

# Introducing Gephi

### Another Tool (Weapon) for your Arsenal

### Steps

- 1. Make Sure Gephi Installed
- 2. Run and Load 'Les Miserables' sample dataset
- **3.** View default visualisation
- 4. View Data
- 5. Calculate a Few Stats
- 6. View Preview
- 7. Export Graph
- 8. Try Different Algorithm
- 9. Preview Results
- **10.Ask Questions of the Graph and Stats**





## Step 1 - Install and Launch Gephi

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## Step 2 - Open Sample File

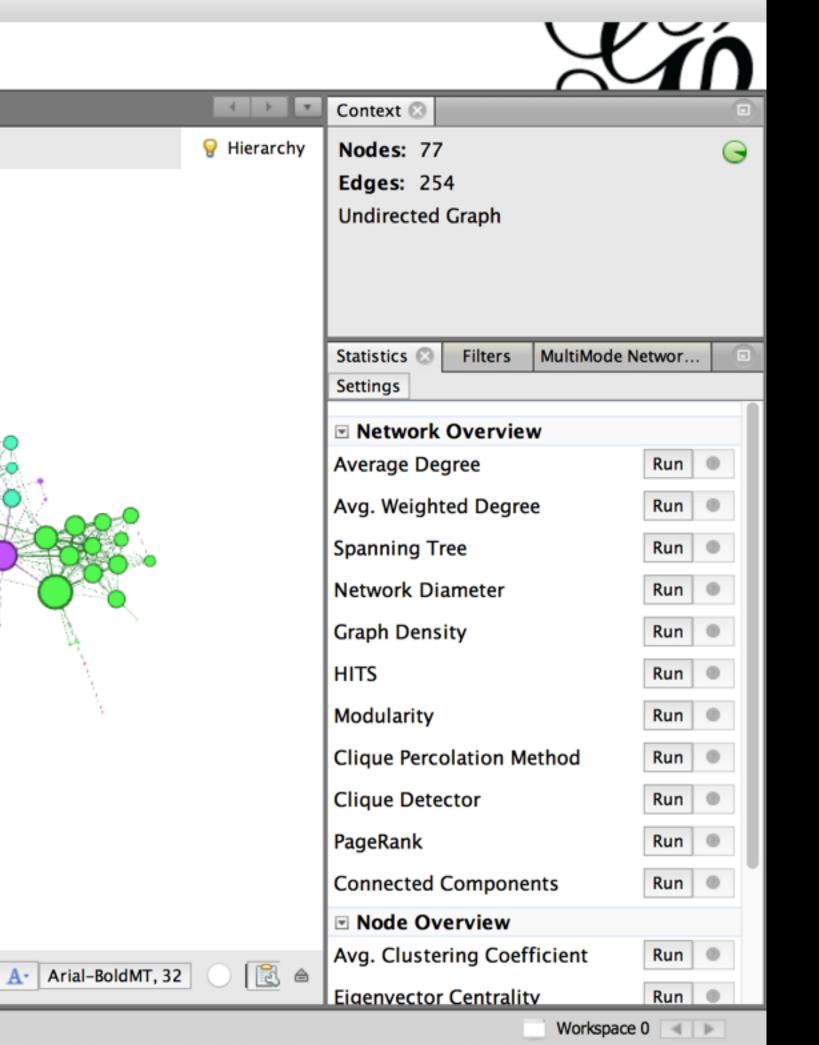
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# Step 3 - A Network Graph!

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### Step 4 - Inspect Node Data

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### Step 6 - Summary Stats

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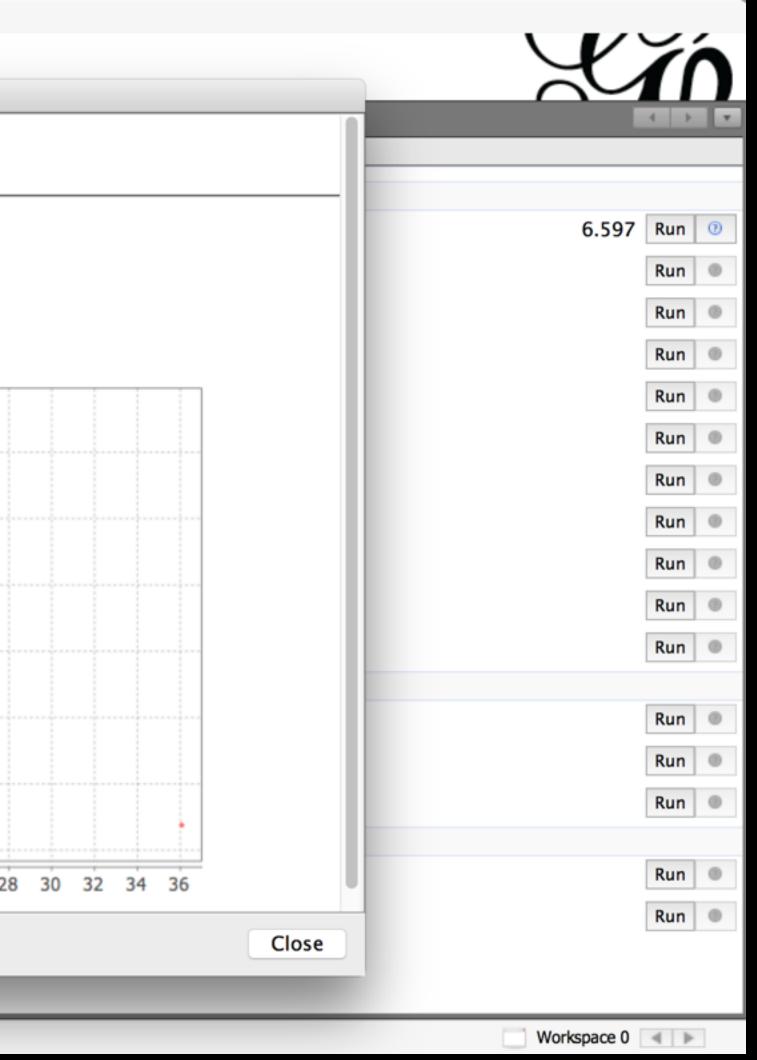






