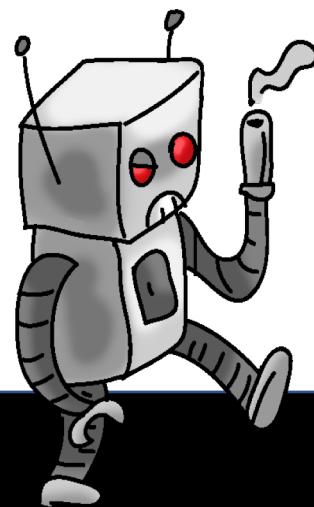




# Political Data Science: A tale of fake News, Social Bots and the post-truth er



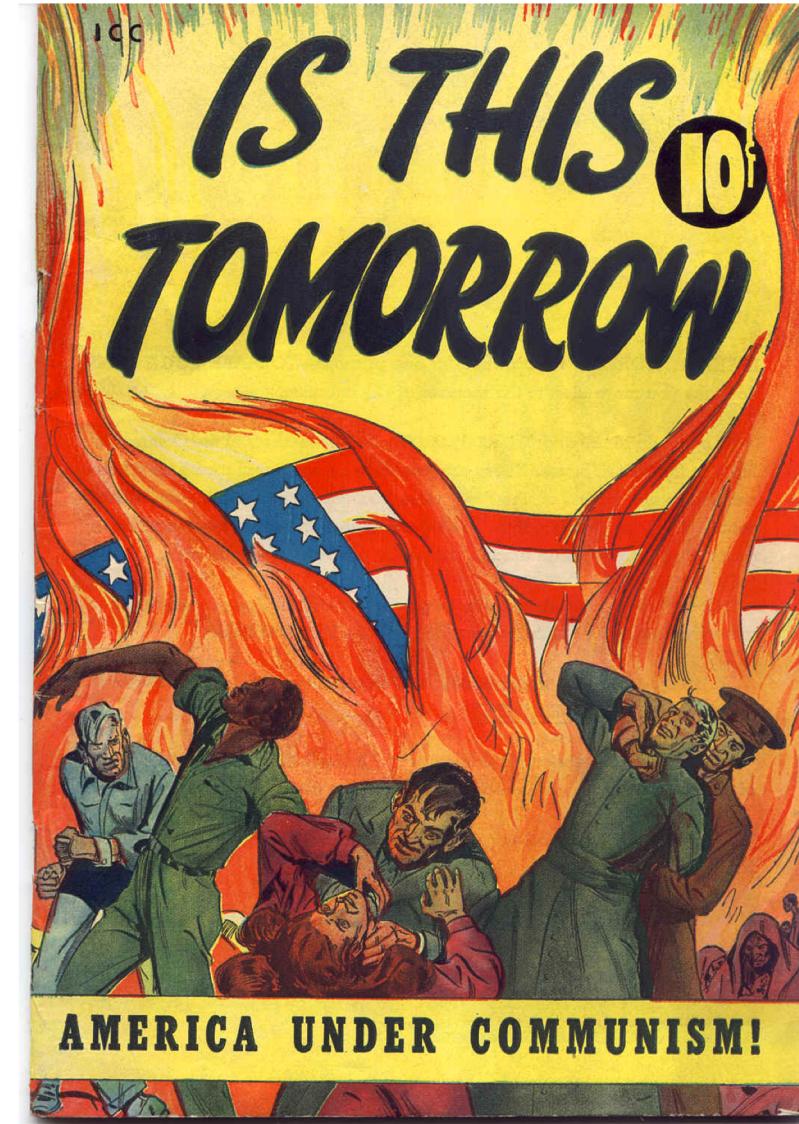
Juan Carlos Medina Serrano





# Post-truth Era



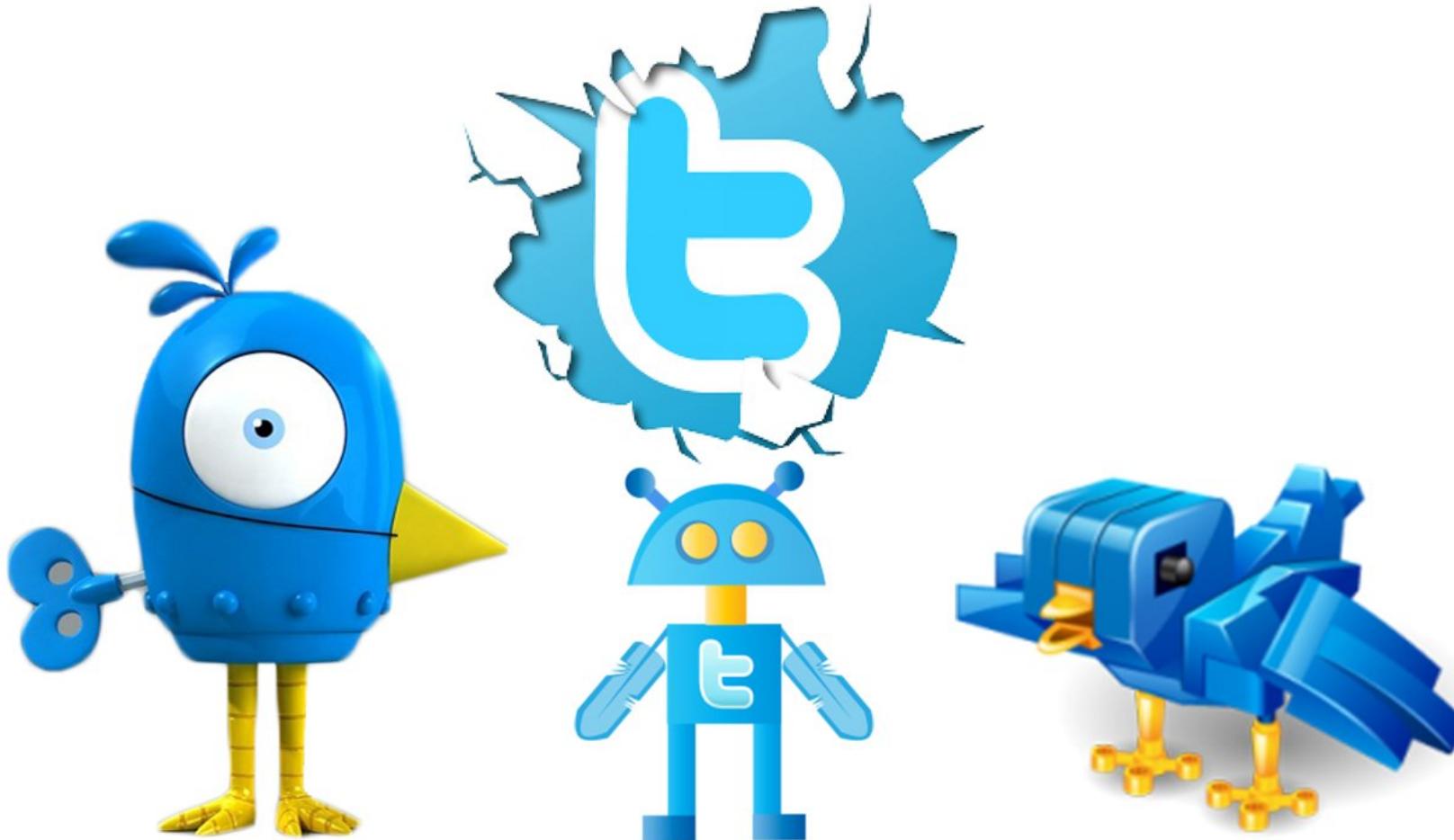


# Post-truth Algorithmic Era



# Social Bots





# How to recognize them?

- Anomaly Detection!
  - 1 ) Machine Learning Methods (Classification)
  - 2 ) Heuristic Methods

- Botometer:  
**Features: Network, user, temporal, text features**



# #pizzagate: A conspiracy spread by bots



# Russian Interference?



**SATAN: IF I WIN CLINTON WINS!  
JESUS: NOT IF I CAN HELP IT!**



**BM** shared their event.

Sponsored ·

People are genuinely scared for their futures!  
Racism won, Ignorance won, Sexual assault won

STOP TRUMP! STOP RACISM! JOIN THE PROTEST at Union Sq.  
Saturday 12 PM

Bring signs, snacks, water!



