Influentials

A minority of individuals that are able to spread ideas to an exceptional number of people.

Brought to you by Michael and Priscilla.

Influential Hypothesis:

A minority of individuals called influentials exist and are able to spread ideas/innovations to an exceptional number of people

Motivation:

*New ideas and innovations appear **everyday**.*

*What mediums exist to spread them and how can we **effectively** utilise them?*

To *investigate*:

➜ how significant the roles of influentials are in the spread of innovations and ideas

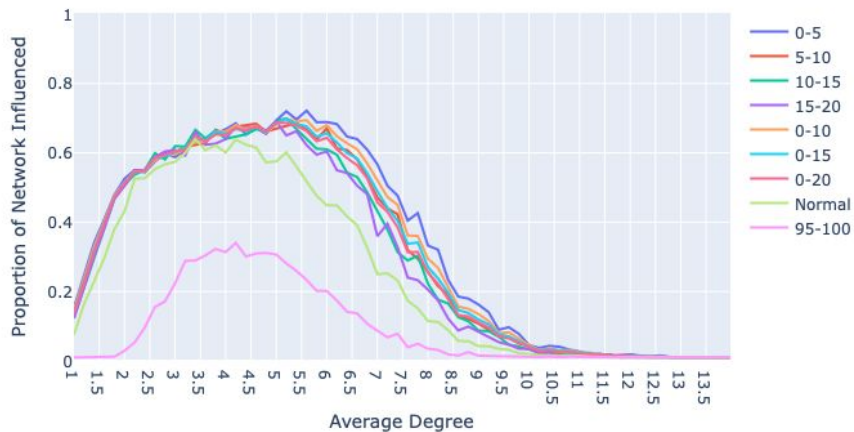➜ what characteristics of influentials and conditions on the population are necessary in catalysing this spread

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Method

Visualisation of Influence Simulation
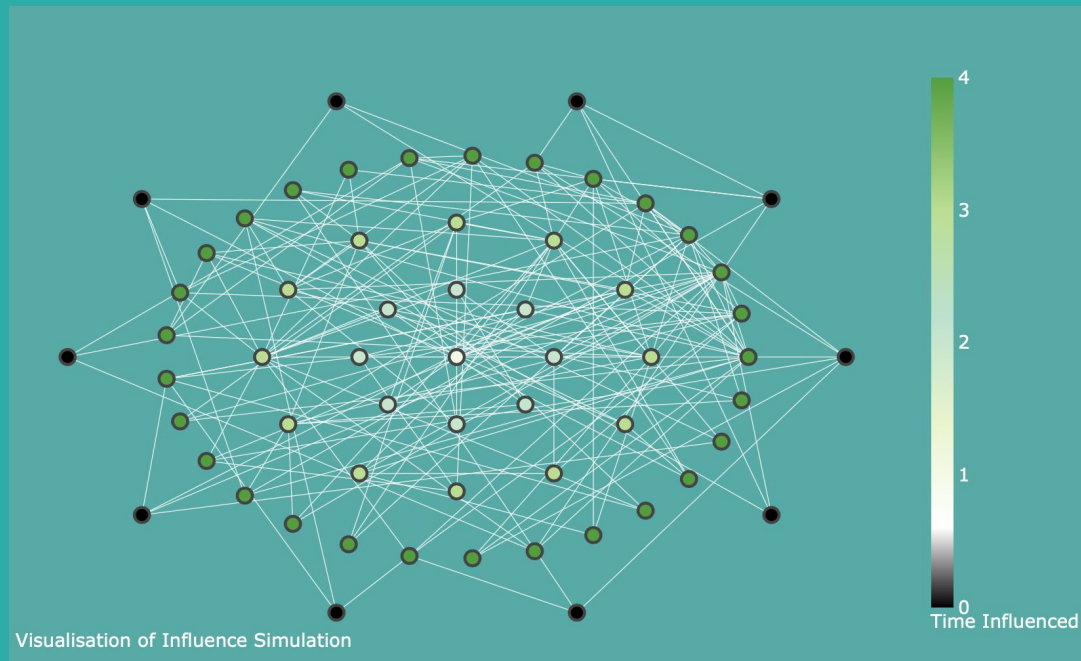
- Threshold Model
- Poisson/Scale-Free Networks
- Aggregated nodes by degree
  - 0-5
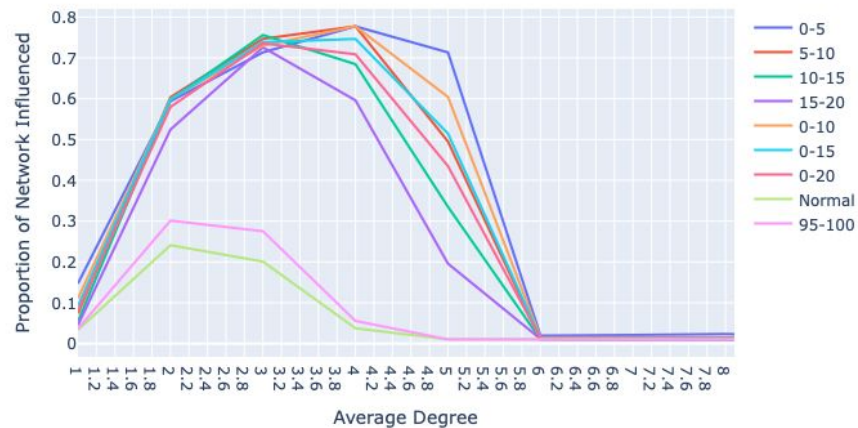 - 5-10
  - 10-15
  - 15-20
  - Normal
  - 95-100