### Step 7 - Whose Connected?

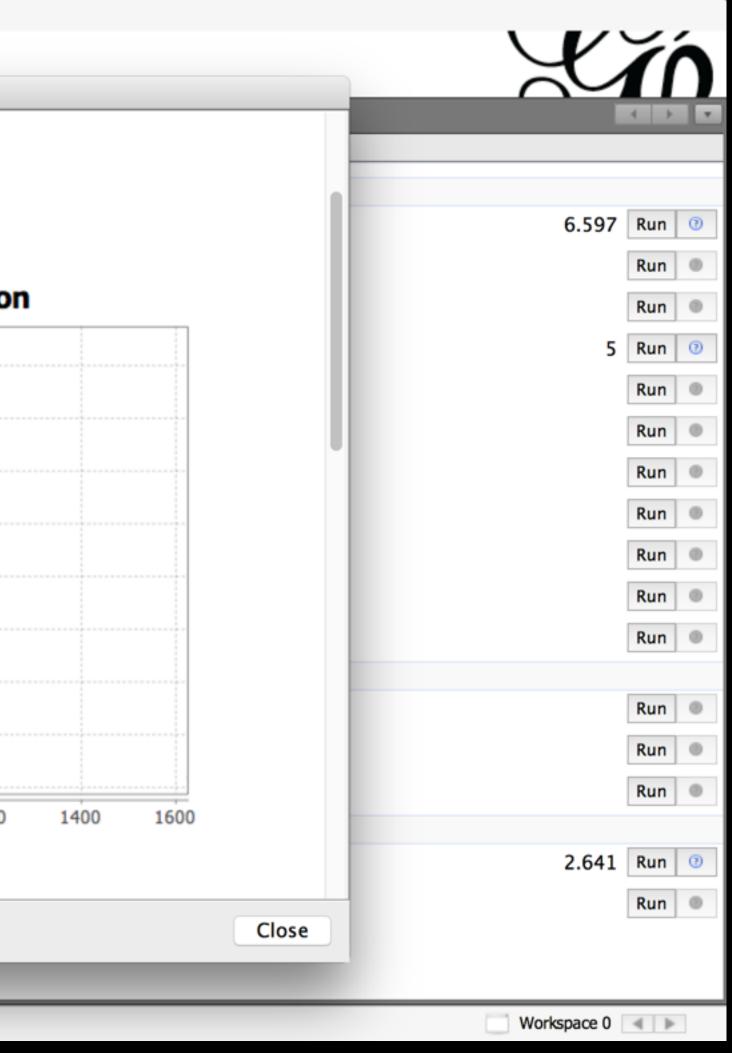
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### Step 8 - Someone is Important

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# Step 9 - Preview Your Graph

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## Step 10 - Preview Your Graph

