Exploring False Story Dynamics in the *Black Panther* Twitter Conversation

Ramon Villa-Cox

rvillaco@andrew.cmu.edu

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Center for Computational Analysis of Social and Organizational Systems
http://www.casos.cs.cmu.edu/

Event: *Black Panther* Release

- 3rd highest grossing film in US
- Most tweeted about film ever
- Hyped on social media for its representation of African and African-American actors and creators

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Four False Stories on Twitter

1. Fake Attacks
2. Fake Attacks – Satire
3. Fake Scenes
4. Pro-Alt-Right

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Data Description

- Twitter API search (both rest and stream)
  - by #BlackPanther
  - by reference to false story posts
- Subsets by type of false story and by time
  - we are going to concentrate on the Fake Attack posts and reactions (retweets/replies)
  - Feb 15 through Feb 17
  - Total of 1869 Tweets including 60 Fake Attack origin tweets

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Exploring the data with ORA

Three Goals:

1. Find central actors
2. See how the message of these actors diffused over time.
3. Evaluate these diffusion pattern by comparing them to what it is observed in synthetic networks.

Need to create Dynamic Meta-Networks in ORA:

1. Time slices
2. Cumulative

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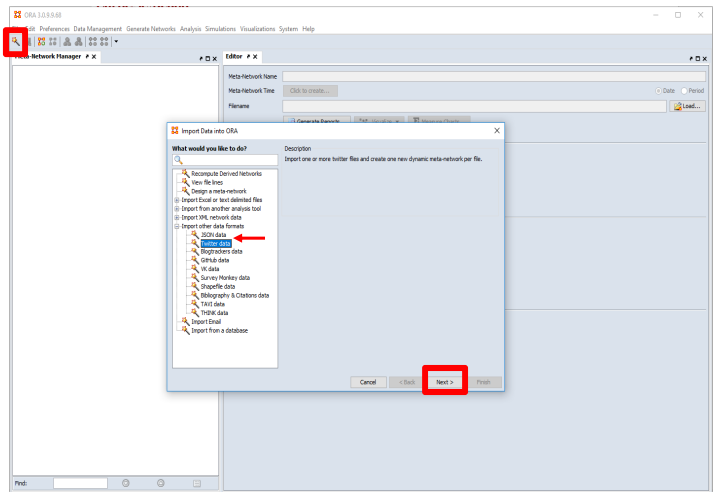
ORA - Import Twitter Data



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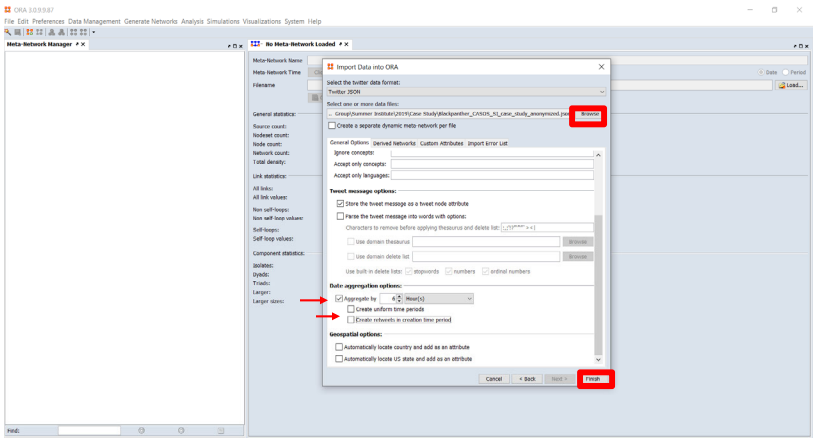
Time Slices – Just Import



