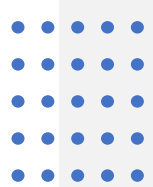




# Twitter Analysis for Democratic Socialism

Maria Jaramillo



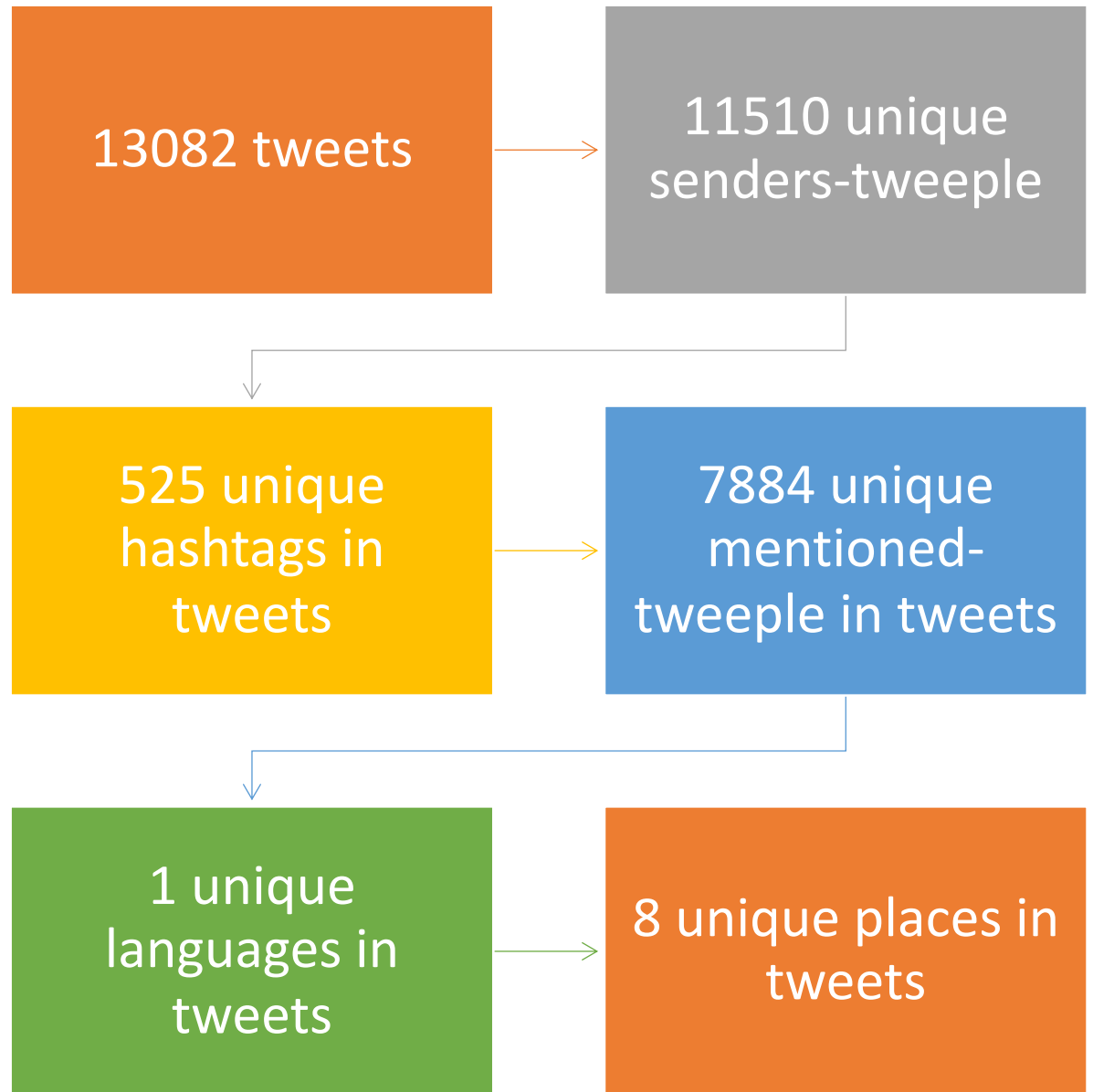


# Motivation – What is democratic socialism?

- During the 2020 democratic elections, Senator Bernie Sanders gained unprecedented popularity
- American fear of socialism – linked to Soviet policies
- What is Bernie really proposing?
  - Welfare system inside the existing capitalist economic model
  - Free college and healthcare
  - Scandinavian countries as models
- Communism vs Socialism
  - Communism does not believe in democracy, free markets, or private property
  - Social democrats accept capitalism, but protect its citizens from the downsides of the economic system.

