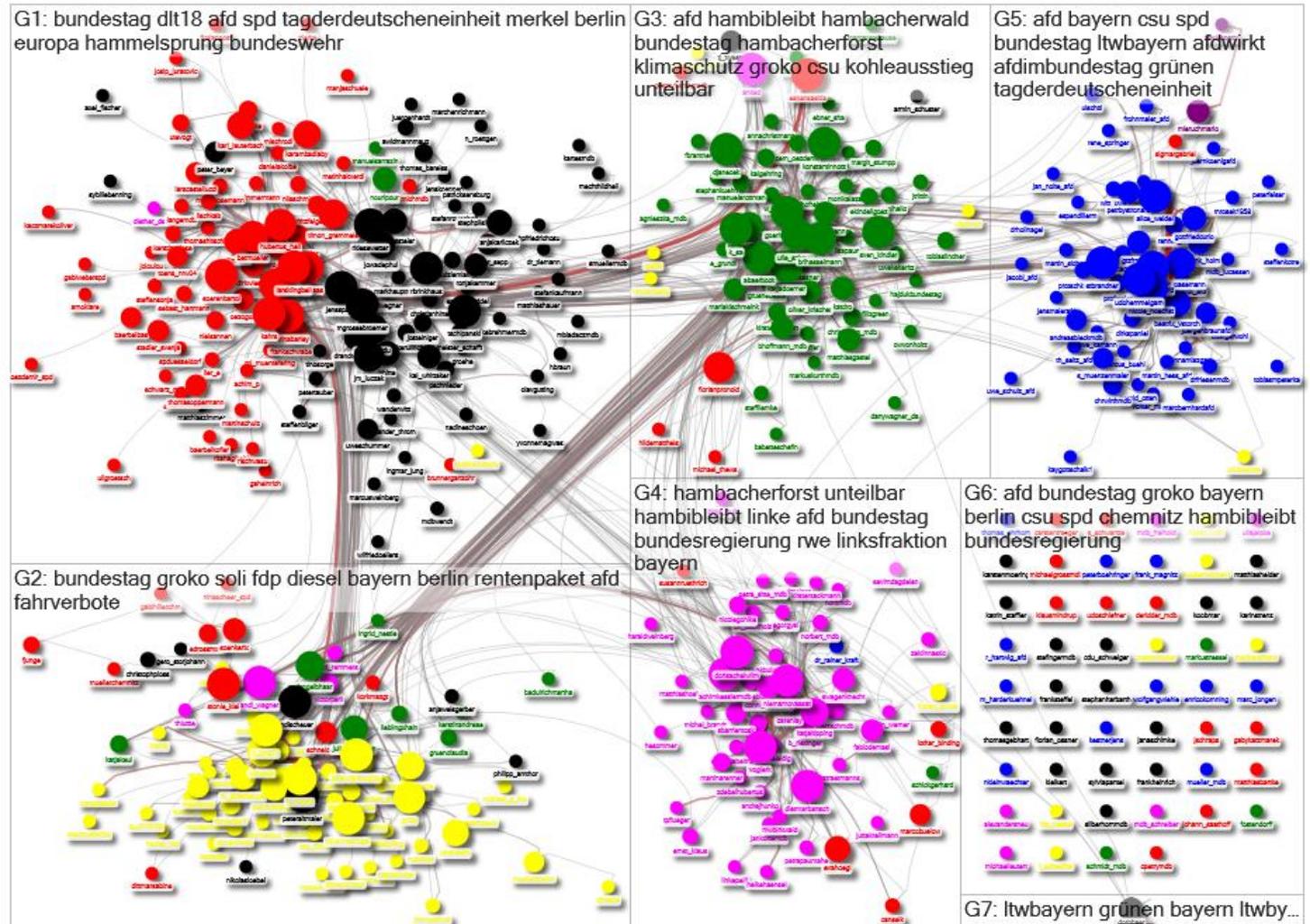
INTERNAL NETWORK: TOP INFLUENCERS

Rank	Twitter Handle	Party	Betweenness Centrality	Eigenvector Centrality
1	c_lindner	FDP	25740.531	0.018
2	kahrs	SPD	15147.732	0.014
3	katarinabarley	SPD	8493.334	0.010
4	mgrossebroemer	CDU/CSU	8234.326	0.008
5	larsklingbeil	SPD	8033.471	0.008
6	stbrandner	AfD	7976.457	0.010
7	peteraltmaier	CDU/CSU	7956.670	0.010
8	sven_kindler	B90/Die Grünen	6686.655	0.011
9	udohemmelgarn	AfD	6365.859	0.011
10	rbrinkhaus	CDU/CSU	6311.749	0.005
11	dorisachelwilm	Die Linke	5432.233	0.007
12	johannesvogel	FDP	5137.178	0.005
13	rkiesewetter	CDU/CSU	4855.530	0.005
14	alice_weidel	AfD	4689.686	0.009
15	dietmarbartsch	Die Linke	4584.795	0.005