NOV  
12

**Trump is NOT my President. March aga...**

Sat 12 PM EST · Union Square - 14th & Broadwa...  
33,140 people interested · 16,760 people going

Interested



# Costs?

\$95,000



# Costs?

**Table I.** Presidential Campaign Expenditures by Media Type, 2012 and 2016 General Elections (July 1 to November 30).

Candidate	Total Expenditures	Total Media Expenditures	Amount	% Total Expenditures	% Total Media Expenditures
<b>2016</b>					
Hillary Clinton (D)	US\$348,051,714	US\$252,866,041	US\$20,208,872	5.8	8
Donald Trump (R)	US\$176,882,315	US\$176,882,315	<u>US\$83,547,877</u>	30.7	47.2



# The AFP: Social media King





September  
2017

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## retweets

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<i>AfD</i>	43,633
<i>CDU</i>	14,603
<i>CSU</i>	3,738
<i>Die Grünen</i>	15,440
<i>Die Linke</i>	12,888
<i>FDP</i>	7,905
<i>SPD</i>	13,712

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September  
2017



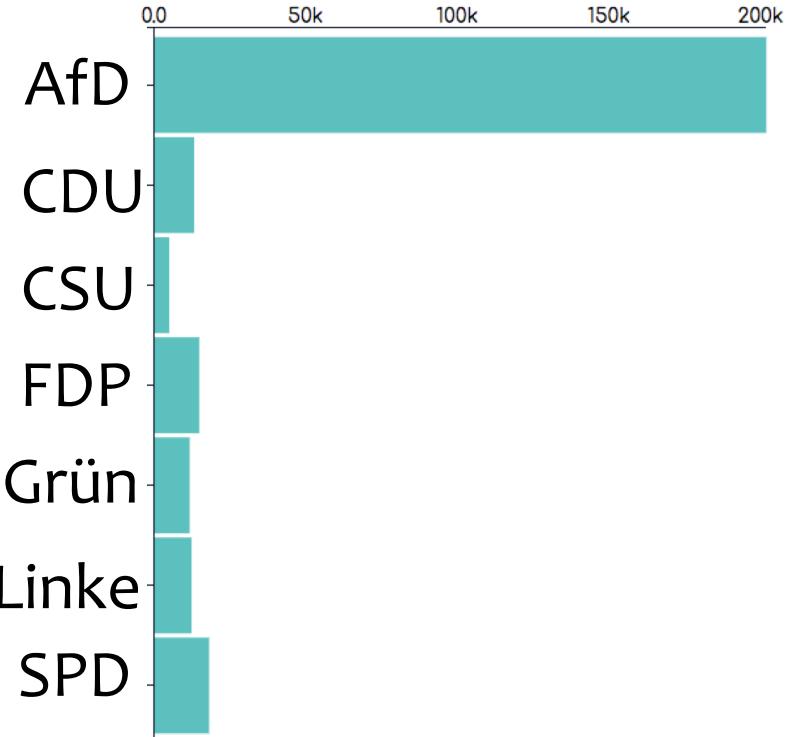
	retweets	bots(%)
<i>AfD</i>	43,633	32.92%
<i>CDU</i>	14,603	21.15%
<i>CSU</i>	3,738	24.02%
<i>Die Grünen</i>	15,440	15.68%
<i>Die Linke</i>	12,888	12.97%
<i>FDP</i>	7,905	23.45%
<i>SPD</i>	13,712	12.99%



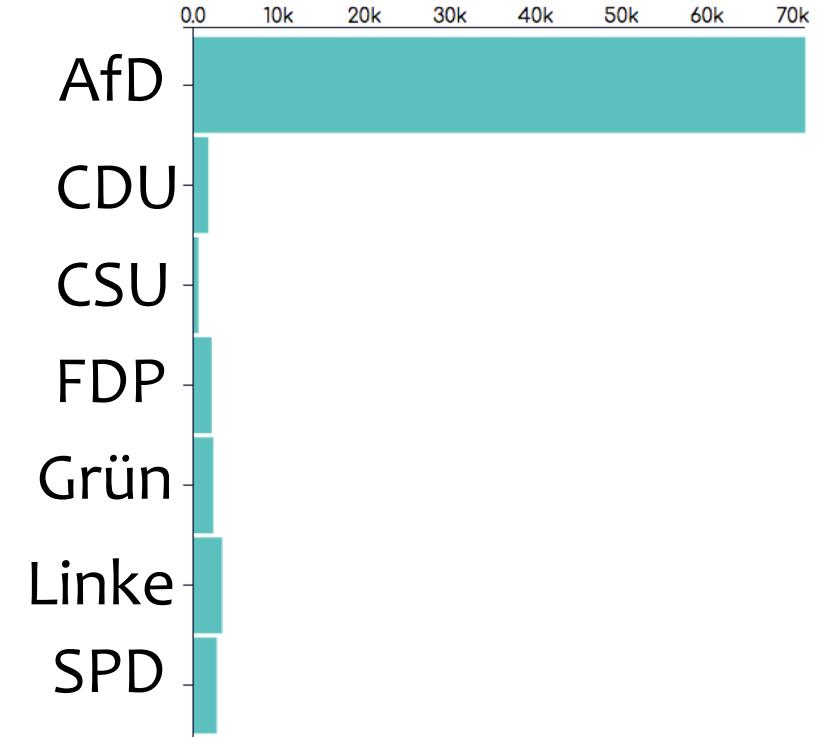


First week  
October 2019

## Likes



## Shares



# Fakes on Facebook



Fred Ehliger  
(Henry Tudor)