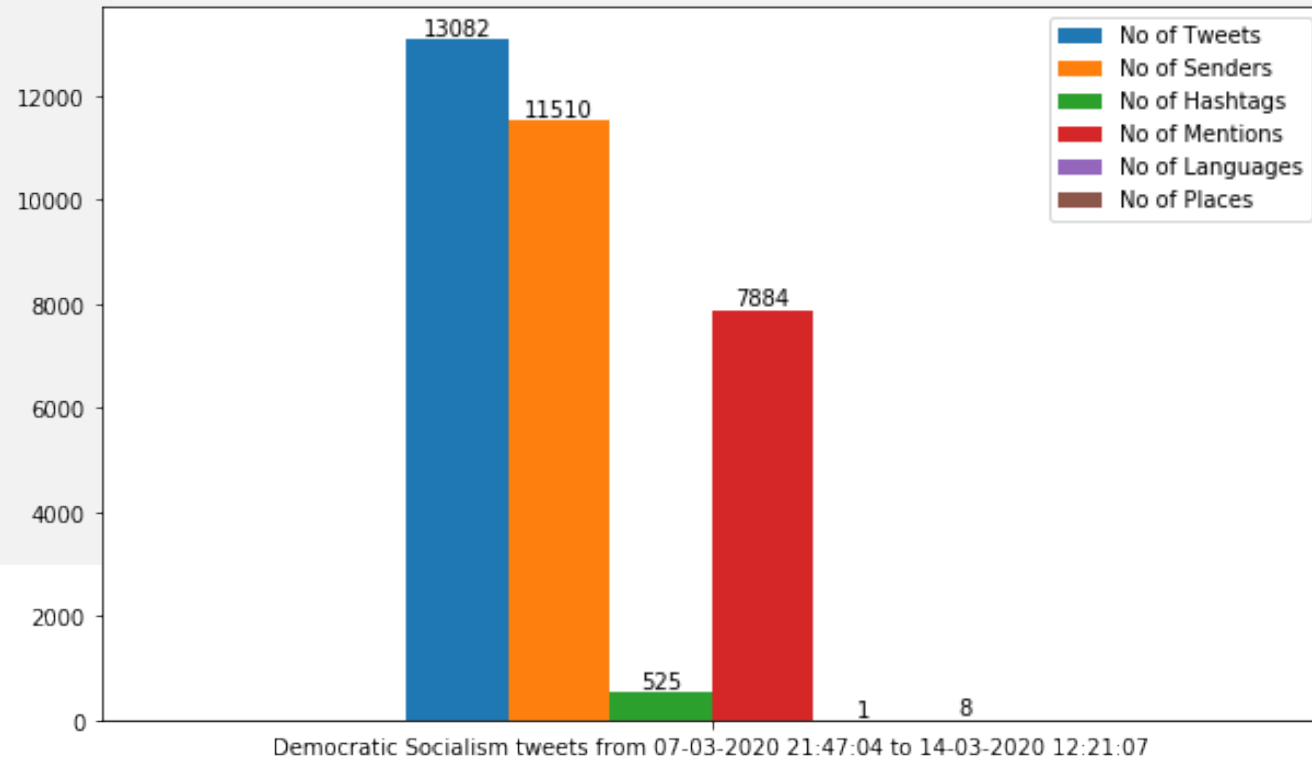
# Basic Statistics

07-03-2020 21:47:04 to 14-03-2020 12:21:07





## Total Counts

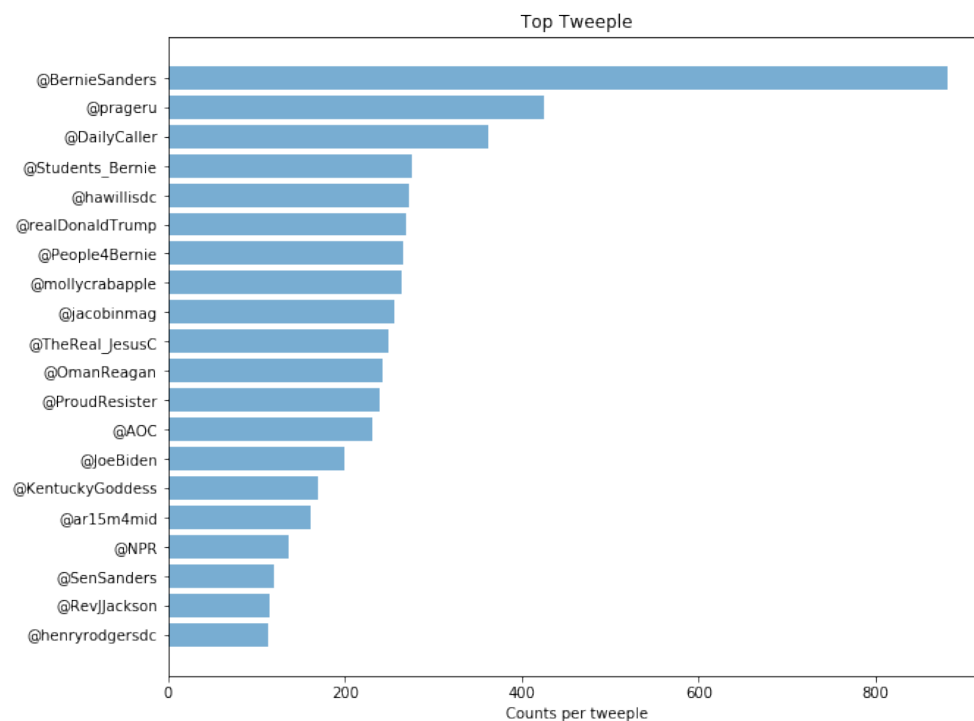


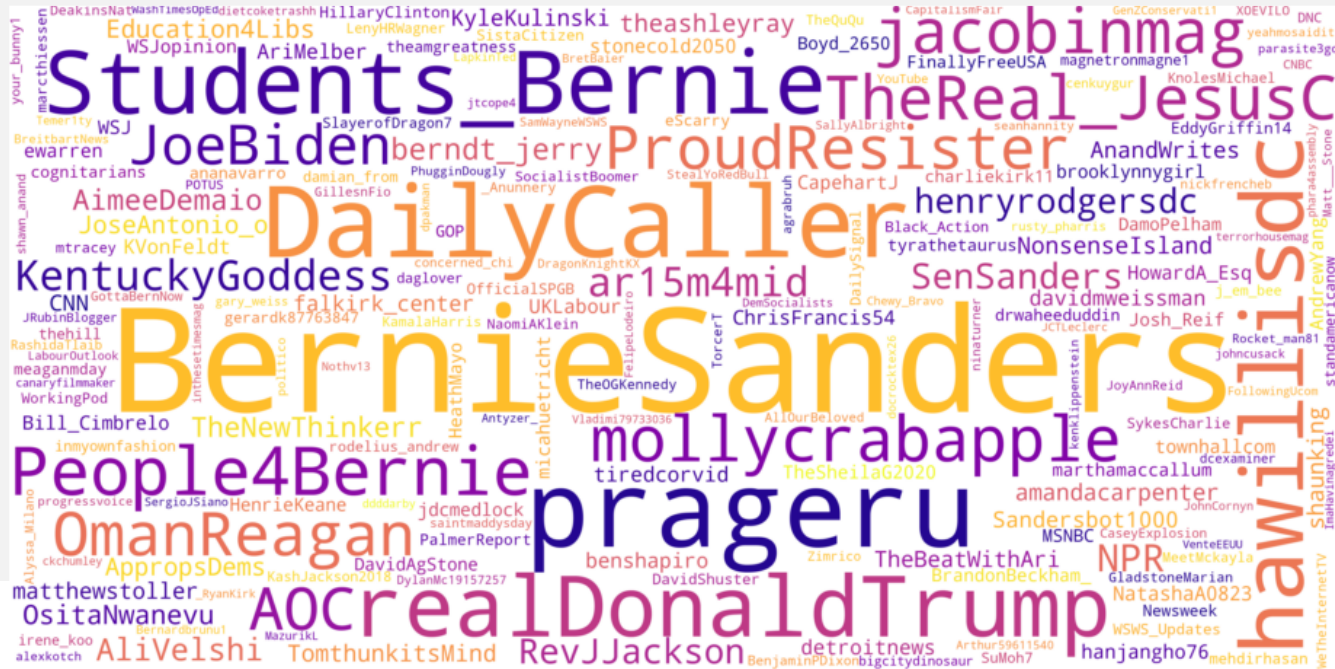
# Total Counts



# Top Democratic Socialism Tweeples

Threshold: 100 tweets



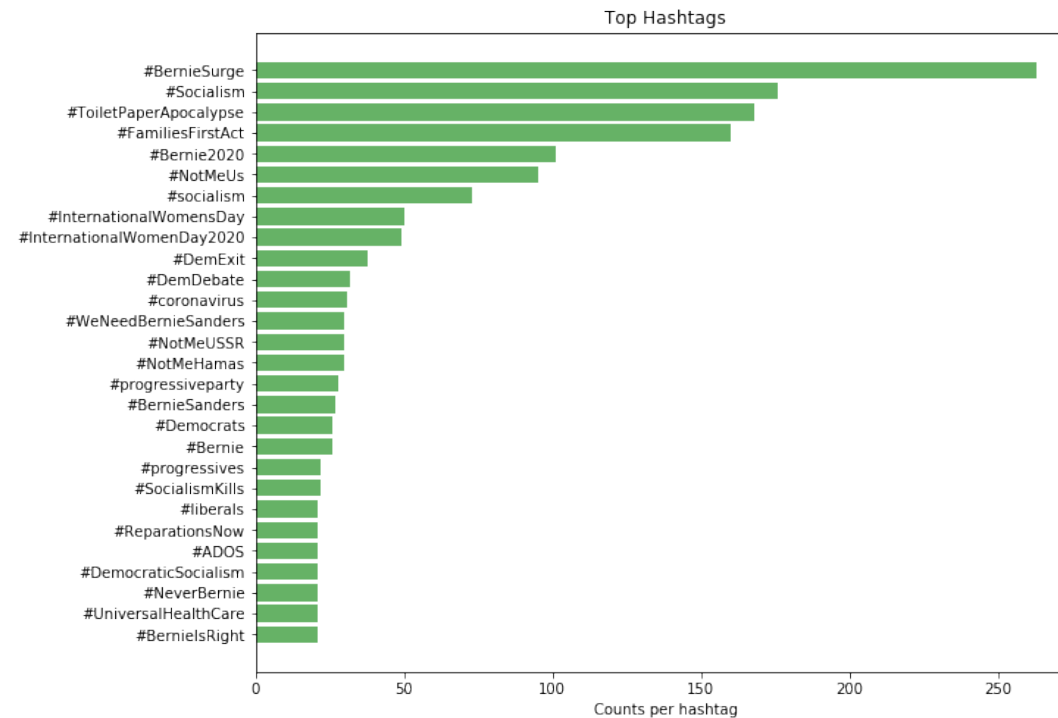


# Word Map: Democratic Socialism Tweeples



# Top Hashtags

Threshold: 20 hashtags

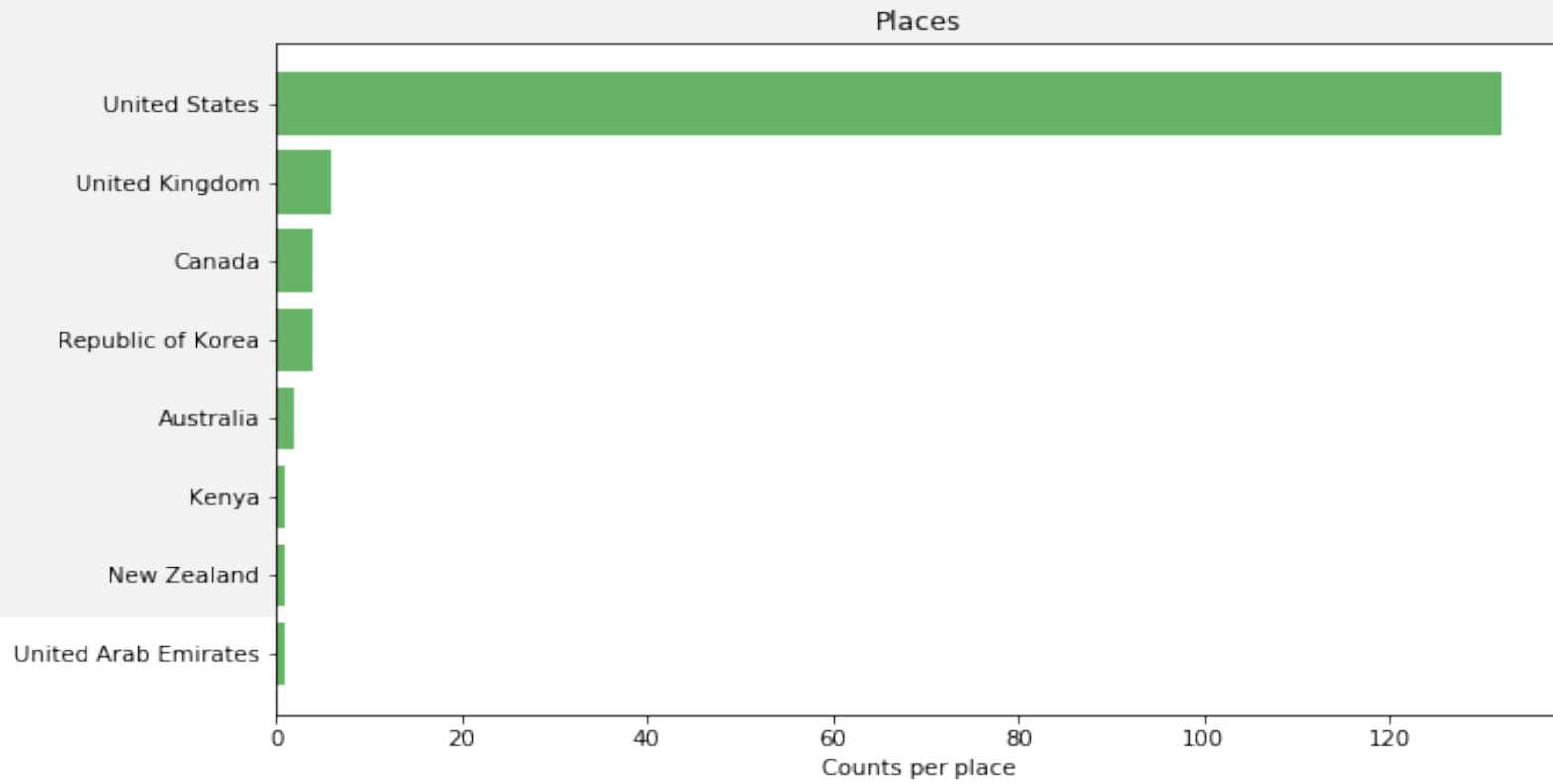


# Word Map: Hashtags

## Hashtags in the 'Democratic Socialism' tweets







All Places



Places in the 'Democratic Socialism' tweets



Word Map:  
Places

# Co-Occurring Hashtags of the 'Democratic Socialism' Tweets



**Number of hashtag-co-occurrences: 2659 multiple (2655 unique)**



**The graph of co-occurrent hashtags is a weighted graph and it includes:**

396 nodes (hashtags) and 1215 edges (hashtag co-occurrences)



