Politician Followers and Mentions Networks in the 2018 U.S. Midterms

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Politics, Politics, Politics…

…are prime in terms of the confluence of social media and misinformation

- Lots of attention on elections and BEND type activities
- Large amount of research focused on voters as targets or participants
- We want to look at politicians as important nodes:
  - their networks
  - as targets
  - what messages they pass on/what messages are they a part of

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Data Collection: Three Streams

1. Mentions - 1,094 politicians user name seeds
   a. Direct retweets of politicians
   b. Mentions of politicians
   c. Retweets of mentions

   - for time period (Aug 28 – Nov 9, 2018)
   - around 60 million tweets, 3 million users

2. Friends/Followers of the politicians
   - 23 million users

3. Politician Timelines

Will take a look at using ORA to visually inspect these networks

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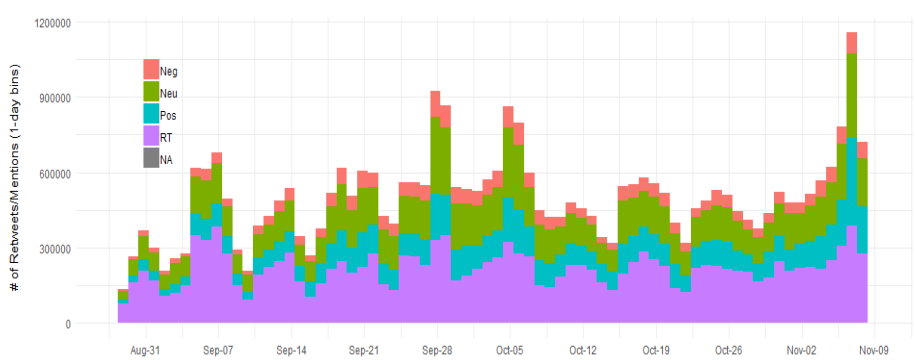
Mentions over time



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Reciprocal Mention Networks

Reciprocal Mention network:

- link exists between two users if they have mentioned (retweeted or other) each other at some point in dataset
- shows two-way conversation between two users

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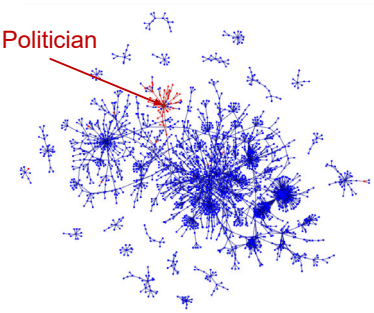
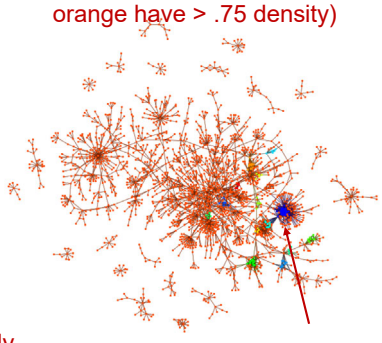
Reciprocal Mention Network Example 1

Colored by Verified Data (red)

Politician



Node Appearance: Node Color: Color by Dense Subgraph (non-orange have > .75 density)



Politician's account interaction is mostly with other verified accounts. Much of the conversation references politician but doesn't involve them.

Possible botnet or very active group of humans

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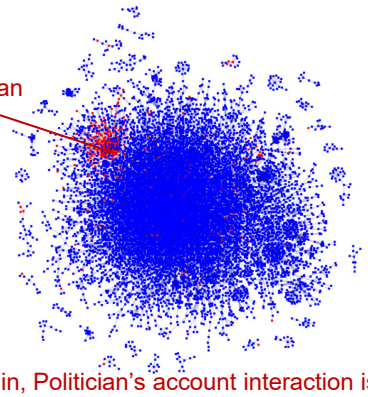
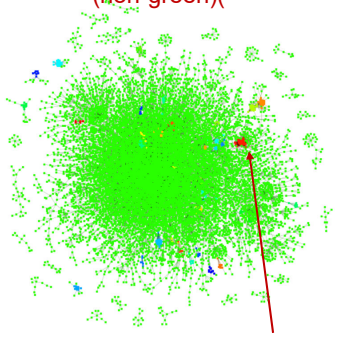


Color by Dense (>.75) Subgraph (non-green)(



Again, Politician's account interaction is mostly with other verified accounts. Much of the conversation references politician but doesn't involve them.

