



Explorative German Political Ecosystem

Social Media Mining

Rachel Brabender, Oliver Clasen and Maximilian Götz

Related Work: Scientific Analyses Results

Tools

**Behavior and
Activity**

**Issues and
Sentiment**

Related Work: Scientific Analyses Results

Tools

Behavior and
Activity

Issues and
Sentiment

Different analytics frameworks [1]:

- **Automated content analysis/text mining:** WordStat, LIWC, General Inquirer, etc.
- **Manual content analysis/text mining:** ATLAS.ti, QDAMiner, The Ethnograph, etc.
- **Opinion mining/sentiment analysis:** SentiStrength, PolArt, SentiWordNet, etc.
- **Social network analysis:** Gephi, UCINET, Pajek, etc.

Related Work: Scientific Analyses Results

Tools

**Behavior and
Activity**

Issues and
Sentiment

- **quantitative analyses** of the activity
 - based on tweets, retweets [5][8] and
 - based on hashtags, links, @-operators [9] and
 - as well **on provincial level** [7]
- **Twitter usage** during campaign led to **more votes** for politicians [2]
- **political orientation \neq social media activity** [7]

Related Work: Scientific Analyses Results

Tools

Behavior and
Activity

Issues and
Sentiment

- **mismatch** between the political **reality** and how it is **mirrored** in messages [4]
- **match of the offline and online political landscape** of the parties' and politicians' political positions [6]
- mostly discussion of **campaign-related events** and **topics specific to social media** [3]
- tweets containing **emotions tend to be retweeted** more often [5]

The Challenge

- Analyzing the biggest political parties in Germany based on their Twitter activity
- five factor model
- Challenges:
 - What data are we using?
 - How do we get the data?
 - How do we process the data?
 - How do we visualize the results?

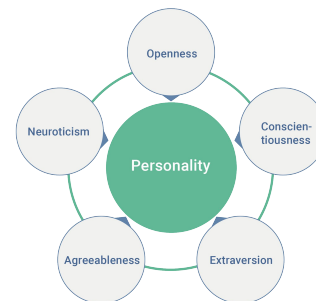


Chart 6

What data are we using?



Chart 7

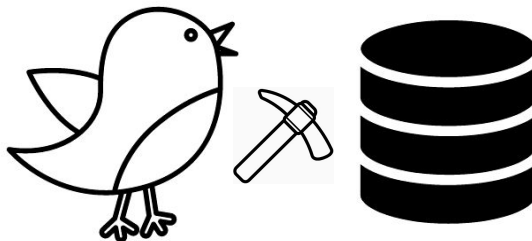
How do we get the data?

Twint

- without Twitter api
- Anonymous
- No rate limits
- Still doesn't get all tweets?!

Tweepy

- Uses twitter api
- Twitter account needed
- There is a limit around 3200 per 15 minutes
- Getting almost all tweets



How do we process the data?


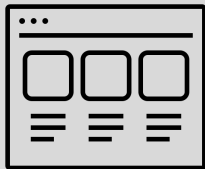
- translate tweets with googletans or goslate
- add to postgres
- create chunks of data for analyzing and feed them to  LIWC (natural language processing tool)
- feed the results to the trained model



Chart 9

Visualization

Concept



Web platform

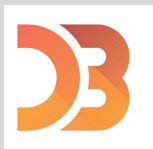


**Visibility of the
change process**



interactive

Tools



data visualisation



web framework



database



backend

What to analyze

How do parties present themselves on twitter?

- 1 Which personalities do they portray?
- 2 What is their focus of communication?
- 3 Are they (in)consistent?