\\Results\\

The influence distribution matters.
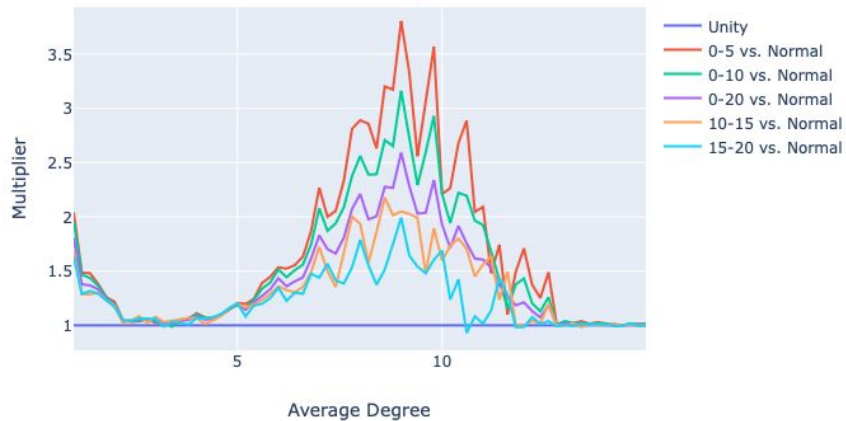
Result

Poisson RG

Scale-Free Network
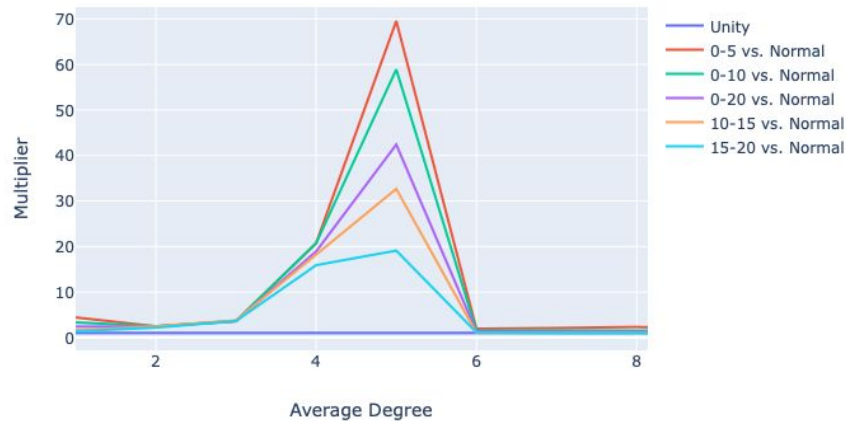
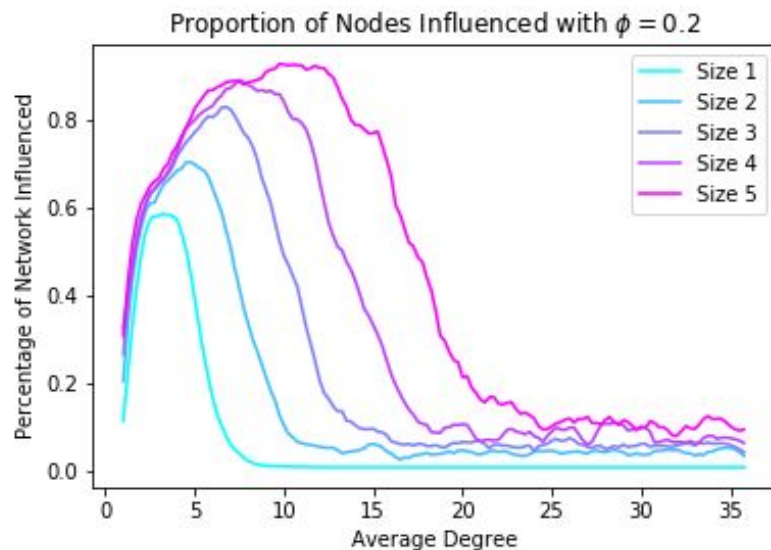# Influentials matter in scale-free communities.