**This graph is a disconnected graph and it includes:**

33 connected components

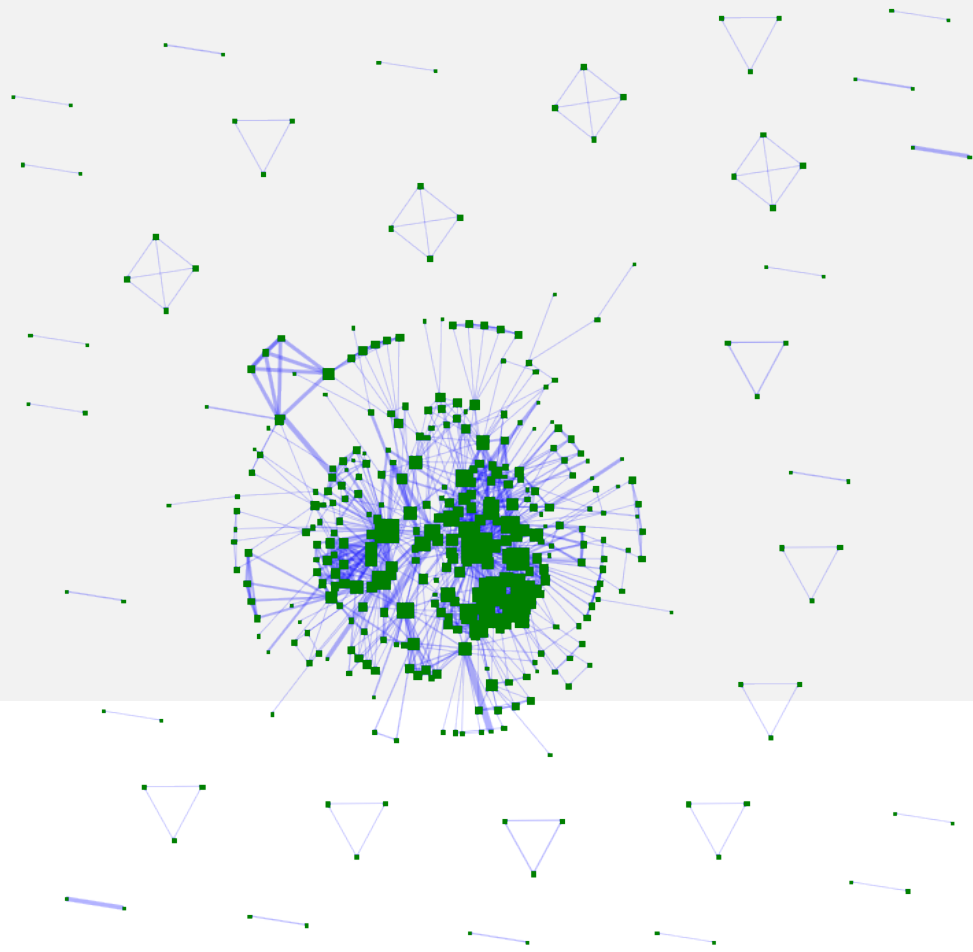


**The largest connected component and it includes:**

315 nodes and 1145 edges

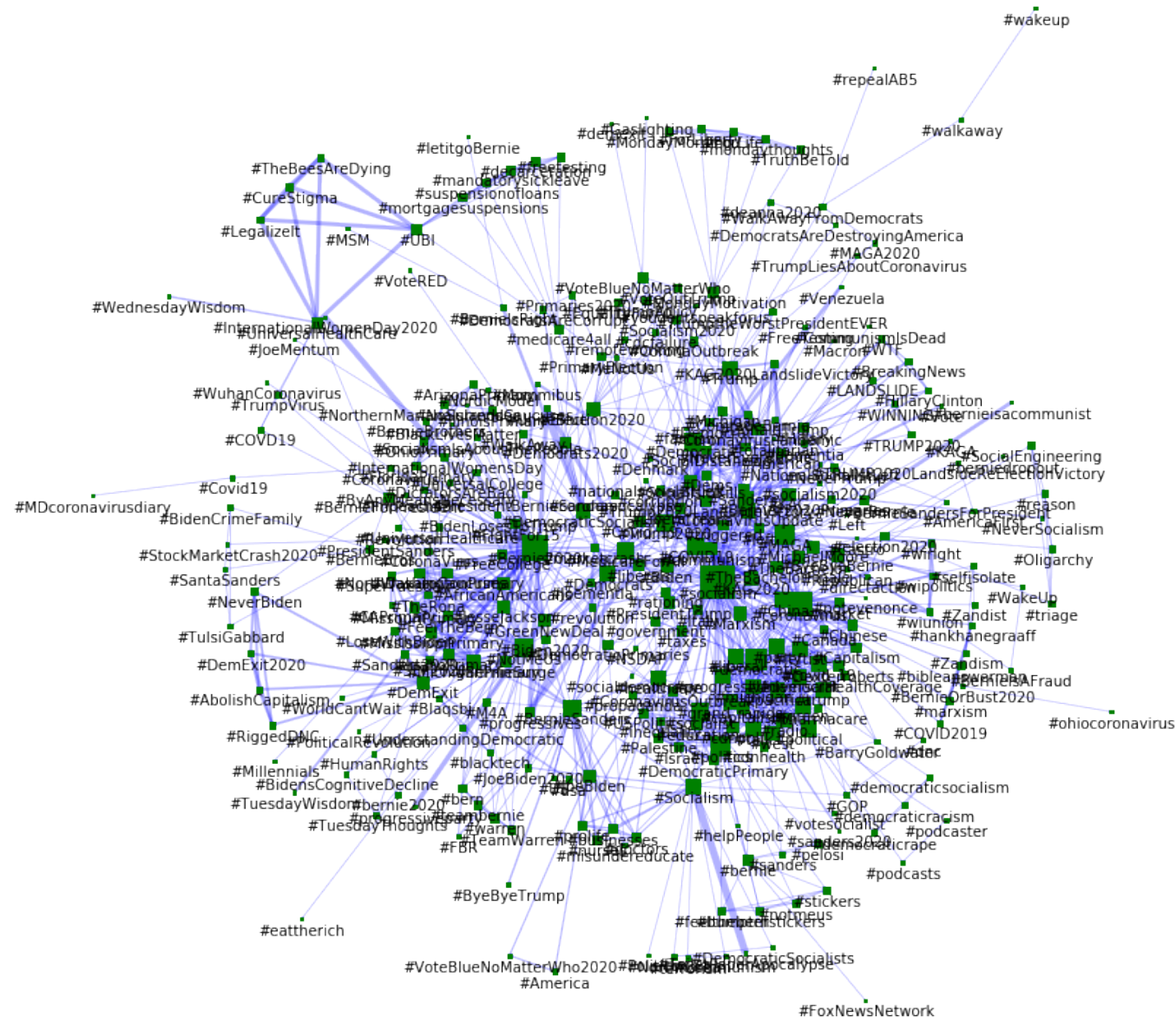


The graph of co-occurrent hashtags of the 'Democratic Socialism' tweets



The graph of Co-Occurring Hashtags of the 'Democratic Socialism' Tweets

The largest connected component of the graph of co-occurrent hashtags of the 'Democratic Socialism' tweets

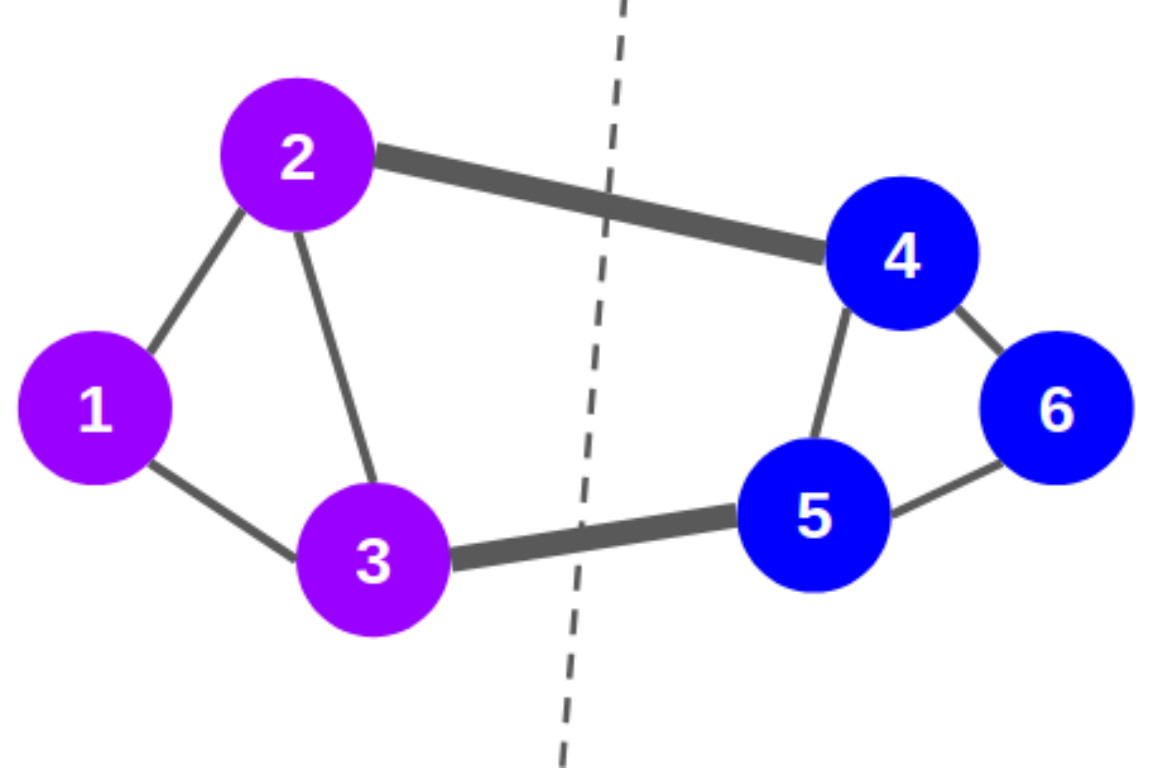




# The 12 Communities of the Largest Connected Component of the Co- Occurring Hashtags of the 'Democratic Socialism' Tweets

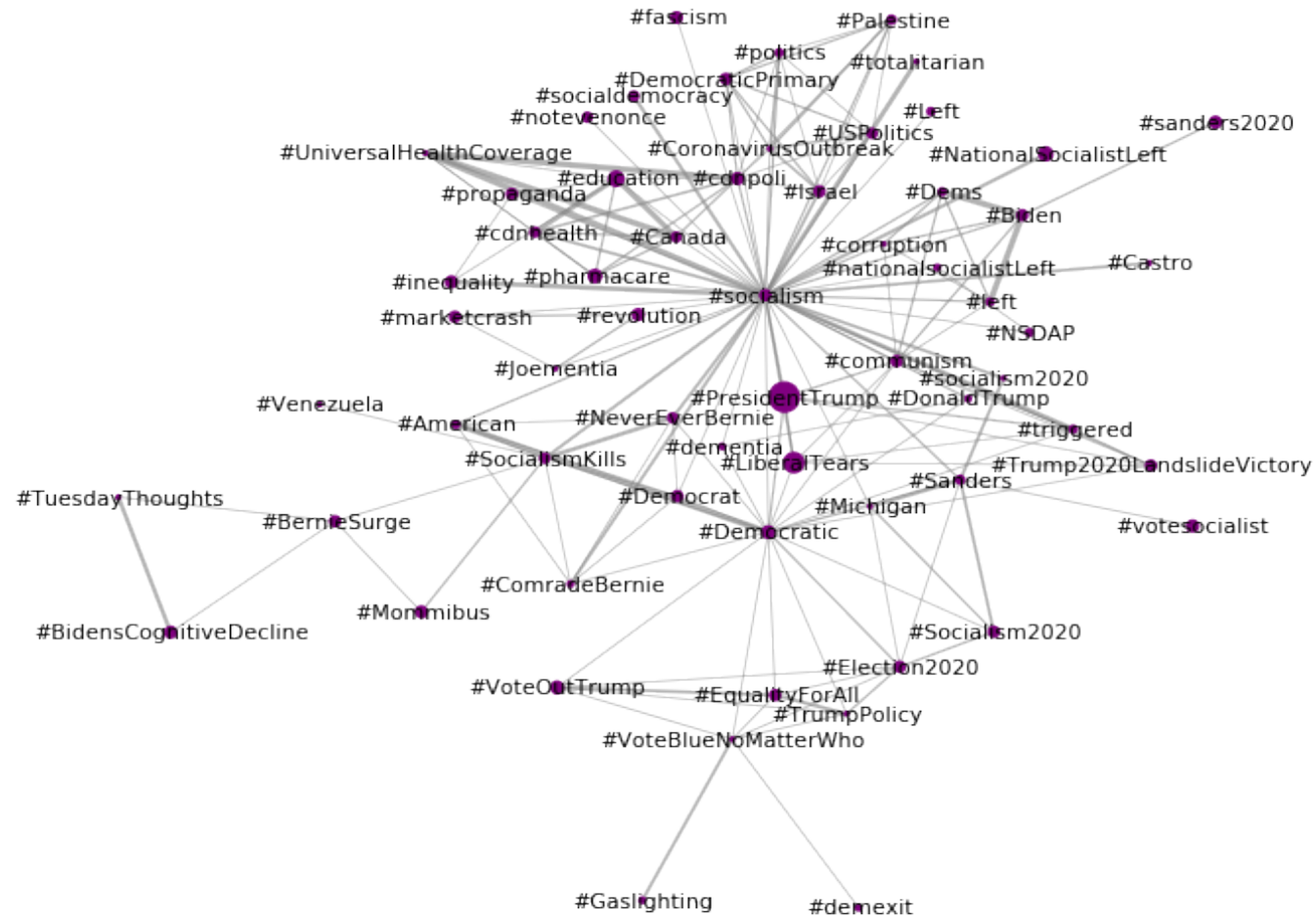


# Review of Community



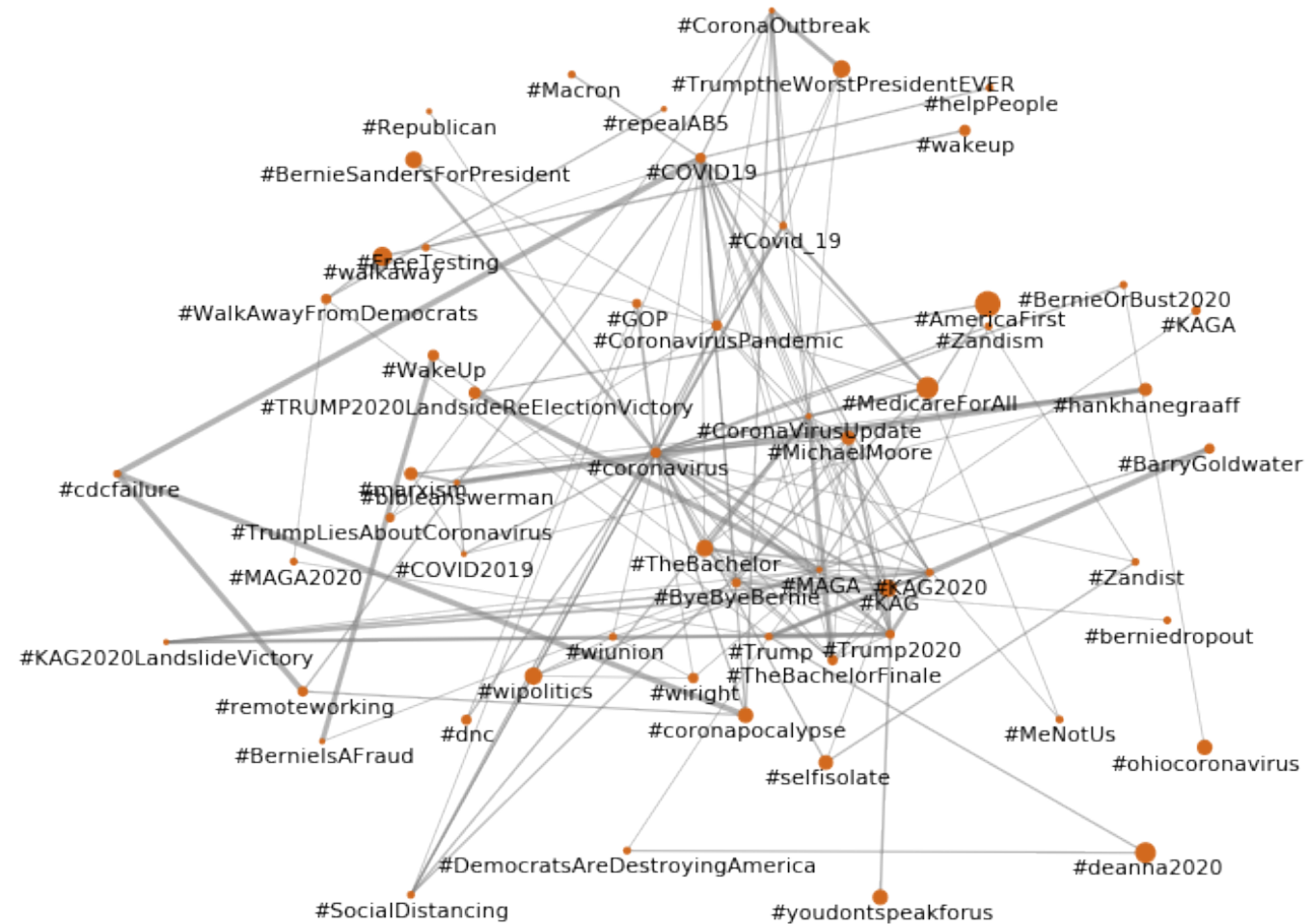
- Very important task in network analysis
- A subset of nodes that are densely connected to each other and loosely connected to the nodes in the other communities in the same graph