Roadmap

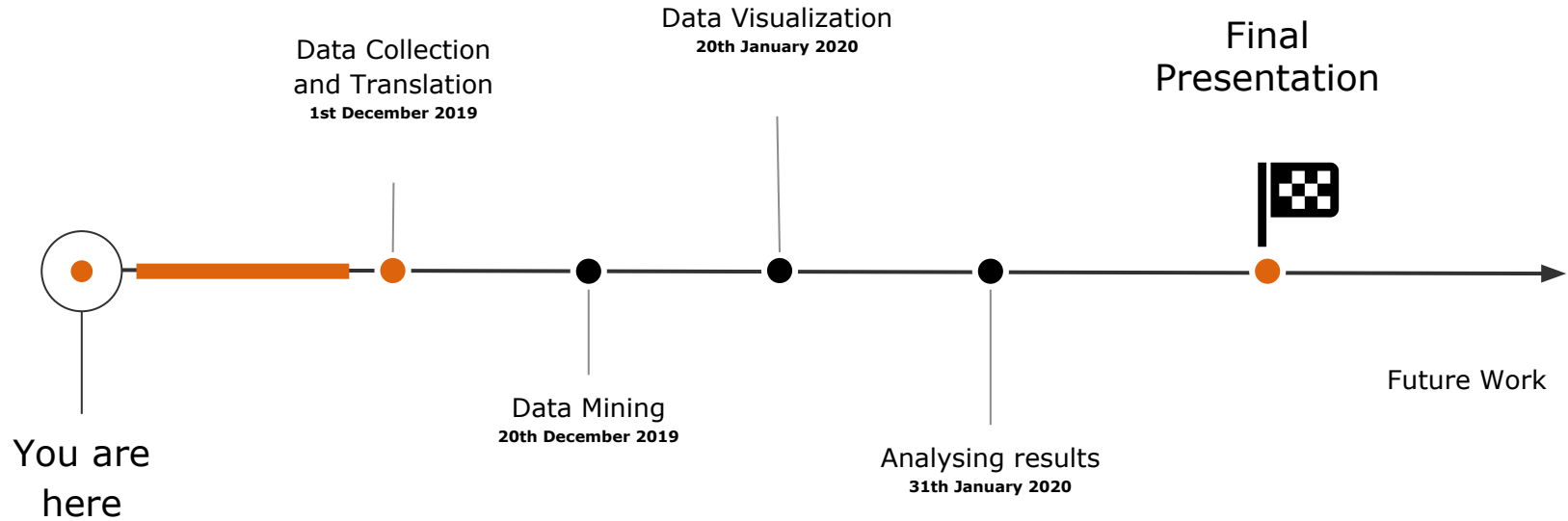


Chart **12**



Thank you for your attention!

Rachel Brabender, Oliver Clasen and Maximilian Götz

Literature

- [1] Stefan Stieglitz and Linh Dang-Xuan (2012): **Social Media and Political Communication - A Social Media Analytics Framework**
- [2] Sanne Kruijkemeier (2014): **How political candidates use Twitter and the impact on votes**. In Computers in Human Behavior 34:131–139 (2014).
- [3] Sebastian Stier, Arnim Bleier, Haiko Lietz and Markus Strohmaier (2018): **Election Campaigning on Social Media: Politicians, Audiences, and the Mediation of Political Communication on Facebook and Twitter**. In Political Communication, Volume 35.
- [4] Sebastian Stier, Arnim Bleier, Haiko Lietz and Markus Strohmaier (2016): **The Mediation of Politics through Twitter: an Analysis of Messages posted during the Campaign for the German Federal Election 2013**. In Journal of Computer-Mediated Communication, Volume 21, Issue 1.
- [5] Stefan Stieglitz and Linh Dang-Xuan (2012): **Political Communication and Influence through Microblogging - An Empirical Analysis of Sentiment in Twitter Messages and Retweet Behavior**. 45th Hawaii International Conference on System Sciences.
- [6] Andranik Tumasjan, Timm O. Sprenger, Philipp G. Sandner and Isabell M. Welp (2010): **Predicting Elections with Twitter: What 140 Characters Reveal about Political Sentiment**. Proceedings of the Fourth International AAAI Conference on Weblogs and Social Media.
- [7] Thomas Elter (2013): **Interaktion und Dialog? Eine quantitative Inhaltsanalyse der Aktivitäten deutscher Parteien bei Twitter und Facebook während der Landtagswahlkämpfe 2011**. In Publizistik, Volume 58, Issue 2, pp 201–220.
- [8] Andreas Dusch, Stefan Gerbig, Mario Lake, Sabrina Lorenz, Fabian Pfaffenberger and Urs Schulze (2014): **Post, reply, retweet – Einsatz und Resonanz von Twitter im Bundestagswahlkampf 2013**. In Die Massenmedien im Wahlkampf.
- [9] Caja Thimm, Jessica Einspänner, Mark Dang-Anh (2012): **Twitter als Wahlkampfmedium: Modellierung und Analyse politischer Social-Media-Nutzung**. In Publizistik, 57(3), 293–313.