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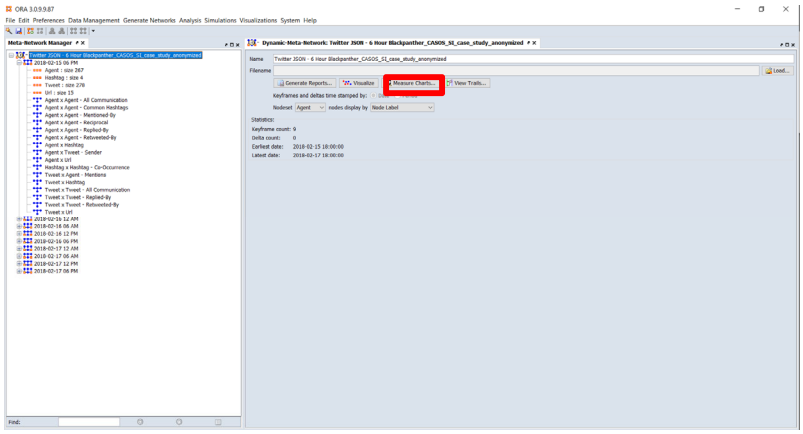
Dynamics Measures – Quick Look



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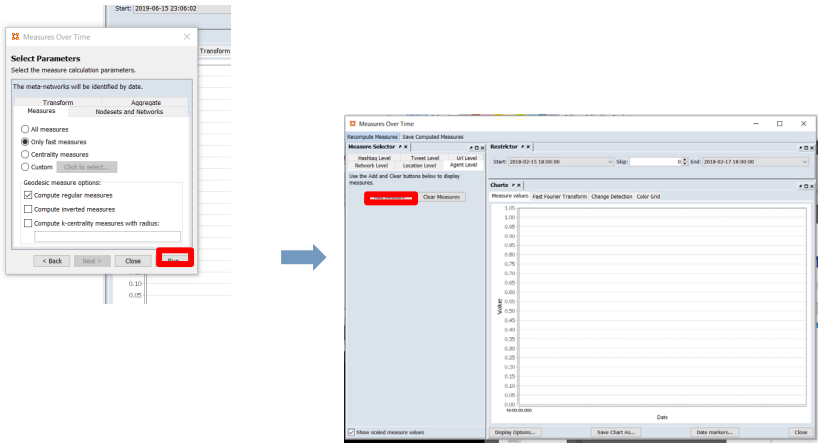
Dynamics Measures – Quick Look



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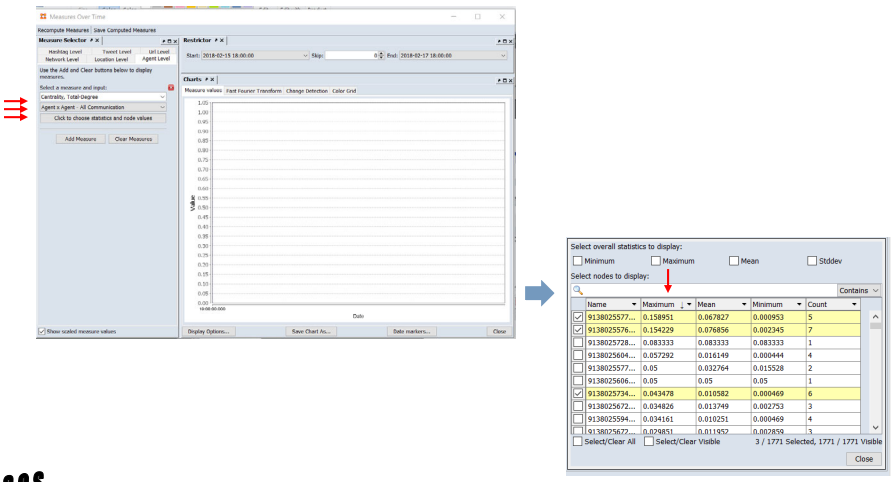
Dynamics – Most Central Users



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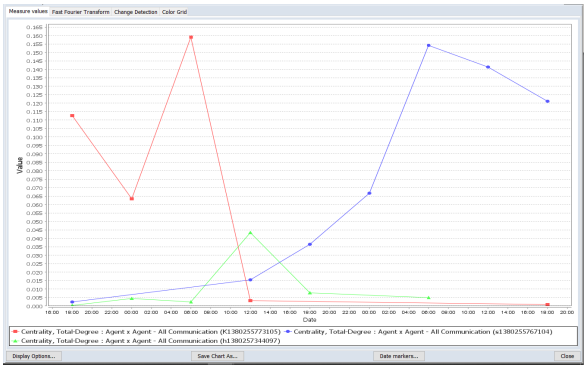
Dynamics – Most Central Users

- Here we can construct diffusion charts for the the different nodes in our network.
- Let's see if we can replicate these patterns on a stylized network!