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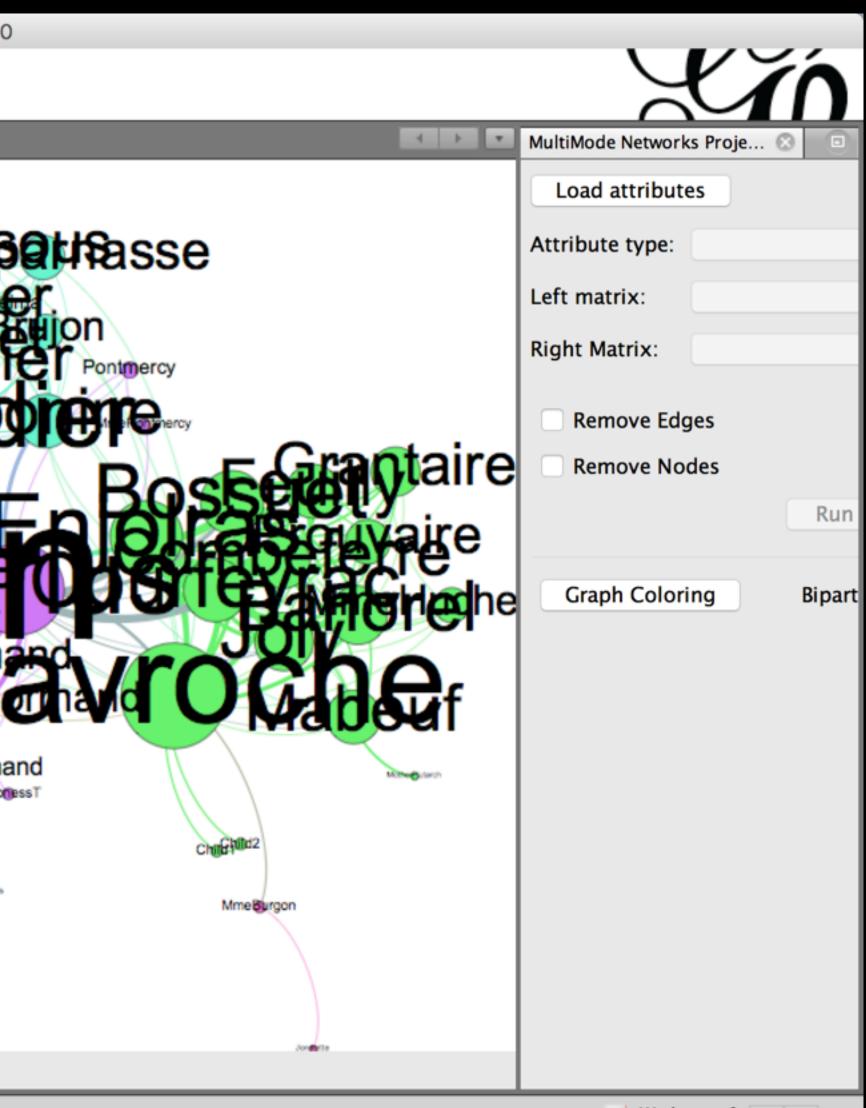
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# Step 11 - Add Labels

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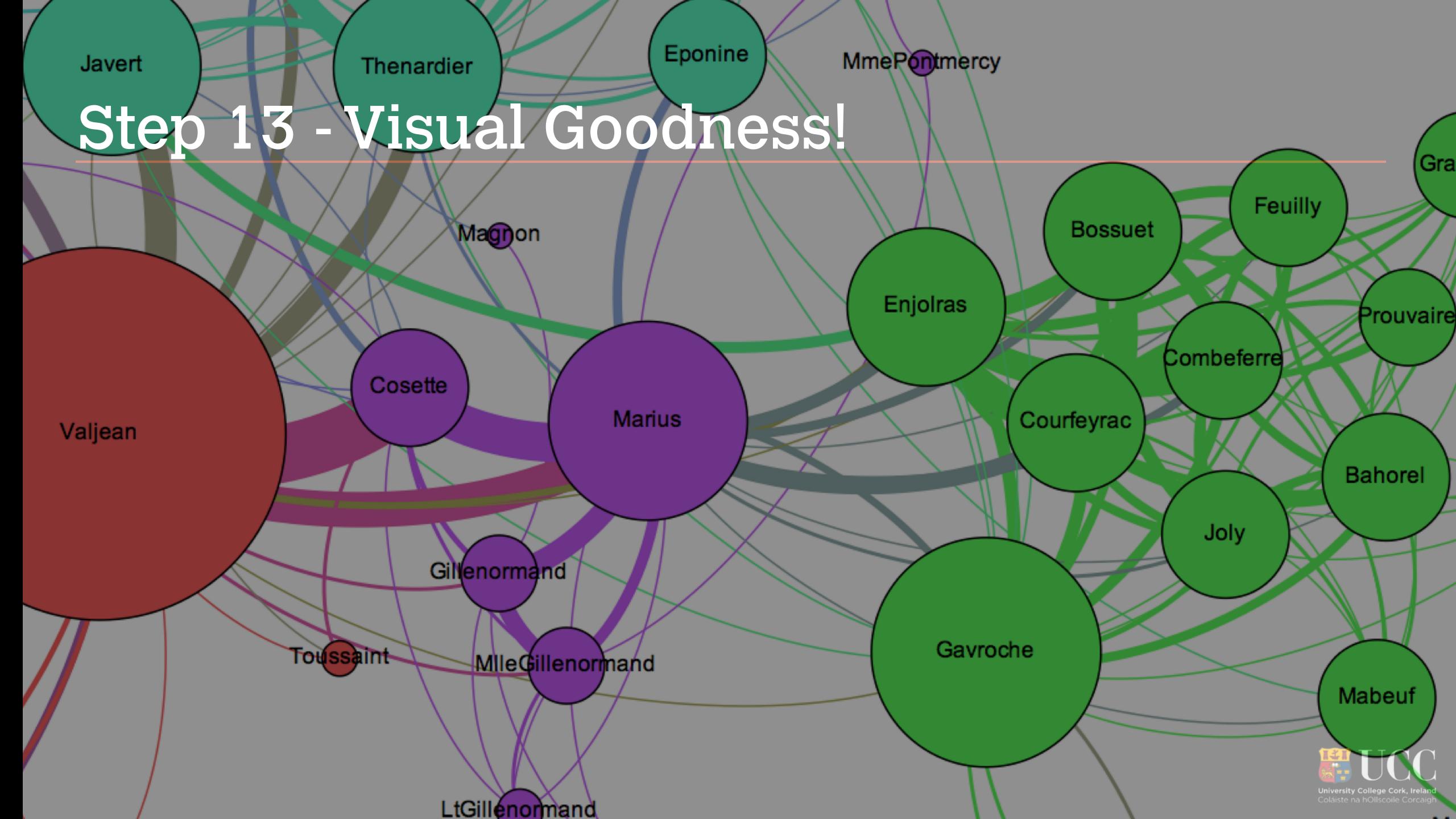