## The 1st Community of the largest connected component of the graph of co-occurring hashtags

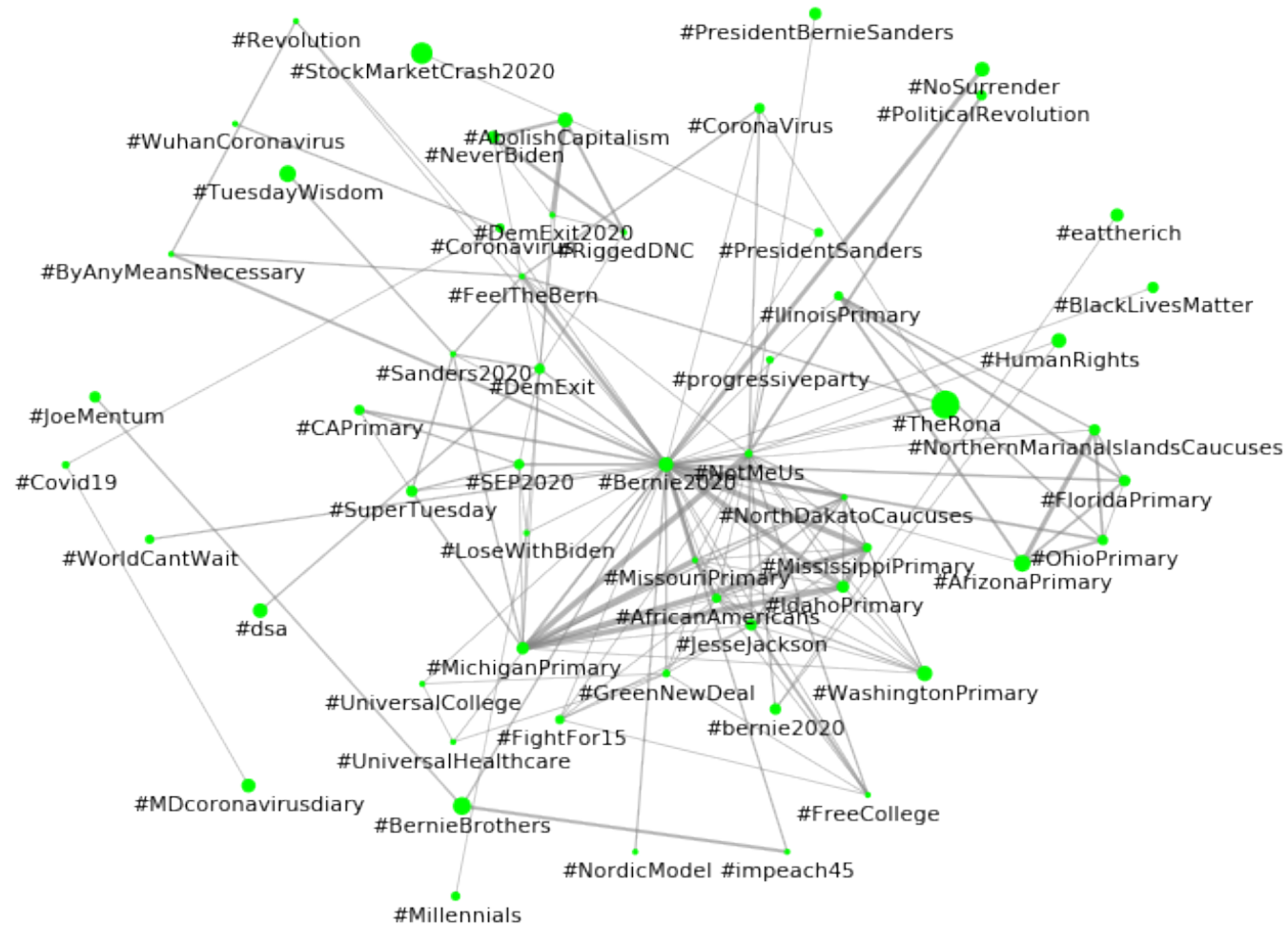




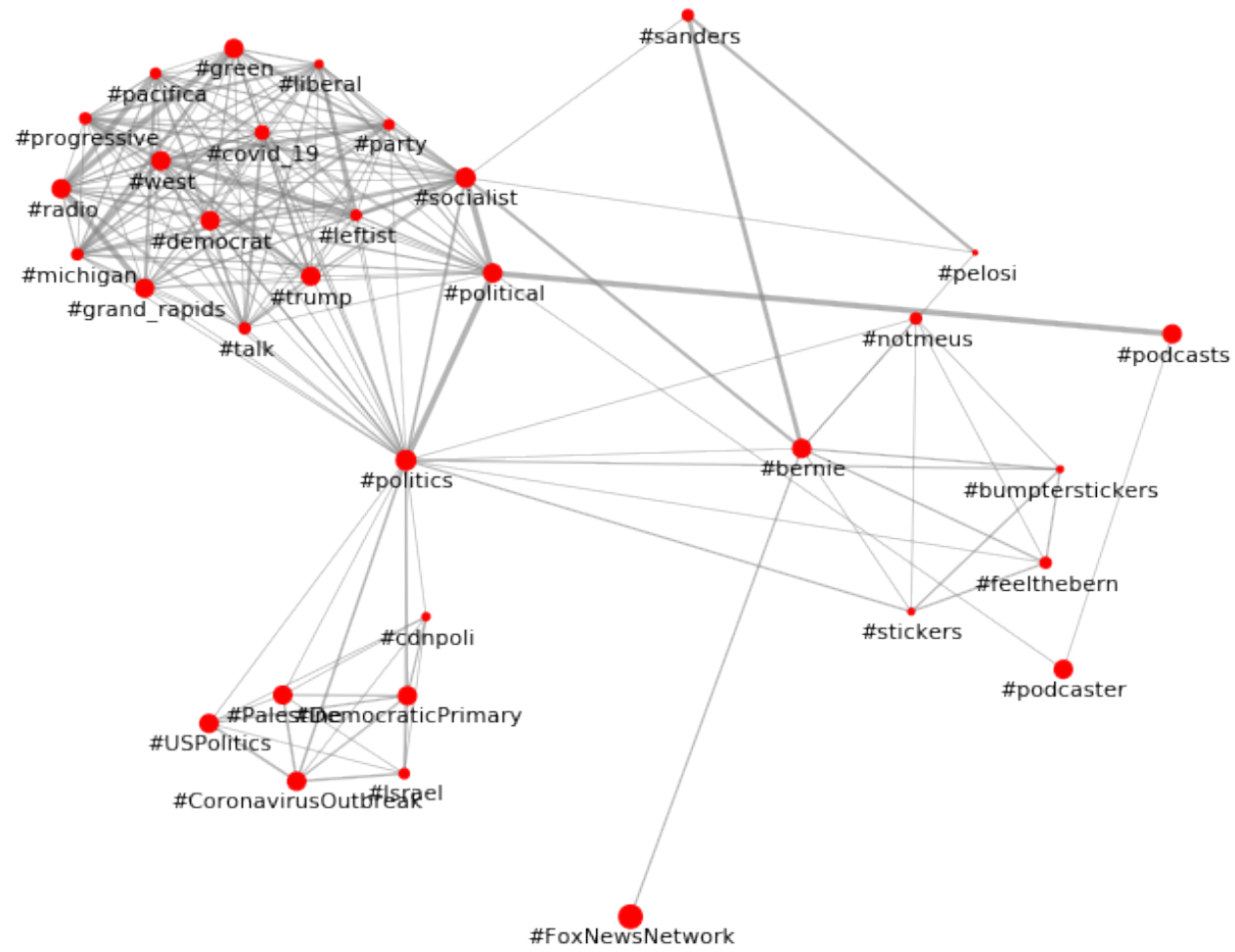
## The 2nd Community of the largest connected component of the graph of co-occurring hashtags



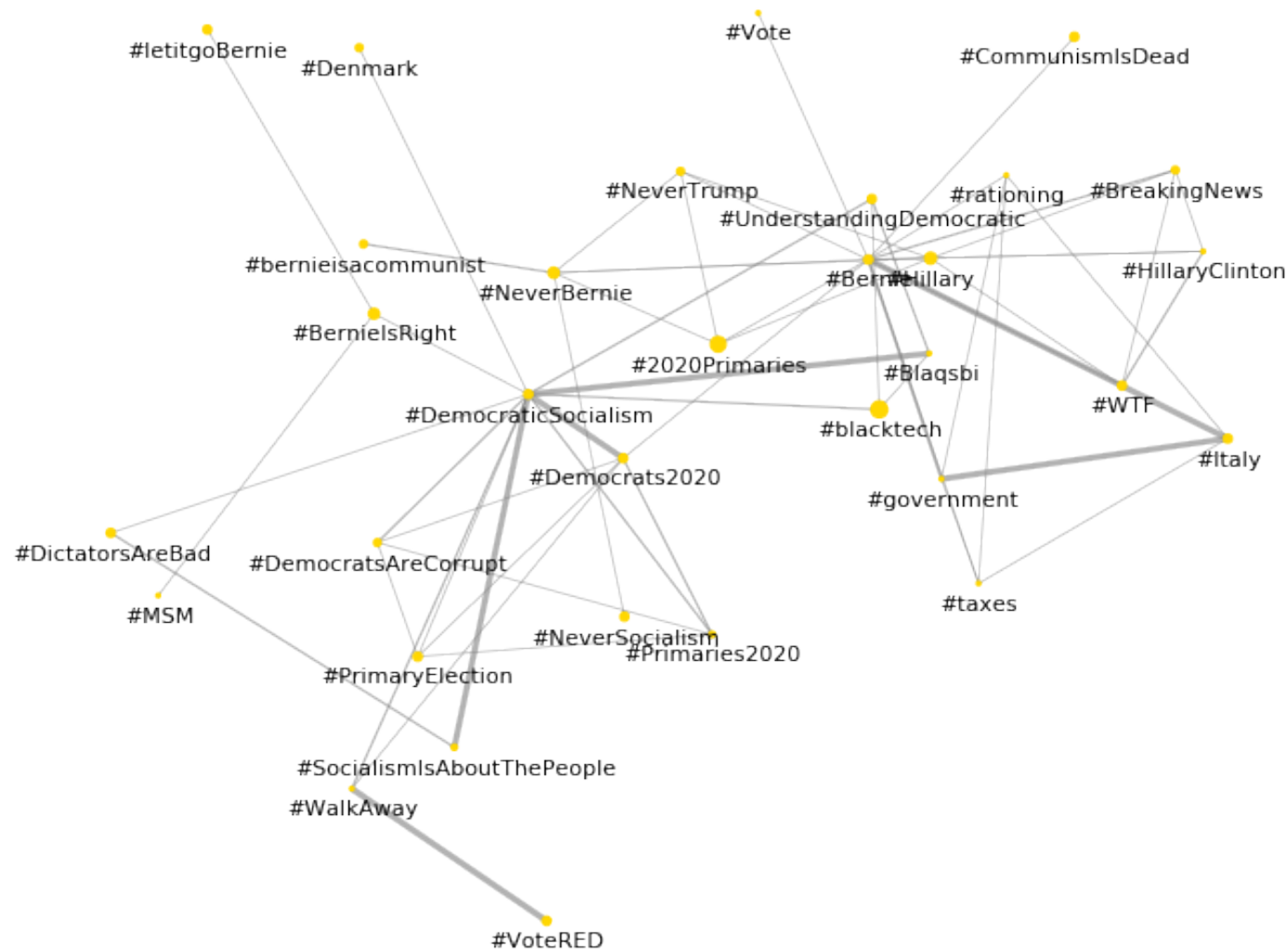
The 3rd Community of the largest connected component of the graph of co-occurring hashtags



