Information Visualization and the Humanities

Angus A.A. Mol
Assignment 3: Mapping Gifts to Obama

**Gift Giving to President Obama (2009 - 2016)**

The President cannot keep gifts received. So what's behind high $-value gifts? Authoritarian countries, e.g., China and Saudi Arabia, and Catholic countries, e.g., Brazil, Mexico, Italy and Ireland were the more generous of gift givers. Do they just want US to like them more?
Networks, what’s next?

• Network modelling
• Graph data(bases)
• Network visualizations (of larger data-sets)
Network models

- DataViz vs. DataModelling
- Graph Modelling
  - (Exponential)Random Graph Models
  - Agent Based Models

Five examples of network models:
1. Sparse random network (p = 0.01)
2. Dense random network (p = 0.1)
3. Lattice network (neighbourhood = 3)
4. Small world network (neighbourhood = 3, edge re-wiring p = 0.1)
5. Scale-free network (node size relative to node degree).
Graph databases: Example FB data (source)

```sql
SELECT friends_of_likers.* FROM posts JOIN likes ON (posts.post_id = likes.post_id) JOIN users likers ON (likers.user_id = likes.user_id) JOIN friends ON (likers.user_id = friends.user_id) JOIN users friends_of_likers ON (friends_of_likers.user_id = friends.friend) WHERE posts.author = :me ORDER BY friends_of_likers.username ASC
```
Backstory.io

"Kerry in Paris to Show US Support for France After Attacks"
November 16, 2015

https://backstory.io
Network visualizations

http://cosmicweb.kimalbrecht.com/

Diplomatic network of countries sharing embassies

Visualize a Facebook ego-network (of yourself or node 107)

• Either collect your data via LostCircles or use a subset of the Facebook ego-network data-set from the Stanford Large Network Database (individual 107)

• Visualize (in one visualization or more):
  • The contrast between betweenness and PageRank centrality
  • The Louvain modularity

• Report:
  • Design decisions (referring to visone settings as well as design theory from Meirelles)
  • An (anonymous) table with the ten highest ranking nodes for betweenness and PageRank, including their relative measures
  • The number of nodes per Louvain community
  • Explanation in your own words and making reference to outside sources of:
    • What is an ego-network
    • PageRank centrality
    • Louvain Modularity
  • Challenges and opportunities
  • Timetable

• Don’t forget to explore the raw data-set! Metrics tip: Link (non-)directionality matters!
Hand-in, via Blackboard in a zip file

• The anonymized data-set of your own Facebook network (if you visualized this)
• Your visualization(s) you created in PDF/TIF
• Your report

• Deadline 24 December
• Project should take about 8 hours
• Grading on:
  • Visualization aesthetics
  • Visualization metrics
  • Report contents

• Assignment details and data on course website tomorrow afternoon.
InfoVis and the Humanities

• Design choices matter!
• Data structures and wrangling matter!
• Understanding theories matter!
• Knowing how to use your tools matter!
• Context matters!
• Learning more matters!