## Step 12 - Export Graph

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## So What Can We Know?

- Centrality measures are essential metrics to analyze the position of an actor in a network.
- They come in many variations:
  - Degree centrality number of connections
  - Closeness centrality closeness to the entire network
  - Betweenness centrality function within network
  - Eigenvector centrality connection to well-connected nodes





## Gephi in More Detail: Loading Data

- Gephi loads directly from Excel or via CSV from others Gephi also supports richer formats that contain more attribute, layout and presentation data • GEXF - More complex networks - multimodal. GML - GraphML - XML based interchange.





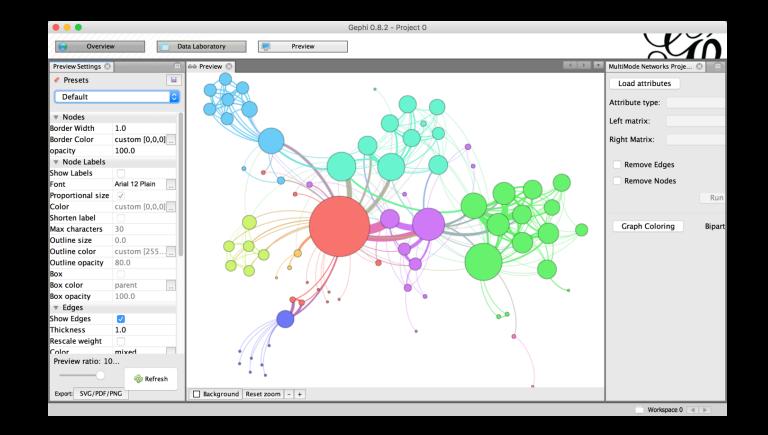
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### Overview Visual Analysis