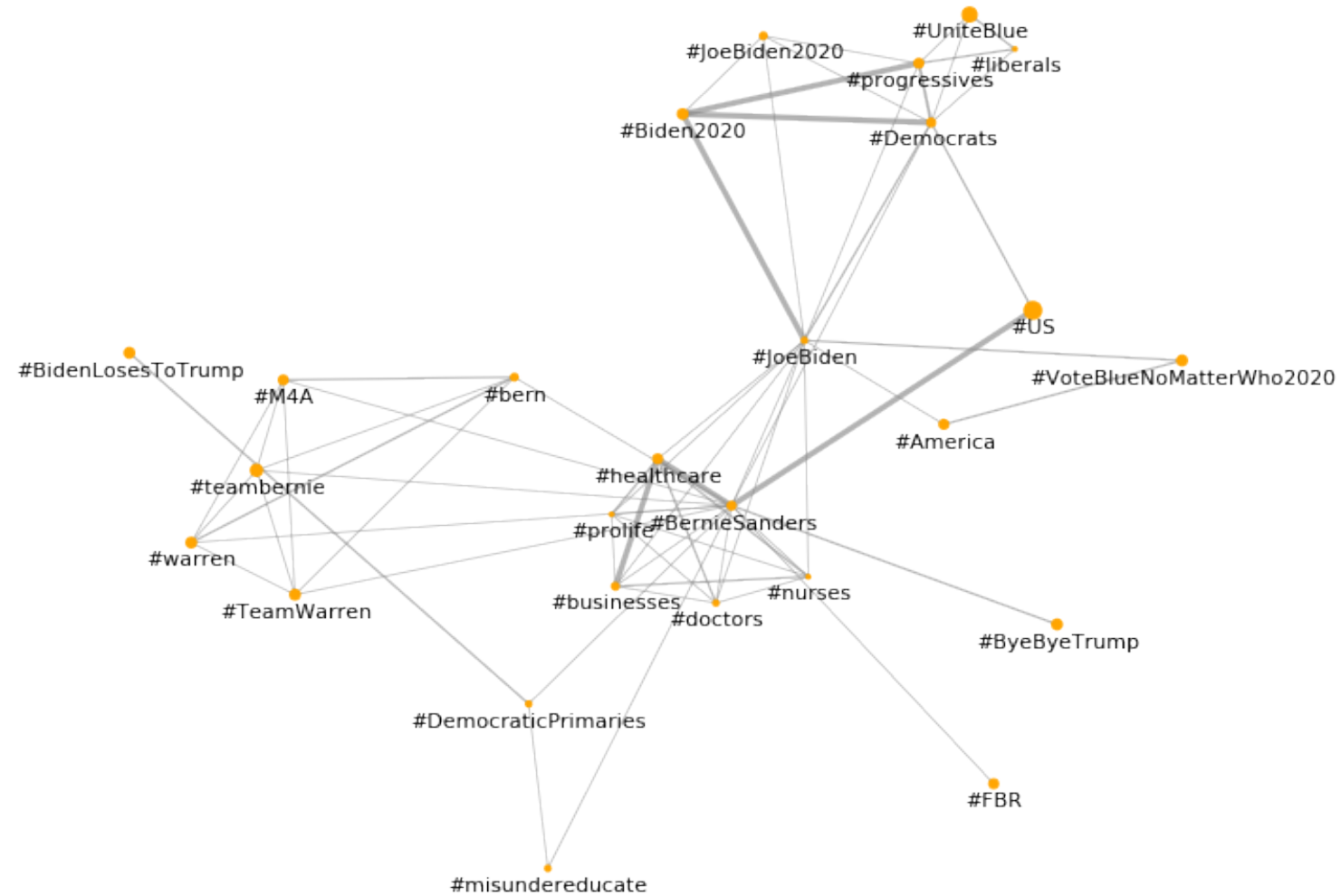
The 4th Community of the largest connected component of  
the graph of co-occurring hashtags



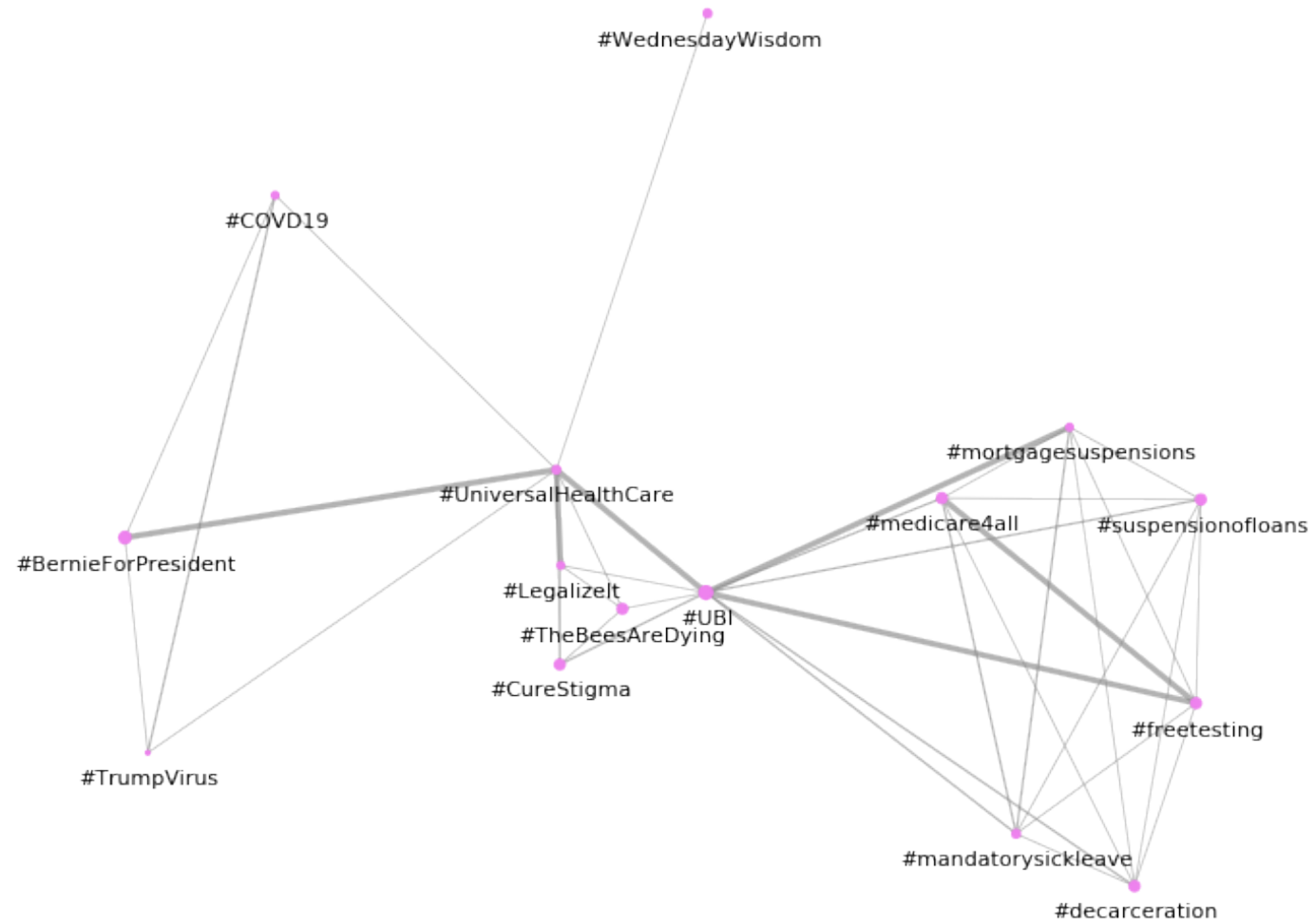
## The 5th Community of the largest connected component of the graph of co-occurring hashtags



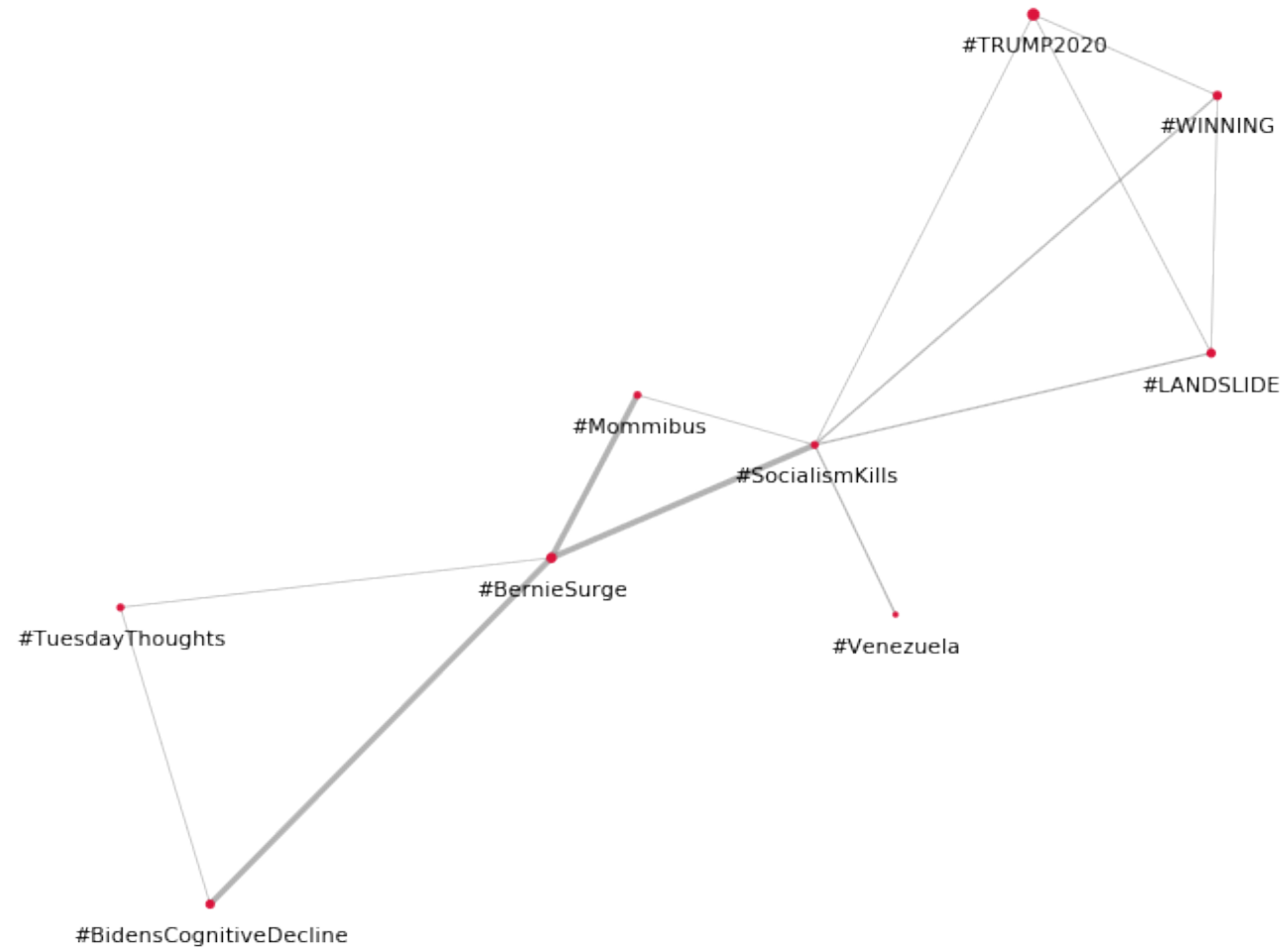
## The 6th Community of the largest connected component of the graph of co-occurring hashtags