Possible botnet or very active group of humans

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Politician Reciprocal Follower Network

Reciprocal Follower network:
- link exists between two users if both follow each other
- shows stronger connection between two users (similar to Facebook friends)

Data is still very large so we are going to take a look at core parts of the network:
- 72-core: all users are connected to at least 72 other users
- 12-core: all users are connected to at least 12 other users

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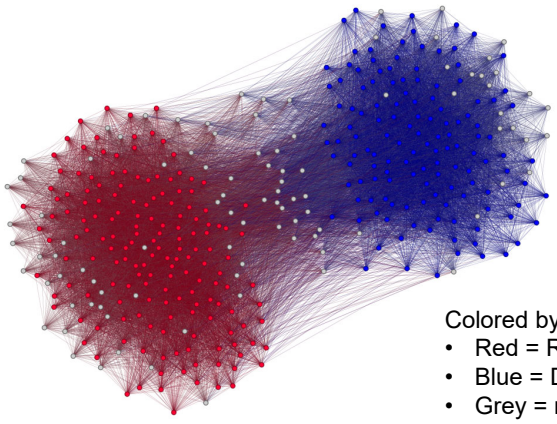
Reciprocal Follower: 72-core



Colored by political party attribute:
- Red = Republicans
- Blue = Democrats
- Grey = non-politicians (in this case mostly committees/agencies/think tanks)

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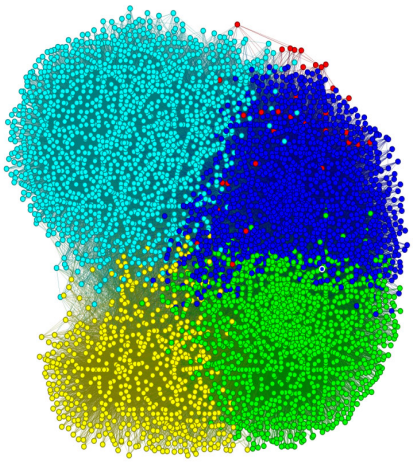
Reciprocal Follower: 12-core

- Policitians and others in network
- Node Appearance: Node Color: Color by Louvain Grouping
- Four main "quadrants", with 5th smaller group
- Why four groups?
  - Can we use a quick visual analysis to tell?



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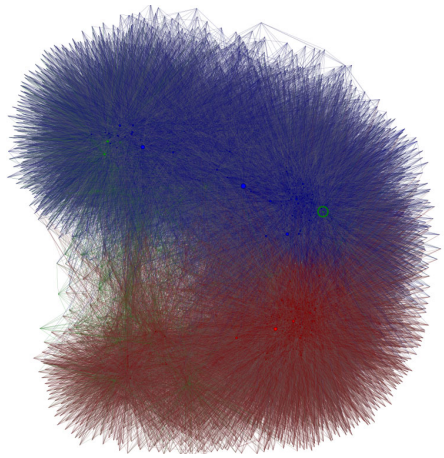
Reciprocal Follower: 12-core

- Node Appearance: Node Color: Color by Attribute or Measure
- Choosing **political party** attribute:
  - Red is Republican
  - Blue is Democrat
  - Green is 3rd party
- Divides "top" and "bottom" of network



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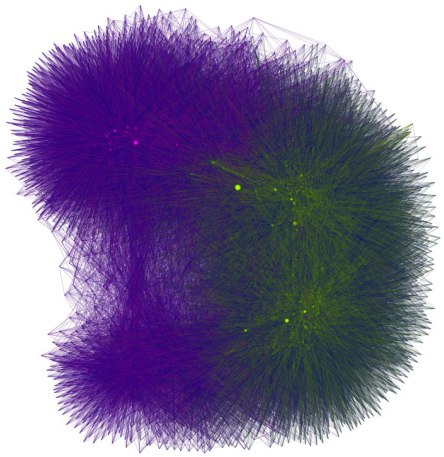
Reciprocal Follower: 12-core

- Node Appearance: Node Color: Color by Attribute or Measure
- Choosing **incumbency** attribute (whether they already are in that position or not):
  - Yellow is Incumbent
  - Purple is Challenger
- Divides "left" and "right" of network



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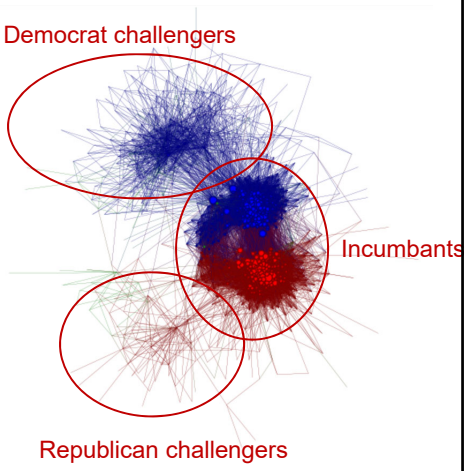
Reciprocal Follower: All Politicians Only

- Node Appearance: Node Color: Color by Attribute or Measure
- Choosing **political party** attribute:
  - Red is Republican
  - Blue is Democrat
  - Green is 3rd party
- The incumbents of both parties are more connected to each other than the challengers
- The challenger Democrats are more numerous and more connected than their Republican counterparts.



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