Eigenvector Centrality
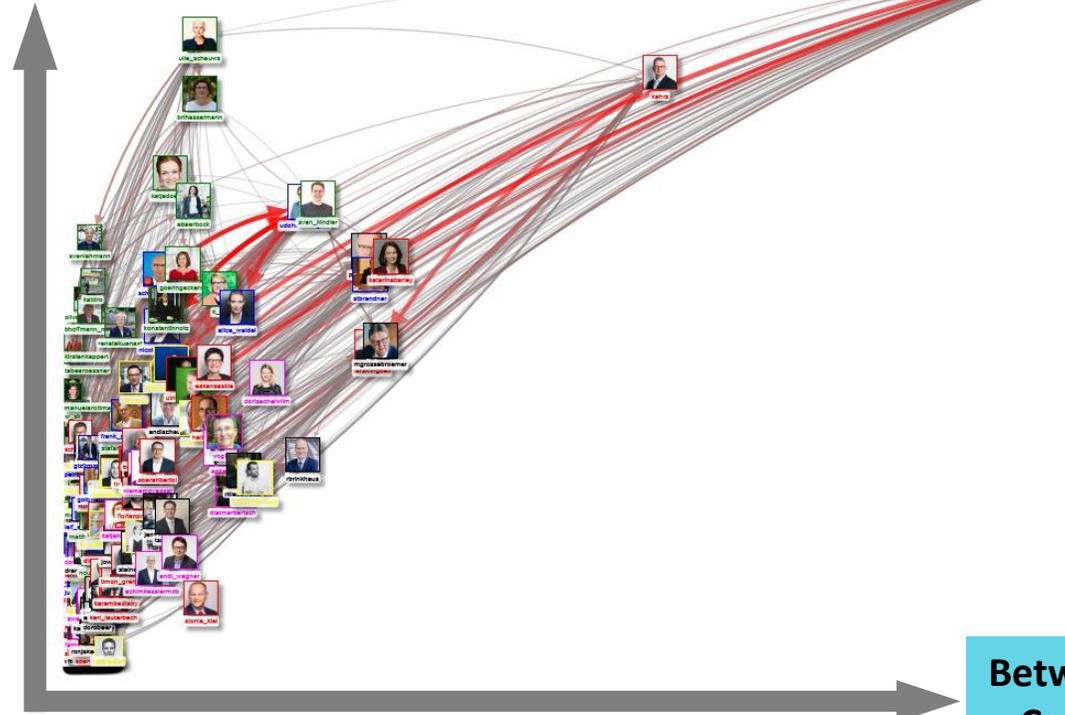
Betweenness Centrality

Betweenness Centrality is the quality of being a gatekeeper or exclusive connection to a sub-group.
Eigenvector Centrality is the quality of being connected to well connected others.
The upper right quadrant shows users who both connect to otherwise disconnected groups and who connect to well connected others.

https://nodexlgraphgallery.org/Pages/Graph.aspx?graphID=169126

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FULL NETWORK: GROUP BY CLUSTER

Clustering algorithm:
Clauset-Newman-Moore

The clustering algorithm places members of **B90/Die Grünen** and **Die Linke** into one single group (G1).

Members of **CDU/CSU** and **FDP** are also clustered into one single group (G2).