Result

Poisson RG

Scale-Free Network

Relative Impact of Influence Across Node Degrees

- Unity
- 0-5 vs. Normal
- 0-10 vs. Normal
- 0-20 vs. Normal
- 10-15 vs. Normal
- 15-20 vs. Normal

Multiplier

Average Degree

Naturally, the number of initial influentials matter

Result

Proportion of Nodes Influenced with $\phi = 0.18$

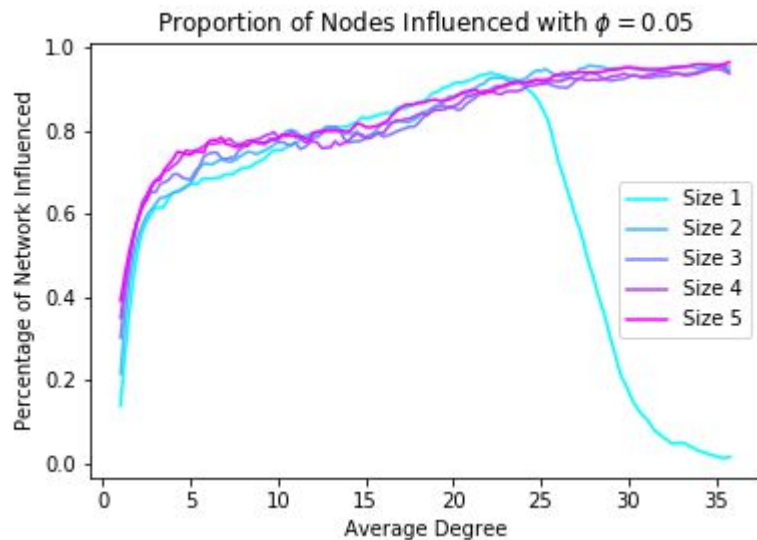Proportion of Nodes Influenced with $\phi = 0.2$
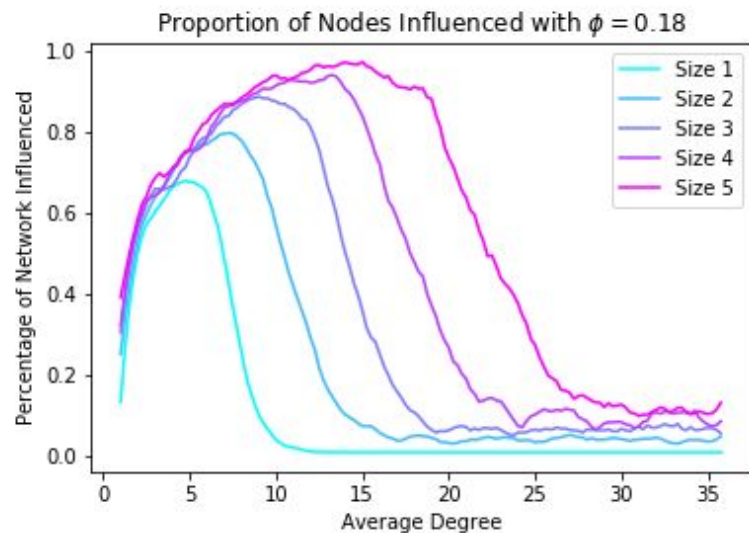
The threshold matters.

Result

Proportion of Nodes Influenced with $\phi = 0.05$

Proportion of Nodes Influenced with $\phi = 0.25$
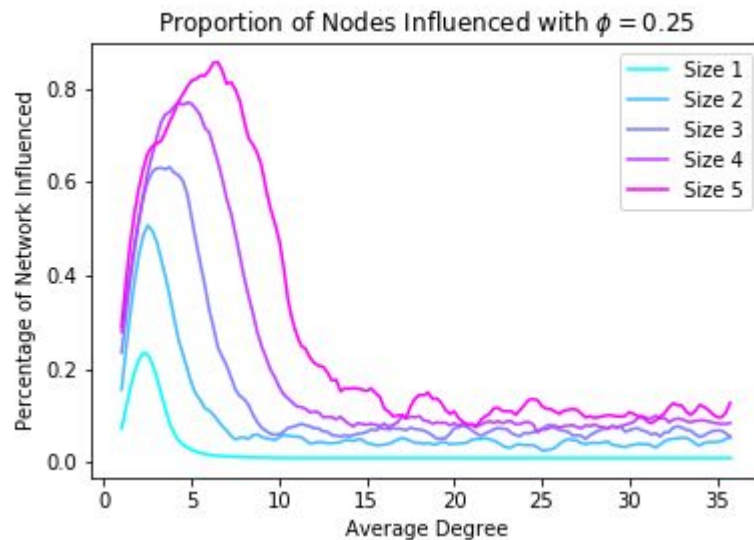
In Summary:

➔ **The importance of influentials is dependent on the degree distribution within the population of interest.**

➔ **The extent of the importance of the number of influentials is dependent on the threshold**