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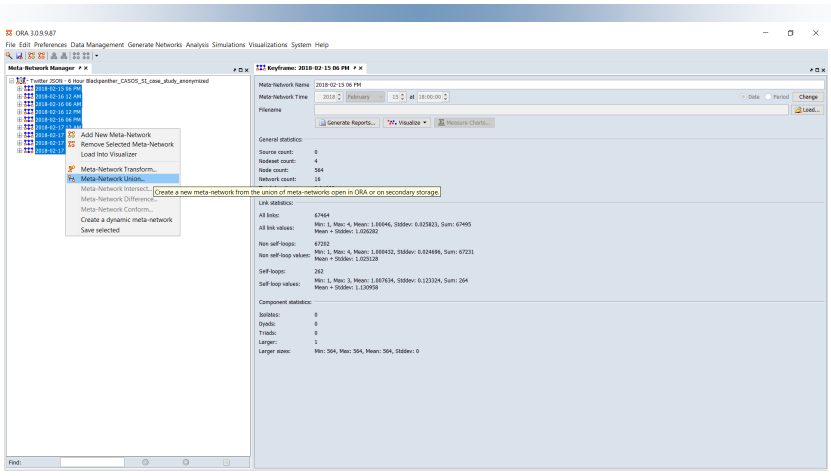
Time Slices – Merge



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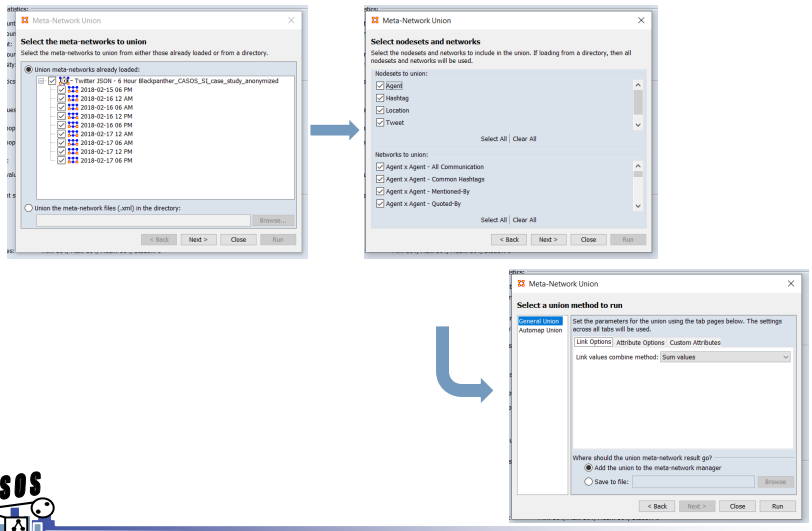
Time Slices – Merge



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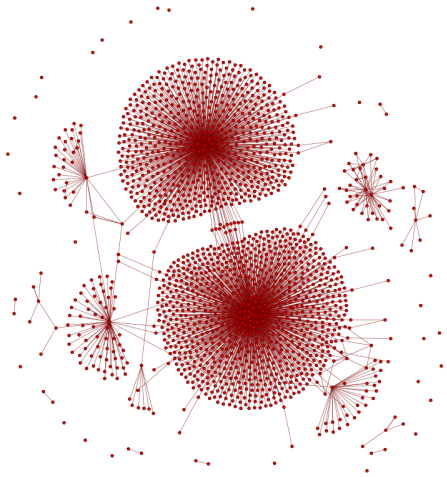
Merged all-communication network



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Lets try to generate a similar synthetic network!

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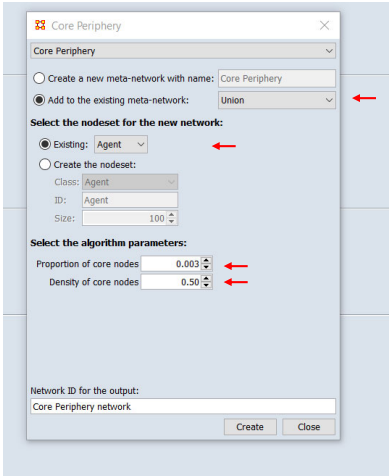
Synthetic Network

- The way that Twitter records interactions makes networks look like stars.
- We can create a similar structure by using a Core Periphery generative process.
- We choose a proportion of core nodes similar to what we observed on our empirical network.