Members of **SPD** (G3) and **AFD** (G4) each form one dominant group.
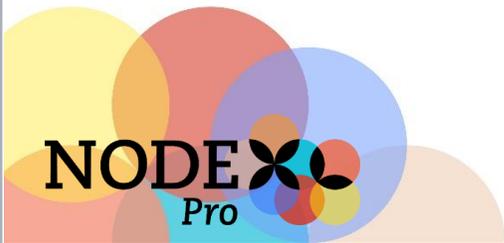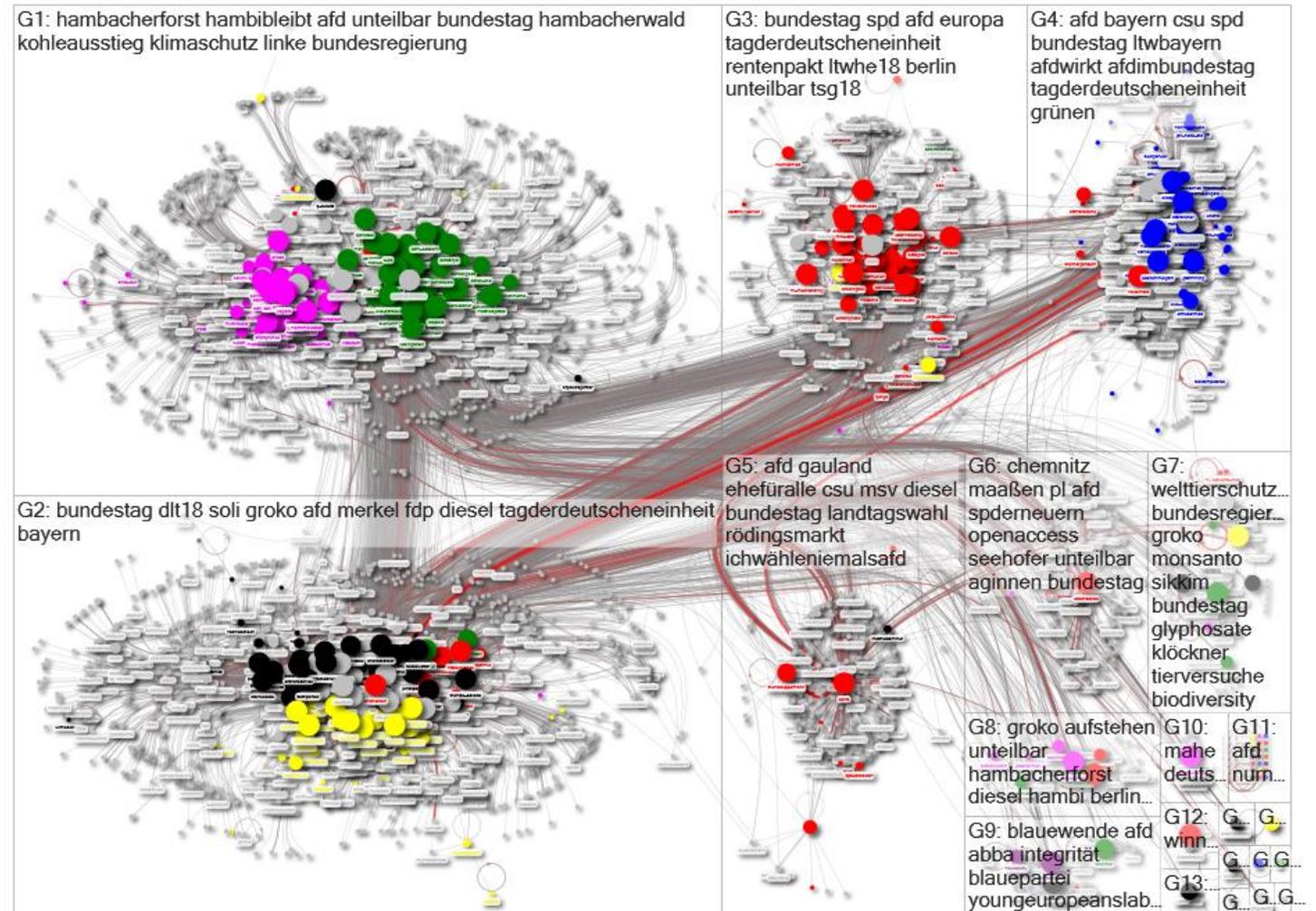
TOP INFLUENCERS OUTSIDE THE BUNDESTAG

The most influential Twitter users outside the Bundestag are related national party accounts and large news media outlets.

Rank	Twitter Handle	Category	Betweenness Centrality
1	cducsubt	Party	1174612.976
2	spdbt	Party	939511.988
3	welt	News/Media	731024.365
4	spiegelonline	News/Media	471645.219
5	gruenebundestag	Party	386620.708
6	die_gruenen	Party	385938.244
7	tagesspiegel	News/Media	312888.187
8	cdu	Party	309163.666
9	csu	Party	303999.802
10	dielinke	Party	265409.586
11	sz	News/Media	239684.103
12	spdde	Party	239172.866
13	afdimbundestag	Party	237197.374
14	afd	Party	220071.677
15	faznet	News/Media	212572.647
16	fdpbt	Party	190287.677
17	arminlaschet	Politician	186602.259
18	junge_union	Party	162198.381
19	_a_k_k_	Politician	157753.422
20	fdp	Party	151872.034

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A project from the **socialmedia** RESEARCH FOUNDATION

This case study is part of the research project

Mapping Political Networks

at the Social Media Research Foundation

All network maps related to the Bundestag can be found here:
https://nodexlgraphgallery.org/Pages/Default.aspx?search=%23nxlbundestag

Please visit the following website for more information:
https://www.smrfoundation.org/2018/09/14/research-project-mapping-political-networks/

Questions? Please send an email to info@smrfoundation.org

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