### Data Manipulate and Structure

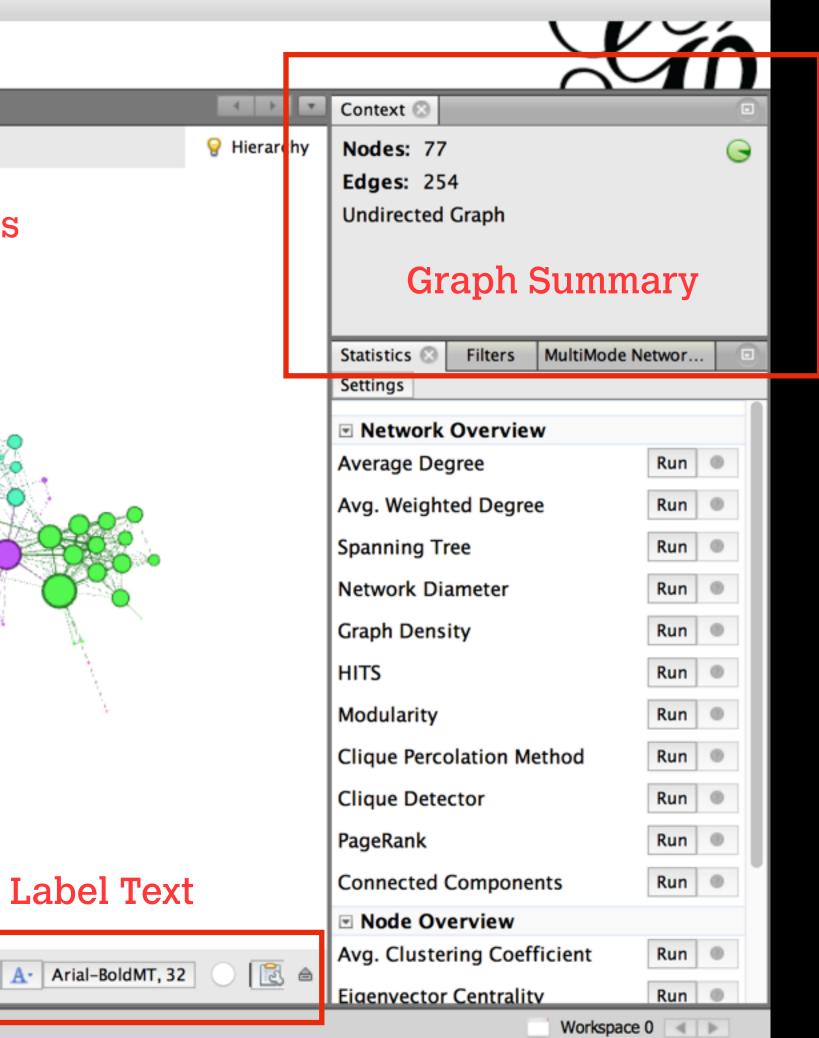


### Preview Present for Sharing



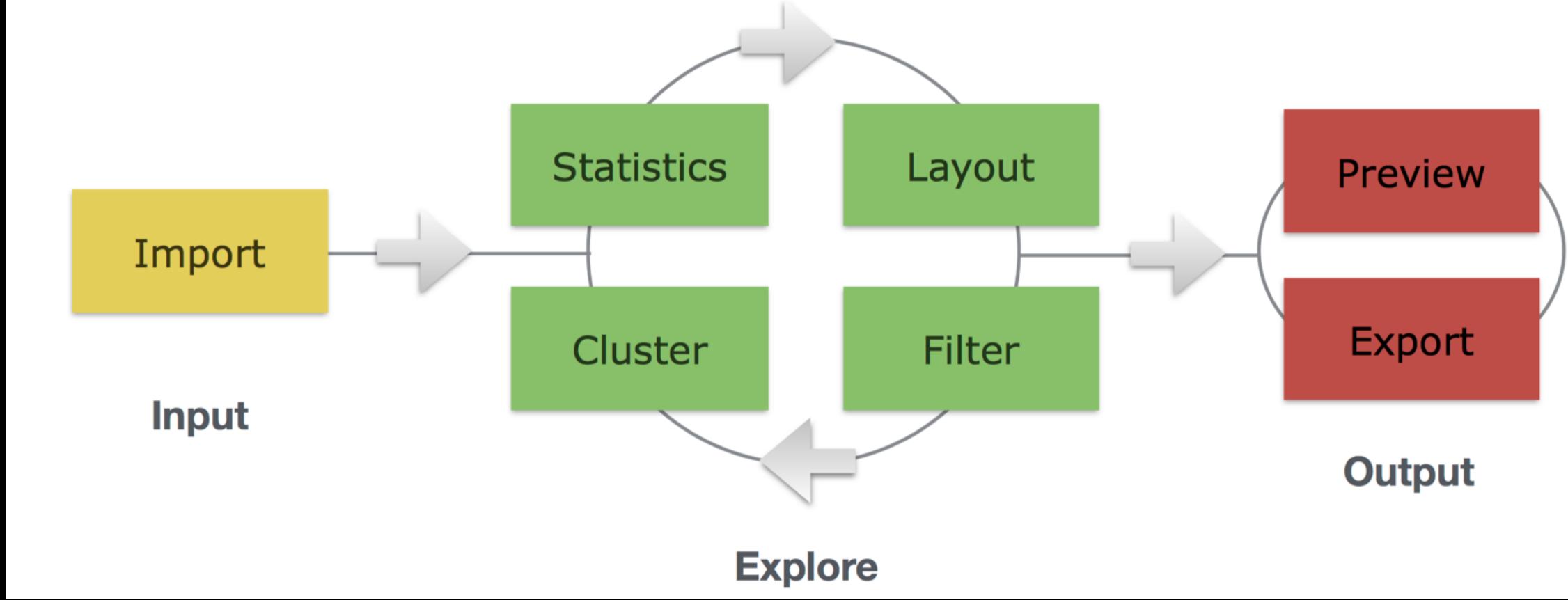
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### The Gephi Process



### Source: Derek Greene from gephi.org







### Alternate Tools

- 1. <u>Cytoscape</u>
- 2. <u>Pajek</u>
- 3. <u>NodeXL</u>
- 4. LoxaWeb
- 5. <u>Netminer</u>
- 6. <u>Social Networks Visualiser</u>
- 7. <u>Polinode</u>