Accounts FdP

- @fdp (since 05.2009, 13,2T Tweets, 349,7T Follower)
- @c_lindner (since 05.2010, 14,9T Tweets, 362,4T Follower)
- @nicolabeerfdp (since 02.2017, 9.261 Tweets, 14,9T Follower)
- @KatjaSuding (since 01.2009, 2624 Tweets, 10,5T Follower)

Accounts SPD

- @spdde (since 03.2009, 42.5T Tweets, 371T Follower)
- @MartinSchulz (since 11.2008, 4.6T Tweets, 698T Follower)
- @Ralf_Stegner (since 10.2008, 50.7T Tweets, 52.2T Follower)
- @larsklingbeil (since 09.2008, 20.1T Tweets, 49.5T Follower)
- @UlrichKelber (since 02.2009, 29.6T Tweets, 22.9T Follower)

Accounts CDU

- @CDU (since 02.2009, 21.7T Tweets, 296.6T Follower)
- @CSU (since 02.2009, 16.1T Tweets, 195,7 T Follower)
- @akk(since 06.2009, 7.984 Tweets, 88,3T Follower)
- @JuliaKloeckner (since 04.2009, 28,7T Tweets, 62,9T Follower)
- @AndiScheuer (since 06.2009, 2649 Tweets, 49,7T Follower)
- @peteraltmaier (since 09.2011, 11,1T Tweets, 255,6T Follower)

Accounts die Grünen

- @Die_Gruenen(since 04.2008, 18.6T Tweets, 488T Follower)
- @Volker_Beck(since 09.2008, 67.1T Tweets, 91.4T Follower)
- @RenateKuenast(since 05.2013, 26.4T Tweets, 50.8T Follower)
- @bueti(since 02.2009, 33.3T Tweets, 24.9T Follower)
- @cem_oezdemir(since 01.2009, 10T Tweets, 157T Follower)

Accounts AfD

- @AFD (since 9.2012, 20,5T Tweets, 147,3T Follower)
- @Alice_Weidel (since 2.2017, 2484 Tweets, 84,2T Follower)
- @Beatrix_vStorch (since 9.2012, 9116 Tweets, 50.1T Follower)
- @MarcusPretzell (since 3.2013, 7230 Tweets, 10,8T Follower)
- @PoggenburgAndre (since 7.2015, 6987 Tweets, 22,6T Follower)
- @FraukePetry (since 3.2013 to 9.2017, 4479 Tweets, 51.8T Follower) bis 09/2017

Accounts die Linke

- @dieLinke (since 06.2009, 28.1T Tweets, 276,2T Follower)
- @GregorGysi (since 08.2012, 2131 Tweets, 347,1T Follower)
- @MartinaRenner (since 08.2009, 7478 Tweets, 13,8T Follower)
- @SWagenknecht (since 06.2009, 1430 Tweets, 412,4T Follower)
- @PetraPauMaHe (since 04.2012, 16,2T Tweets, 13,4T Follower)