Week 03
Visualizing networks
Tuesday, September 7

INFO 5613: Network Science

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Agenda

- Guest Lecture: Prof. Brooke Foucault Welles on rhetoric of network visualization
- Notebook: Exploring layout algorithms and L&G 2005 "polblogs" using Gephi

Lecture

Guest Lecture

○ Prof. Brooke Foucault Welles on her 2015 article "Visualizing Computational Social Science"

Notebook

Visualizing in Gephi

○ Download and install Gephi:

    ○ https://gephi.org/

○ Download the "polblogs_cleaned.gml" file from Canvas

○ Open the "polblogs_cleaned.gml" in Gephi

Module assignment 1

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○ Due Friday, September 17 by midnight on Canvas

○ Find an article around your research interests employing network theories/concepts/methods

○ How did you encounter this paper, it or its authors' influence in your research area, *etc*.

○ Summarize the key relational constructs used by the paper: what are nodes and links?

○ Write a critique using the concepts about data collection, validity, ethics, visual rhetorics

○ Outline how the research could've/should've been done if you were driving it

Next class

Next class

- Readings
  - Pfeffer, J. and Freeman, L. C. (2019). Social network visualization, methods of. In Meyers, R. A., editor, Encyclopedia of Complexity and Systems Science, pages 1–25. Springer
  - Krempel, L. (2014). Network visualization. In The SAGE Handbook of Social Network Analysis, pages 558–577. SAGE.
  - Foucault Welles, B. and Meirelles, I. (2015). Visualizing computational social science: The multiple lives of a complex image. Science Communication, 37(1):34–58
- On Thursday, we will demo Gephi and have reading discussion
- Add terms, phrases, *etc*. to discuss together to the weekly Group Discussion document

Reading responses

○ Find an example of a network visualization from your research area, current events, or something interesting that comes up on a Google search. Include it as an attachment or a link.

○ What are the nodes and edges in this network?

○ What kinds of validity threats or ethical issues (if any) are there with this data?

○ What other features are visually encoded into the visualization (color, size, thickness, shape, *etc*.)?

○ What kinds of patterns or structures does this visualization convey?

○ How did you encounter it? What does that imply about where, why, how this image circulates?