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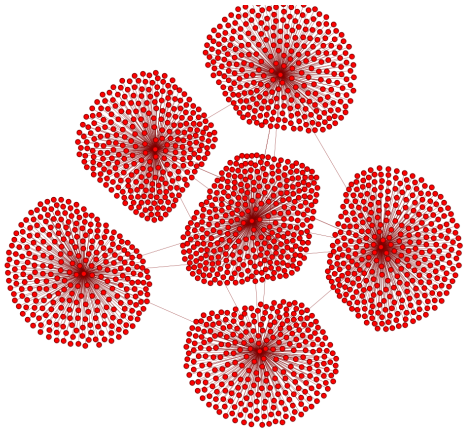
Synthetic Network



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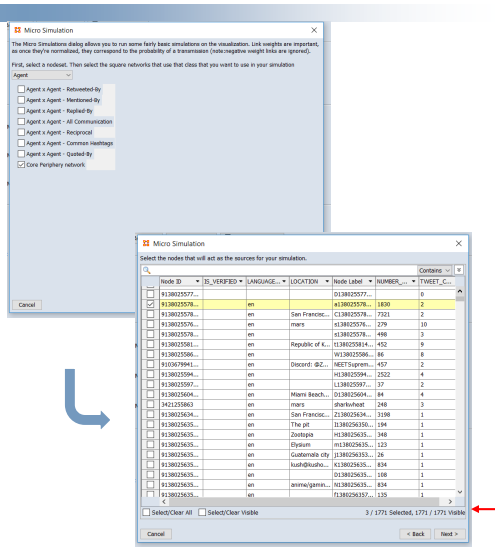
Diffusion of Ideas

- Lets run a diffusion of ideas microsimulation on our synthetic network.
- Lets determine 3 of our core agents as seeds for the simulation.
- In my case these are:
  - A1380255780119
  - V1380256558086
  - S1380256229116



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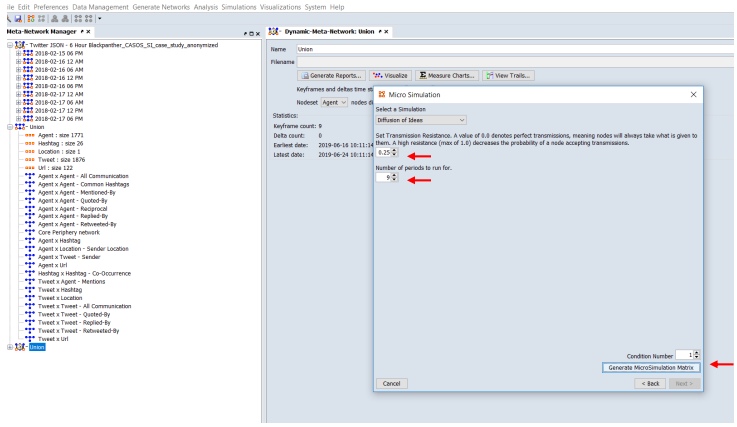
Diffusion of Ideas



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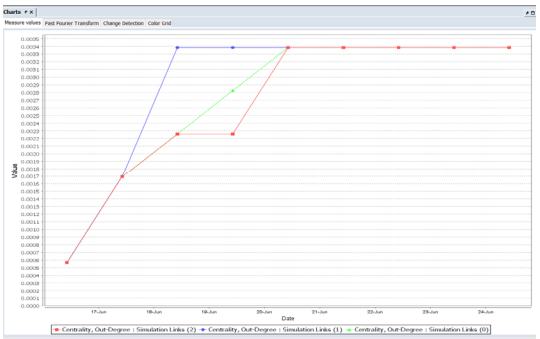
Diffusion of Ideas

- The overall diffusion is orders of magnitude below what we observed!
- What could be the reason for the difference?
- What synthetic network would produce more comparable results?