Timeline   About



**Jonathan Rhys Meyers**

Holy Lands  
David

The Aspern Papers  
Morton Vint

The 12th Man  
Kurt Stage

Damascus Cover  
Ari Ben-Sion / Hans Hoffmann

Black Butterfly  
Jack





طلال عبد الرحمن خلف

Add Friend Message ...

Timeline About Friends Photos More



# Fakes on Facebook



# fake news



# Fake News Detection

- Content-based approaches
  - Visual
  - Text
- Headline/Text coordination
- Social context approaches



# Fake News Detection

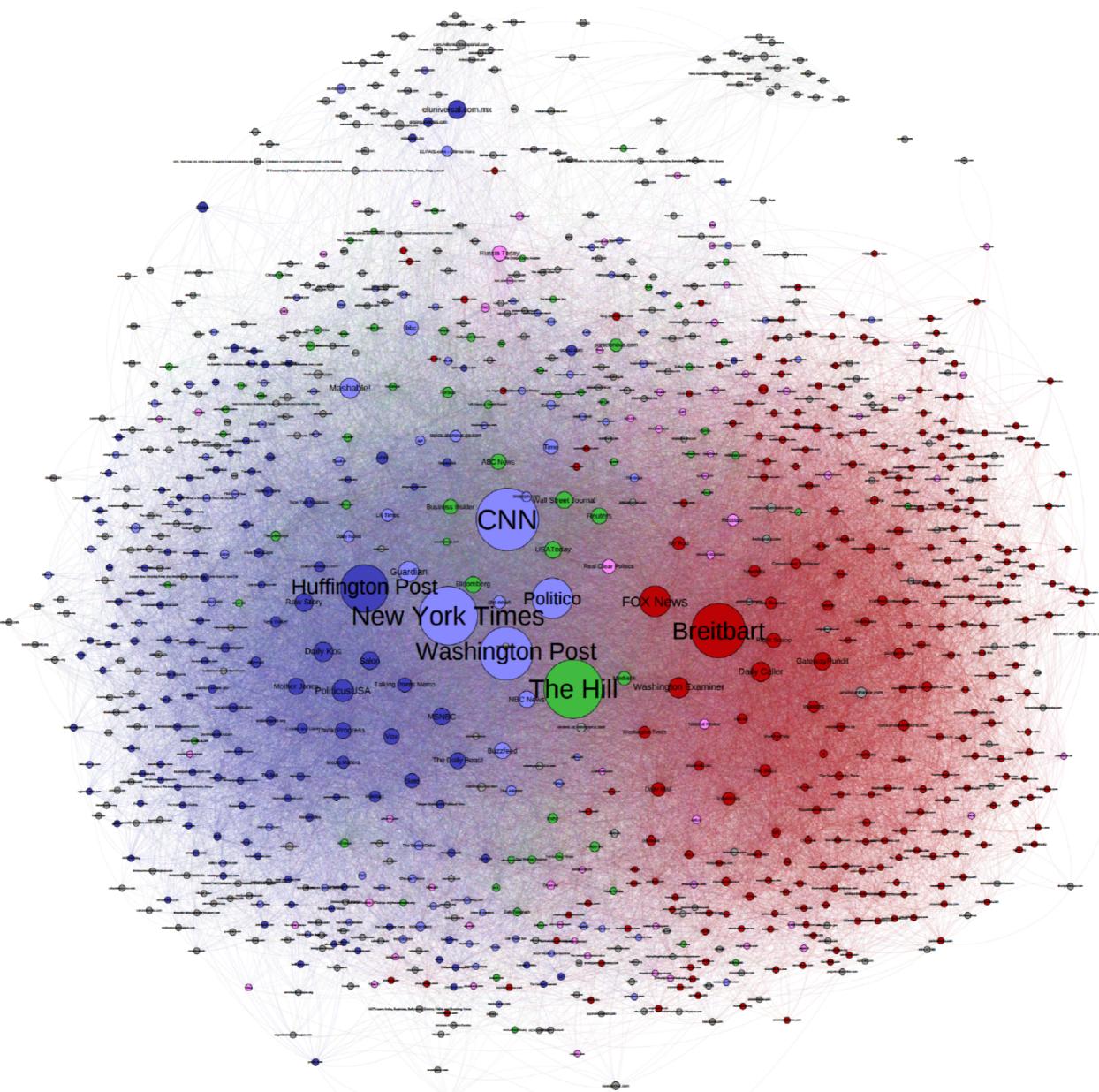
- Content-based approaches
    - Visual
    - Text
  - Headline/Text coordination
  - Social context approaches
- 
- Classification Algorithms
  - Visual: CNN
  - Text: RNN
  - Text: Knowledge Graph
  - Propagation: Graph Algorithms