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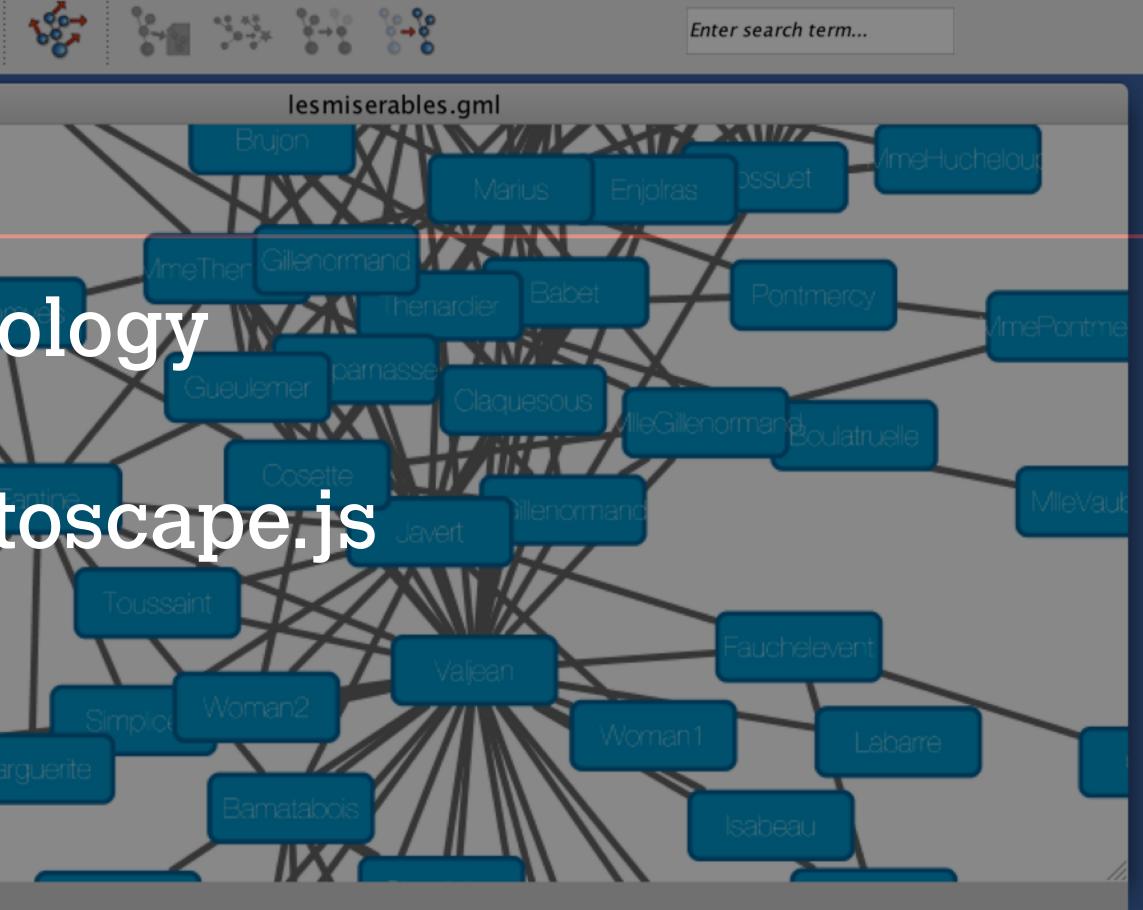
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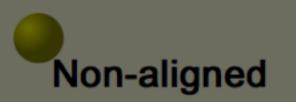
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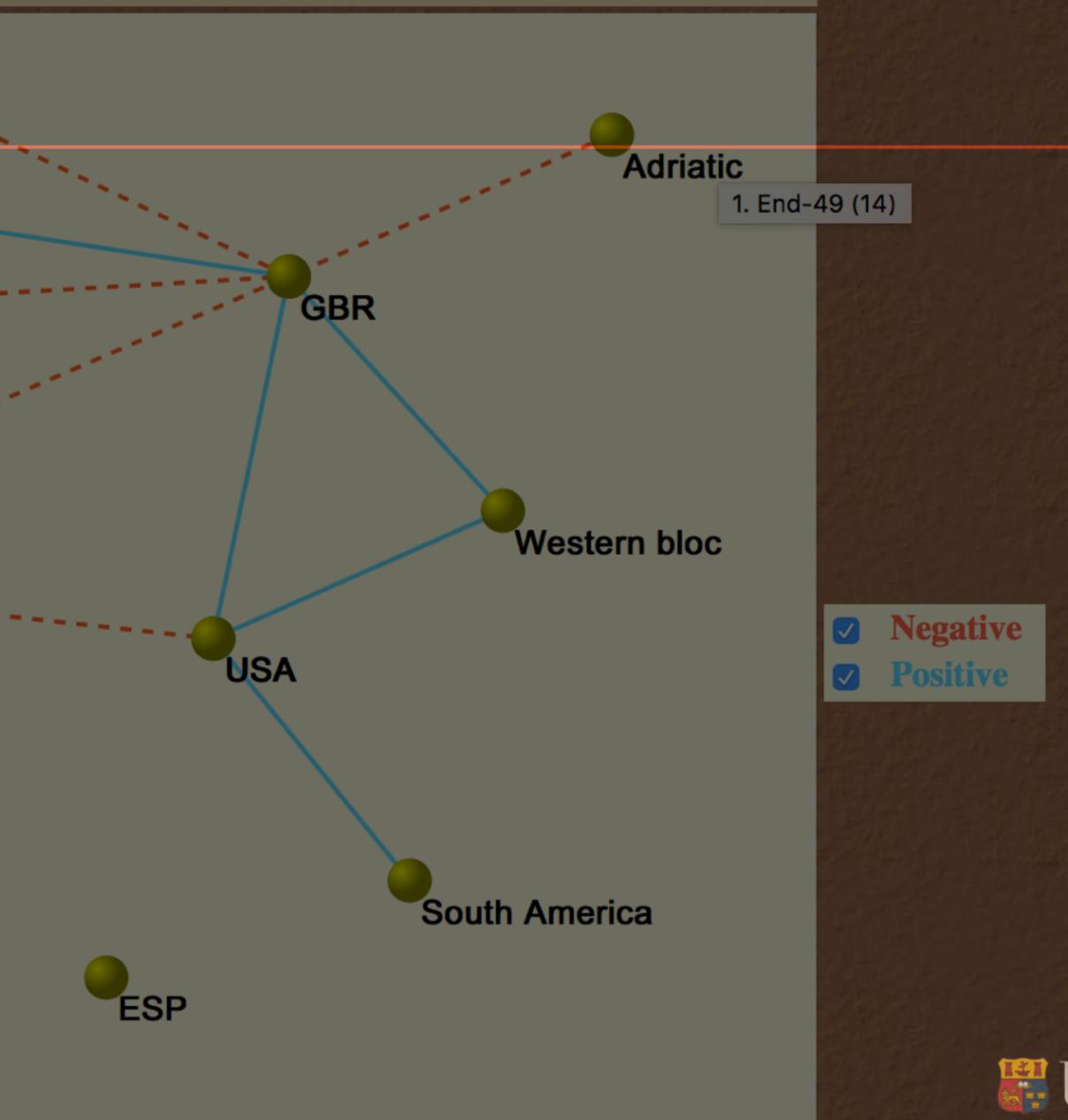