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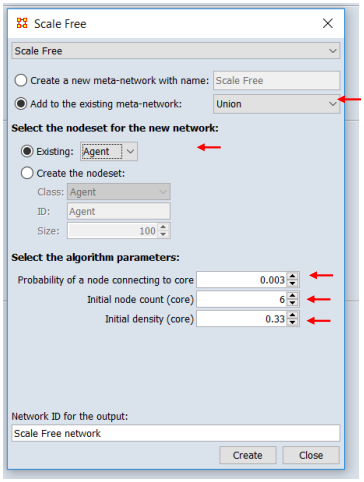
Synthetic Network V2

- Lets Generate a Scale Free Network, with a similar number of hubs.
- Probability thresholds are decided based on phase transition values for the emergence of a giant component for the pendant nodes given the size of the network.



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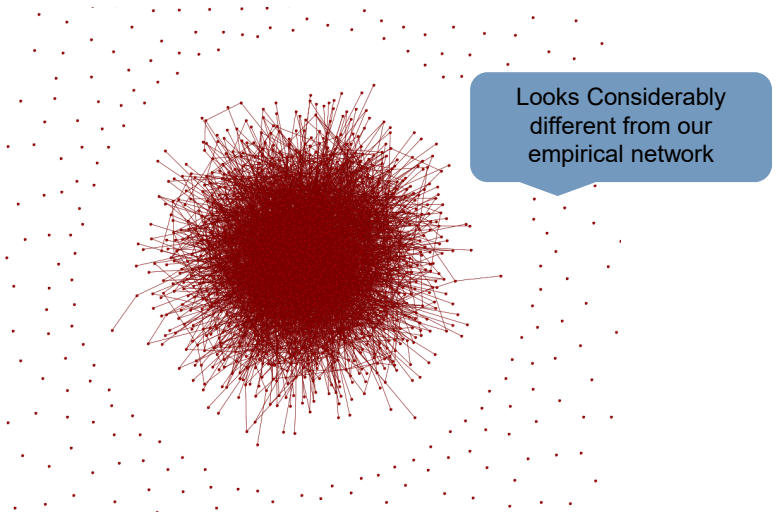
Synthetic Network V2



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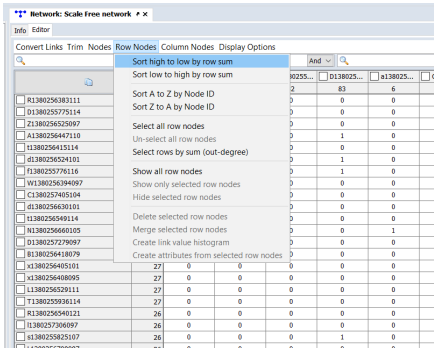
Diffusion of Ideas V2

- Lets select the our hub agents.
- We can do it based on row sums in our network view.
- In my case these are:
  - R1380256383111
  - Z1380256525097
  - A1380256447110



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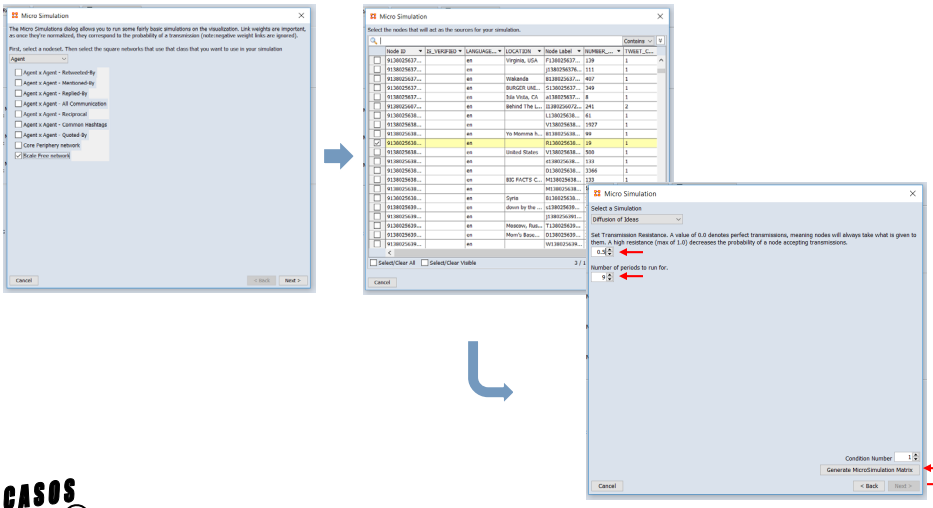
Diffusion of Ideas V2



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Diffusion of Ideas V2