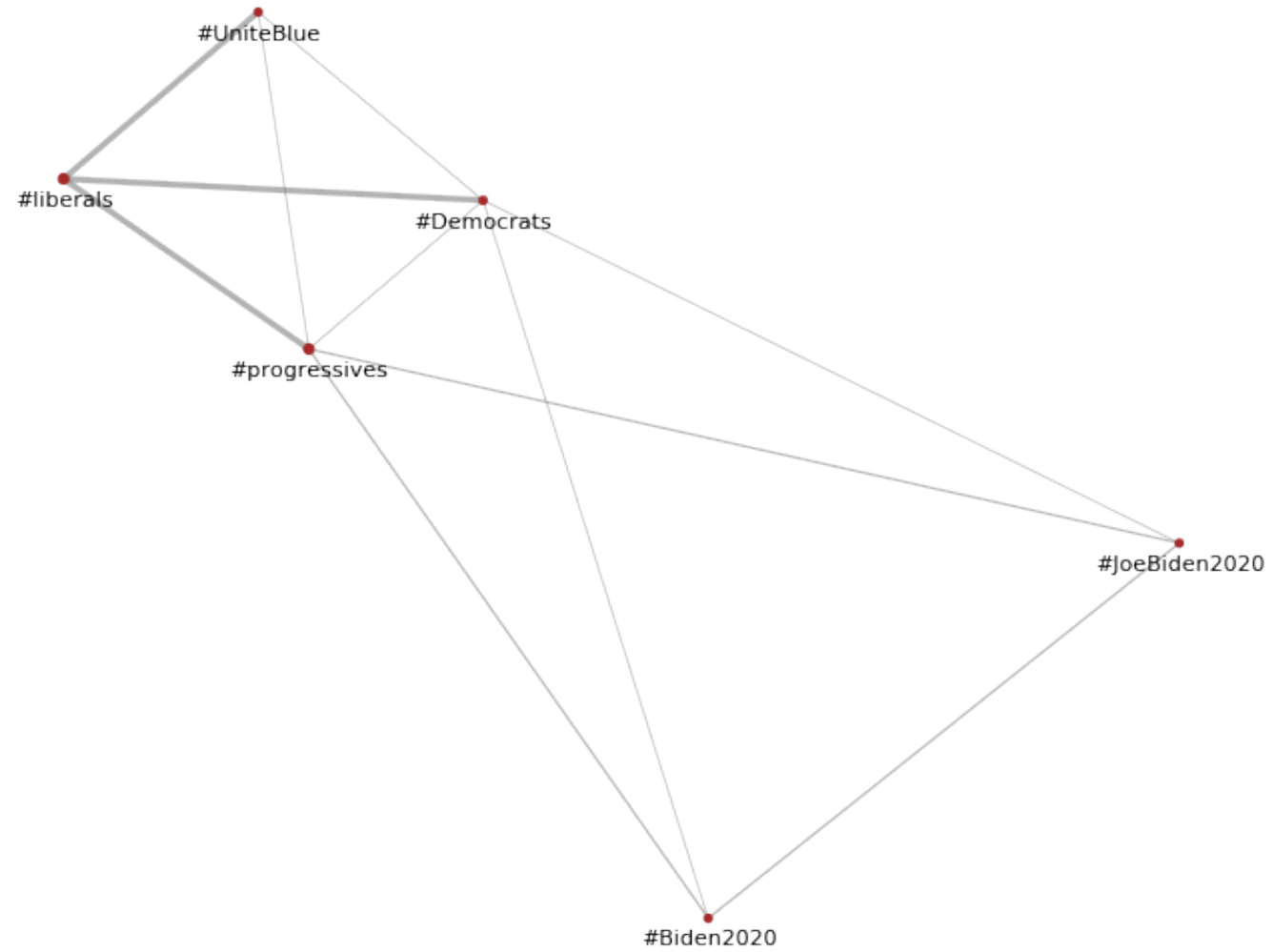
## The 7th Community of the largest connected component of the graph of co-occurring hashtags



## The 8th Community of the largest connected component of the graph of co-occurring hashtags

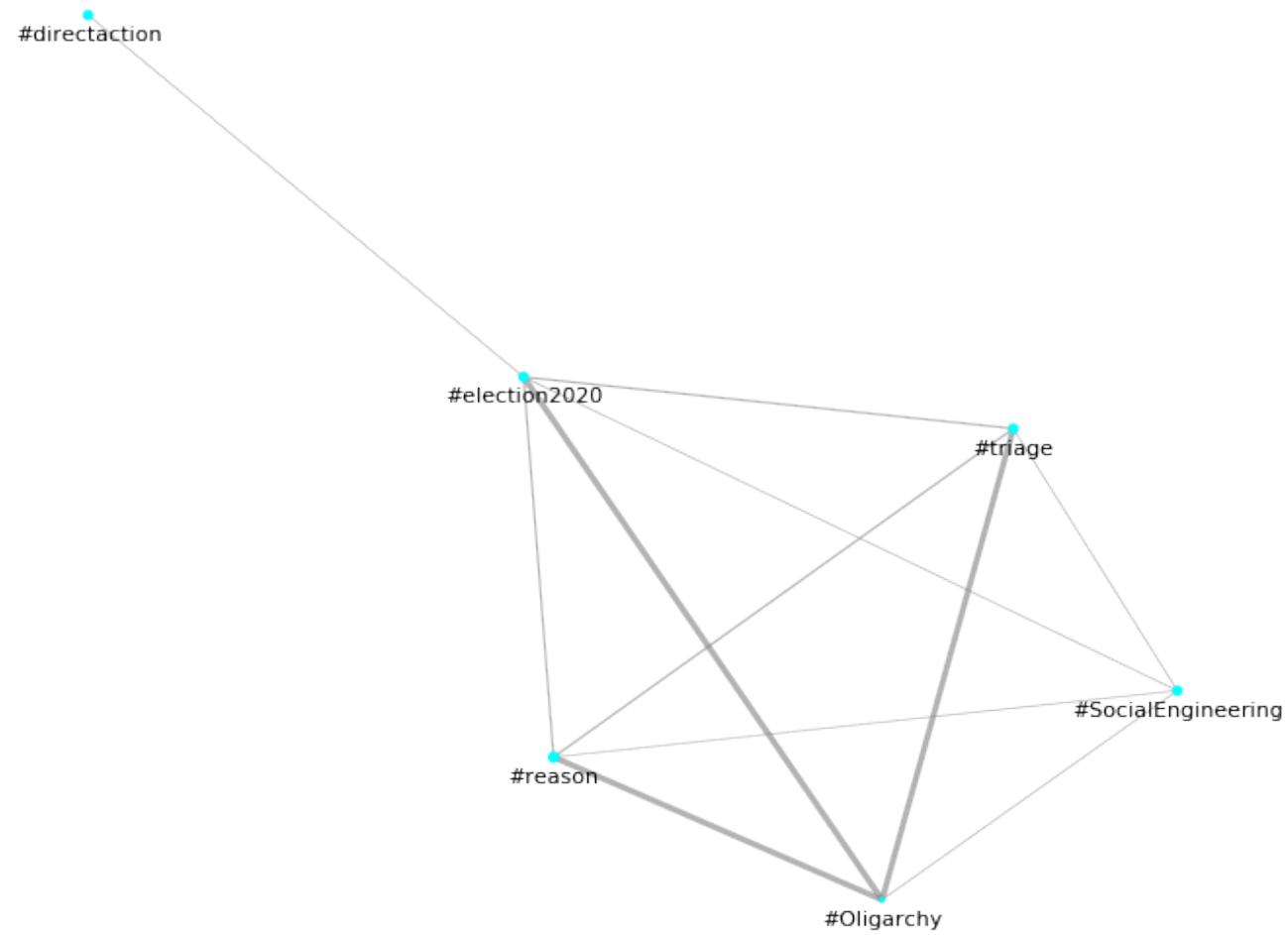


The 9th Community of the largest connected component of  
the graph of co-occurring hashtags

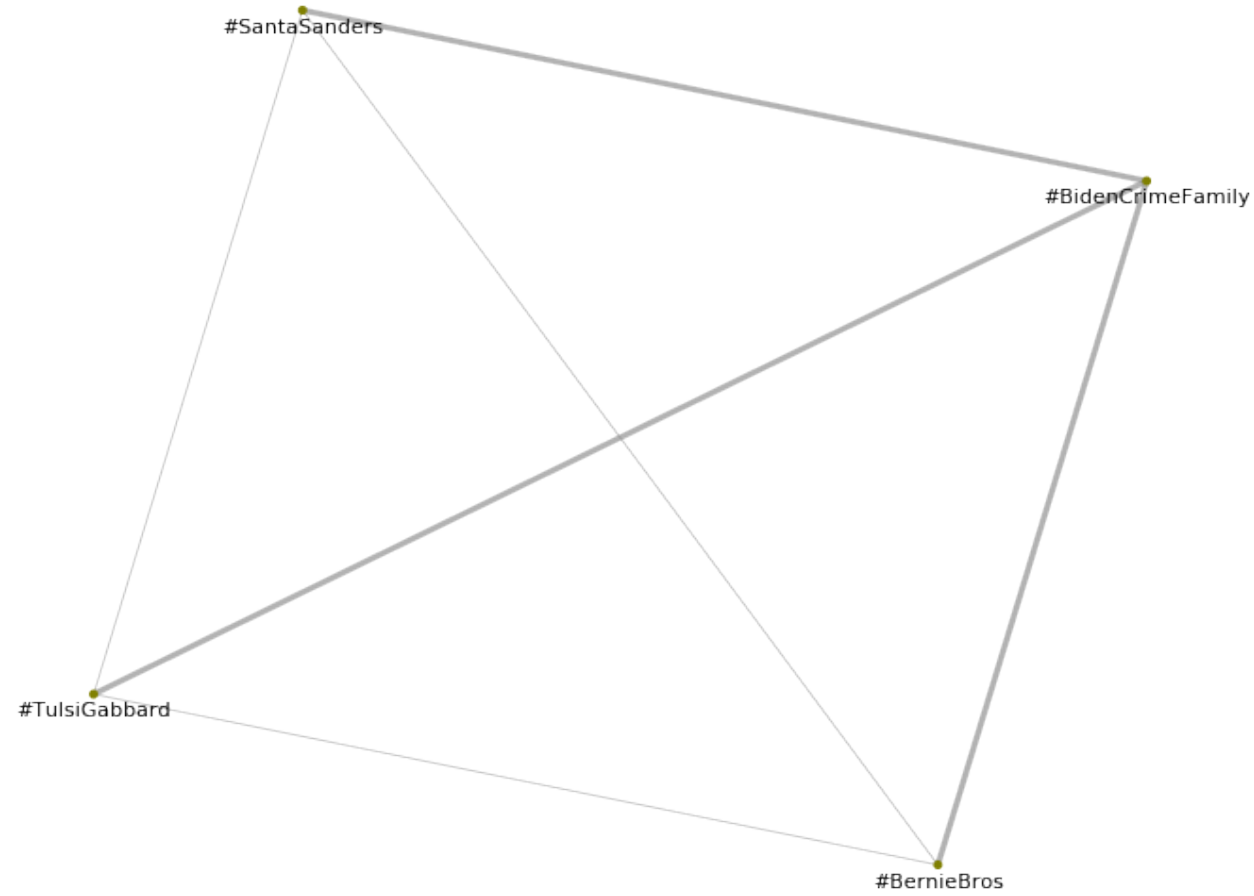




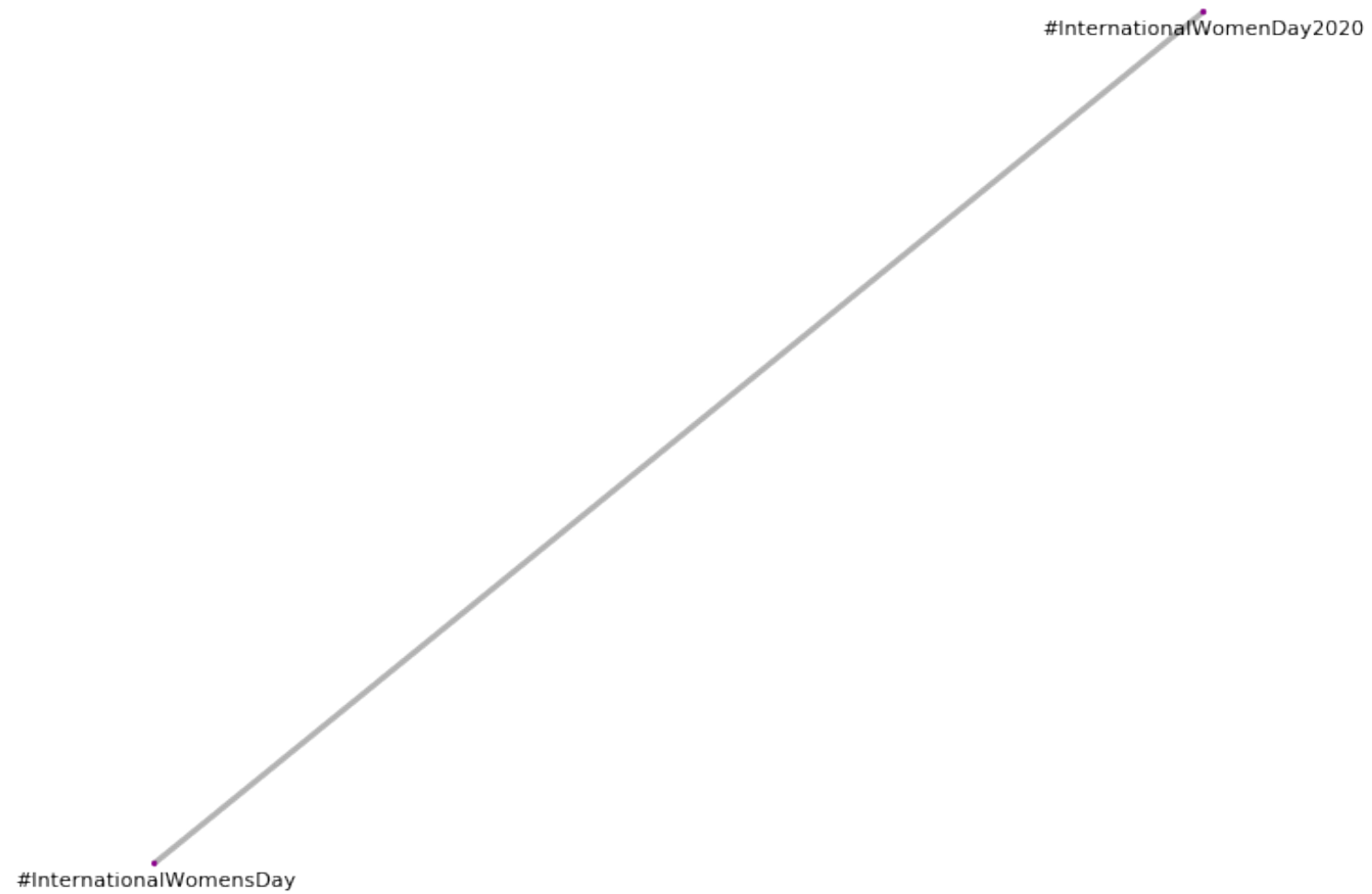
## The 10th Community of the largest connected component of the graph of co-occurring hashtags