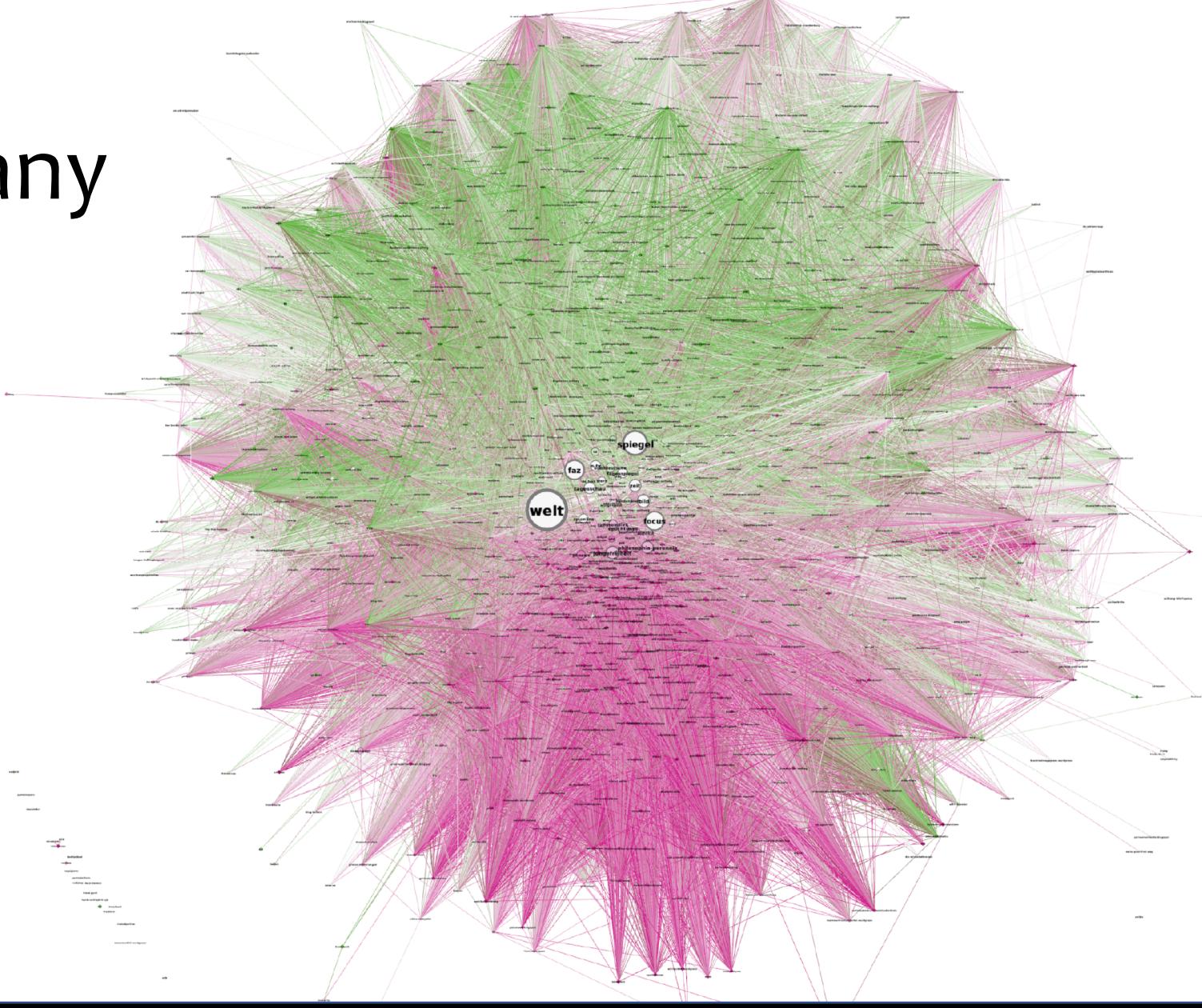
# Polarization



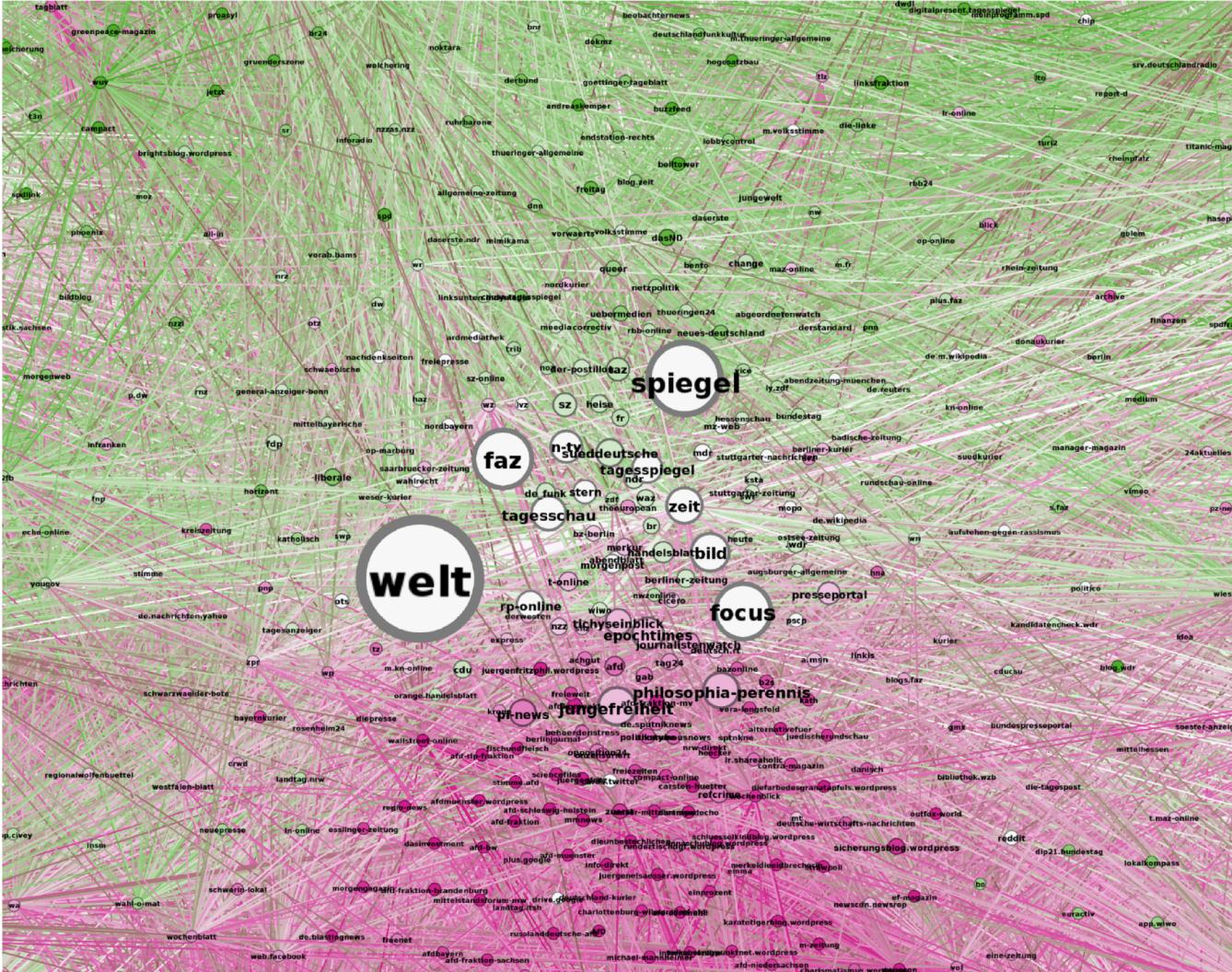
# US



# Germany



# Germany



[www.political-dashboard.com](http://www.political-dashboard.com)



juancarlos-medinaserrano