The 11th Community of the largest connected component of  
the graph of co-occurring hashtags



The 12th Community of the largest connected component of  
the graph of co-occurring hashtags

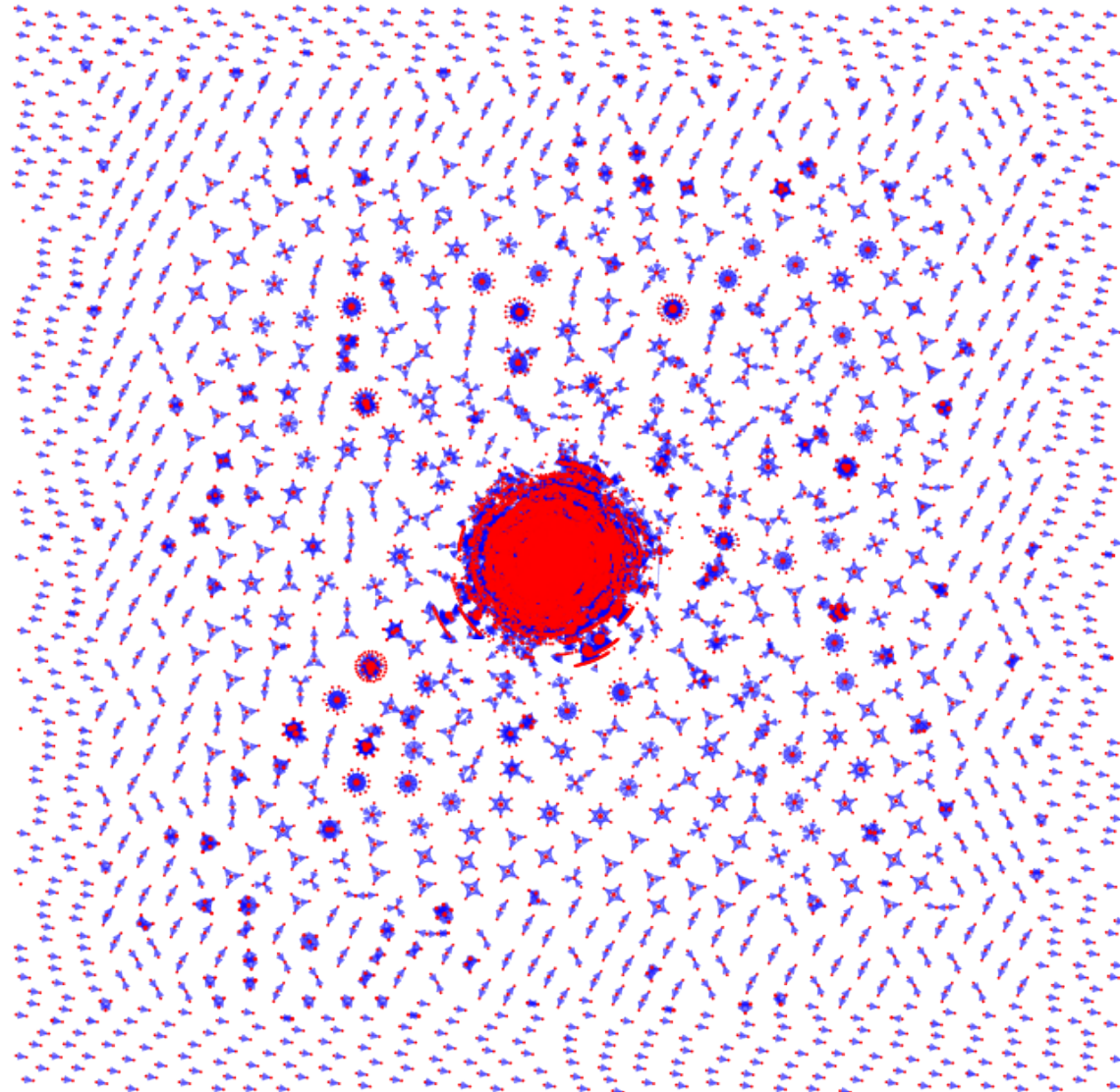




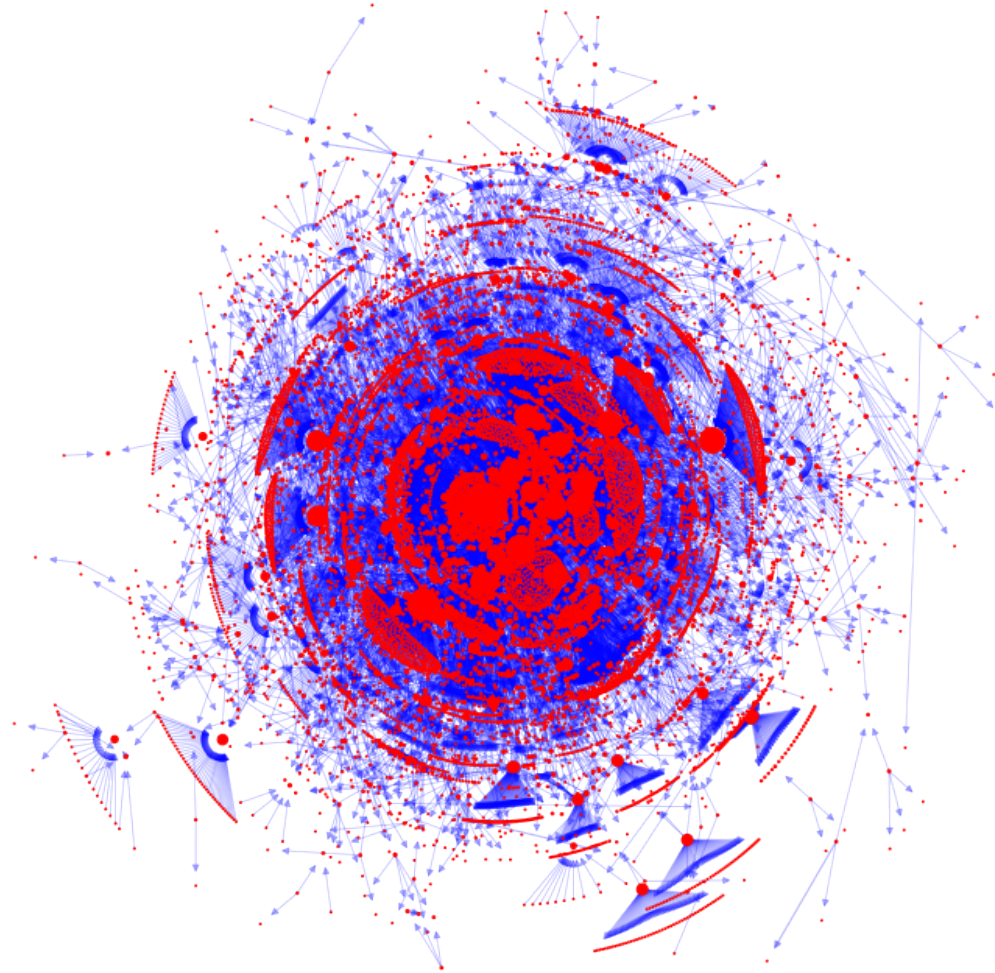
# The graph of Mention-ing/ed Tweeples of the 'Democratic Socialism' tweets

- Number of mentions among tweeples: 22007 multiple (21978 unique)
- The graph is a weighted directed graph and it includes:
  - 17106 nodes (tweeples) and 20308 edges (pairs of mention-ing/ed tweeples)
- This graph is a weakly disconnected graph and it includes:
  - 1408 weakly connected components
- The largest weakly connected component of this graph includes:
  - 12414 nodes and 16516 edges

The graph of mention-ing/-ed tweeples of the 'Democratic Socialism' tweets



The largest weakly connected component of the  
graph of mention-ing/-ed tweeples of the 'Democratic Socialism' tweets



The random sample subgraph of mention-ing/-ed tweople of the 'Democratic Socialism' tweets





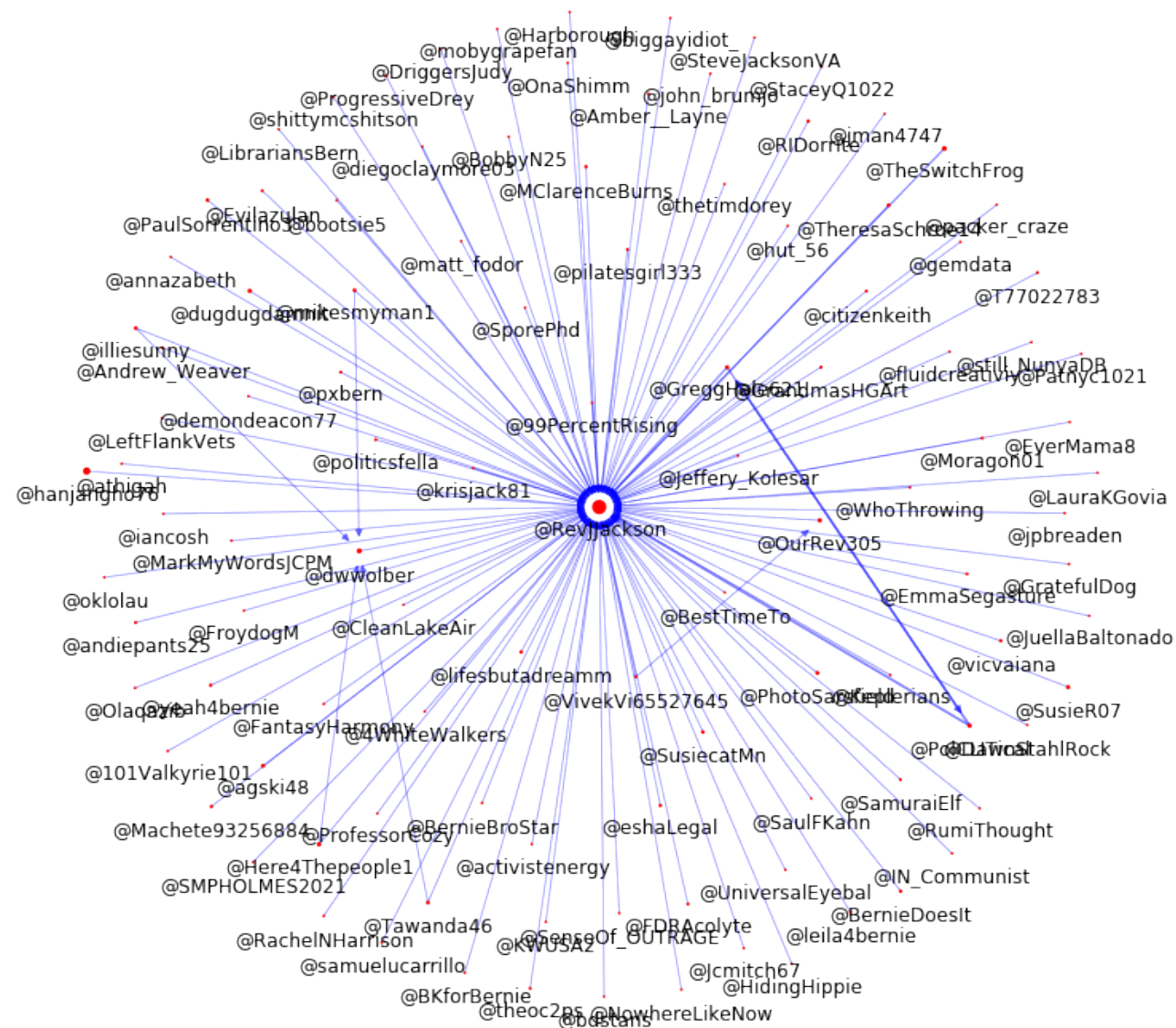
# Egocentric Graphs



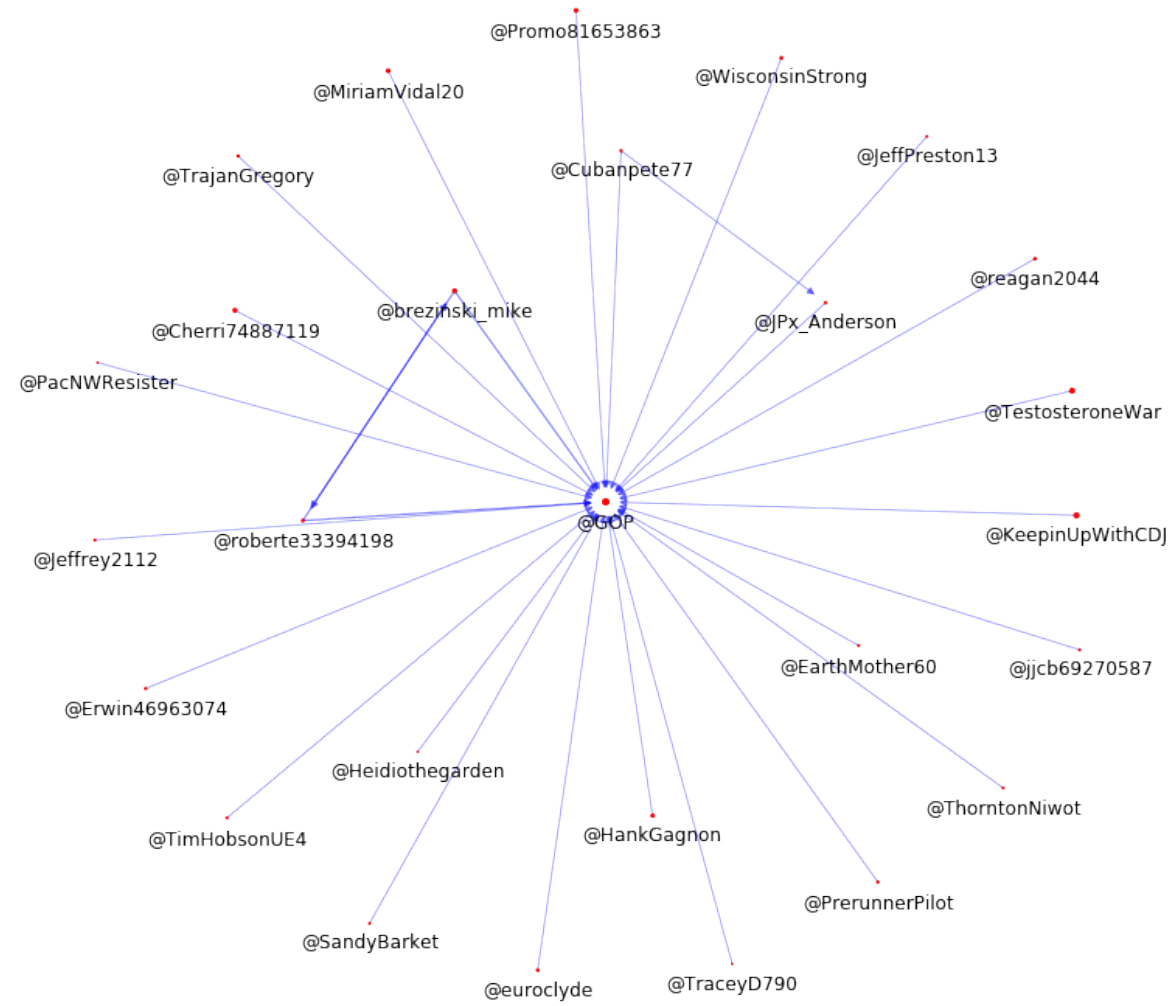
A vertical column of blue dots on the left side of the slide.

In-Degree:  
Being mentioned

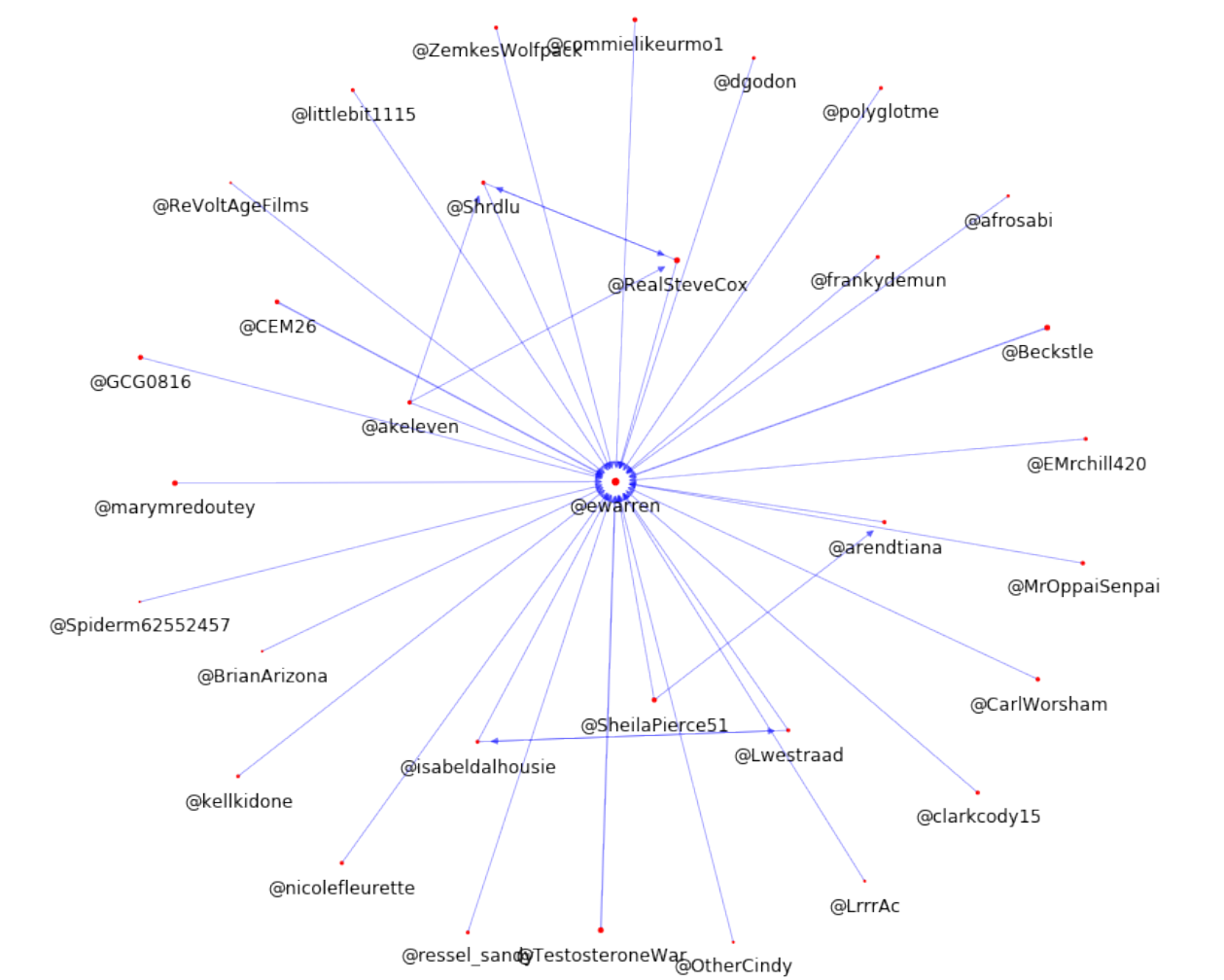
The egocentric subgraph of mention-ing/-ed tweeples of the 'Democratic Socialism' tweets around '@RevJJackson'



The egocentric subgraph of mention-ing/-ed tweeple of the 'Democratic Socialism' tweets around '@GOP'



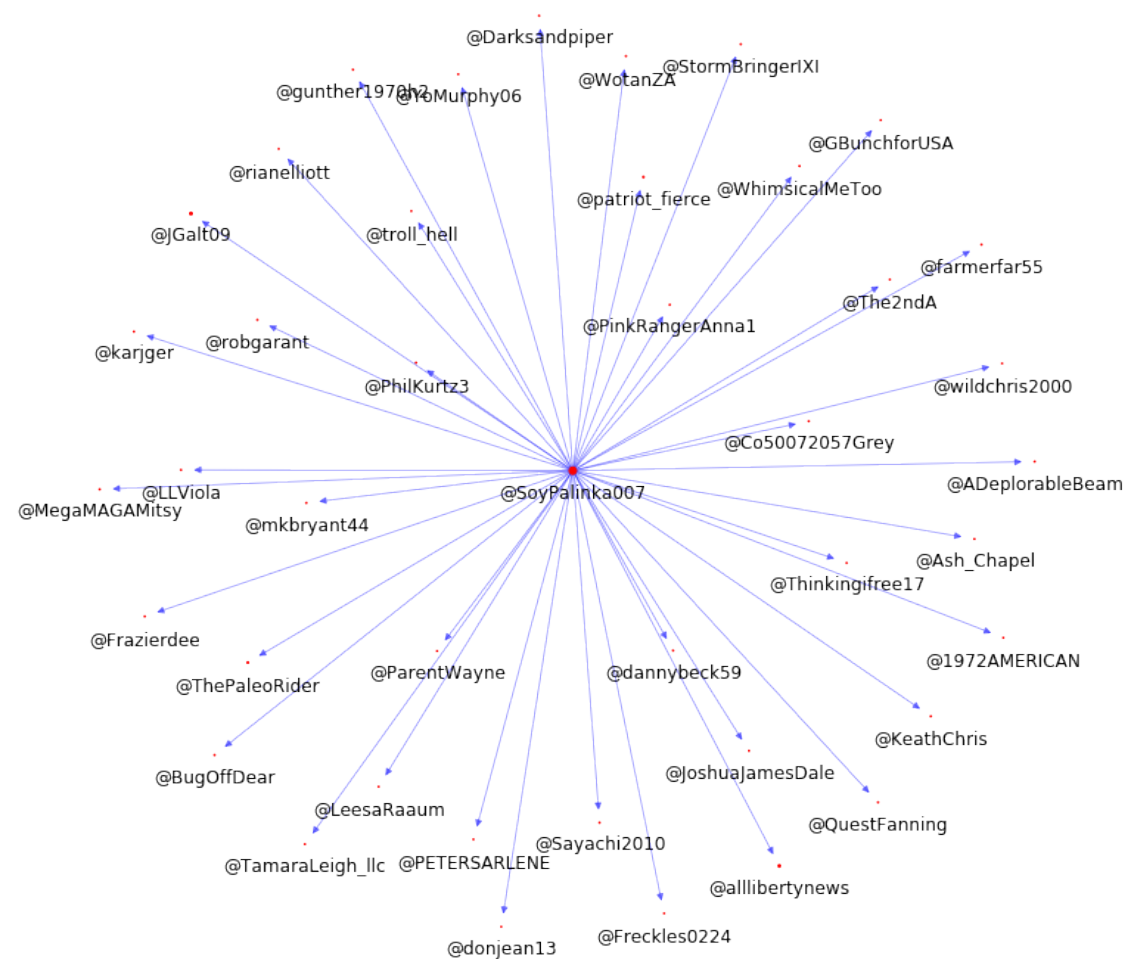
The egocentric subgraph of mention-ing/-ed tweeples of the 'Democratic Socialism' tweets around '@ewarren'



A decorative graphic consisting of two vertical columns of small blue dots, positioned to the left of the text.

Out-Degree:  
Mentioning

The egocentric subgraph of mention-ing/-ed tweeples of the 'Democratic Socialism' tweets around '@SoyPalinka007'



The egocentric subgraph of mention-ing/-ed tweeples of the 'Democratic Socialism' tweets around '@NiceJewishMama'