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University College Cork,



### NodeXL

- OpenSource Excel Template
- Pro version allows direct API access to Social Media
- Limited Algorithms
- Good Clustering
- Automation/Scripting for Repetitive Tasks

RT @samhwils: #HistoryByHillary "I don't know where Bernie was when I was trying to get health care i

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Data Vis LoxaVeb

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- Web-based
- OpenSource Baschiera Deploy Interactive to Web
- Limited Algorithms
- Supports Focussed Narrative Findings

Michael McKenna

Mapping Data

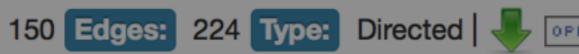
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### Title to Workspace0 gen information

Description

Metrics	
Metric 1	
Metric 2	
Metric 3	
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Motrio 4	
Metric 4	
Metric 5	
Metric 6	
Metric 7	

Metric 8

Intro to DH

Paul Murphy

Rachael Stockdale

Rachel Hanna

TEI Text Encoding

Louisa Costelloe

Google Tools











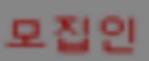


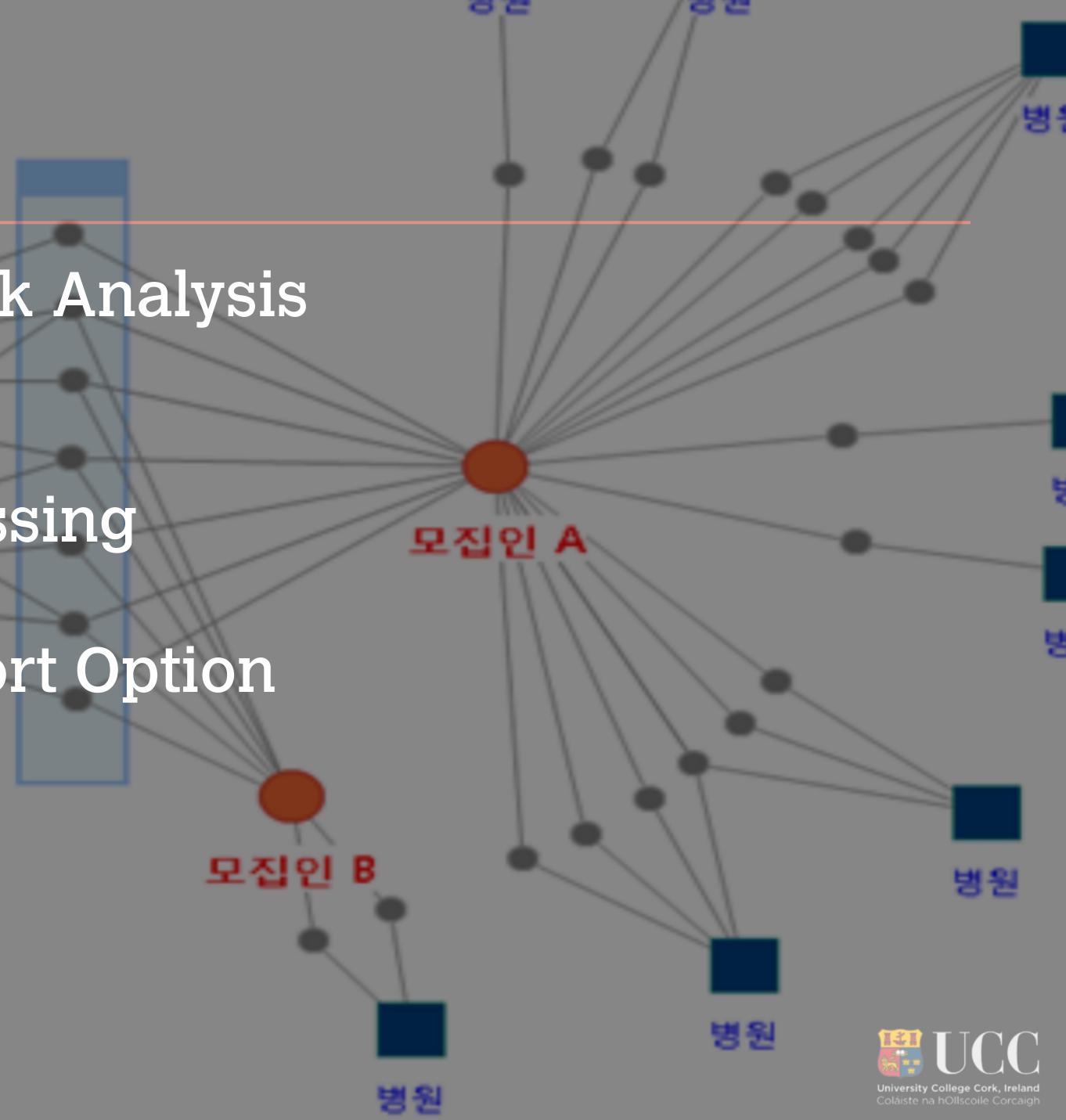
### Netminer

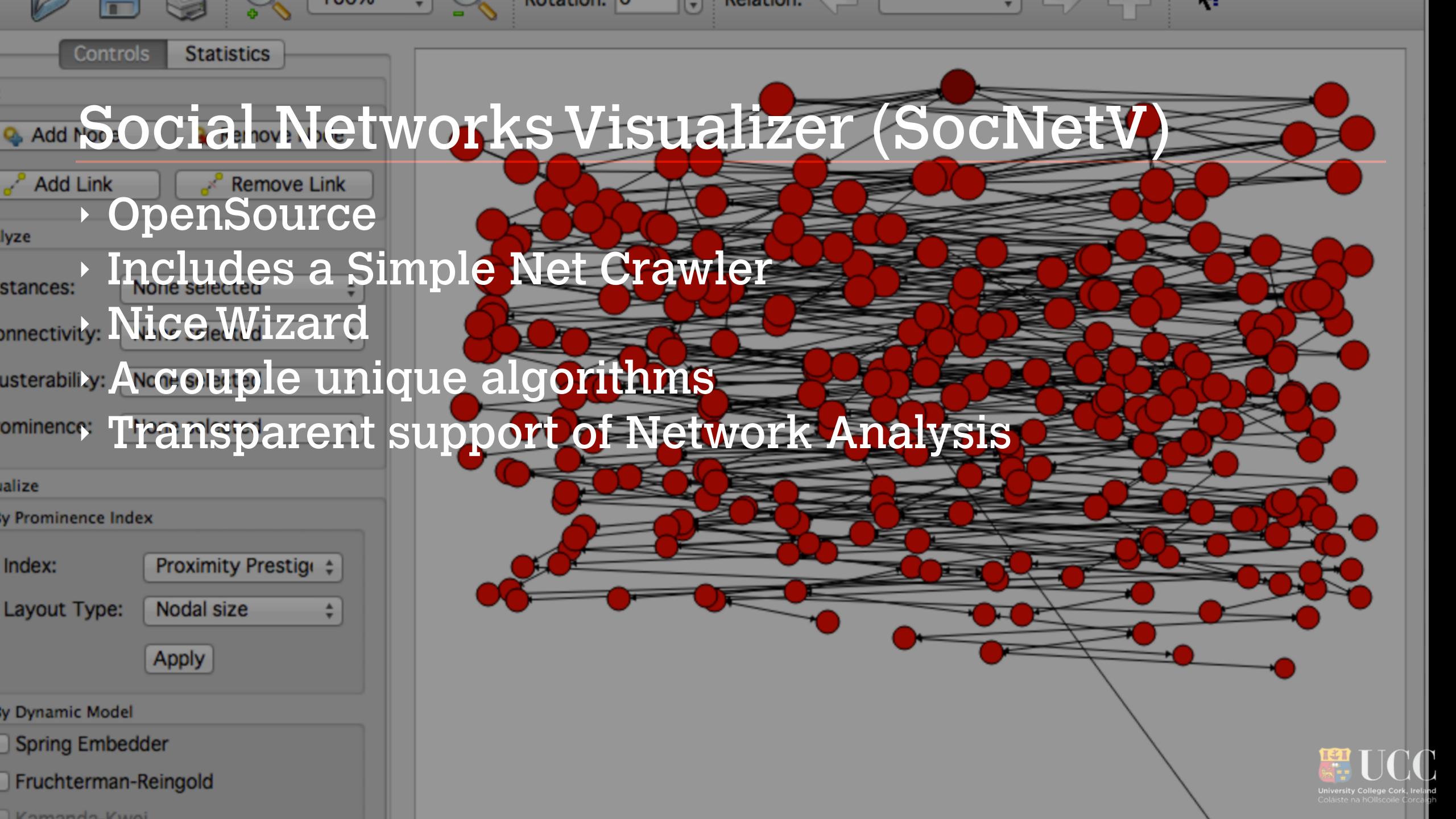
Focused on Social Network Analysis
Academic Pricing
Commercial
Batch and Scripted Processing
Unique 3D Mapping
No Interactive Graph Export Option

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**Joey Foster** 

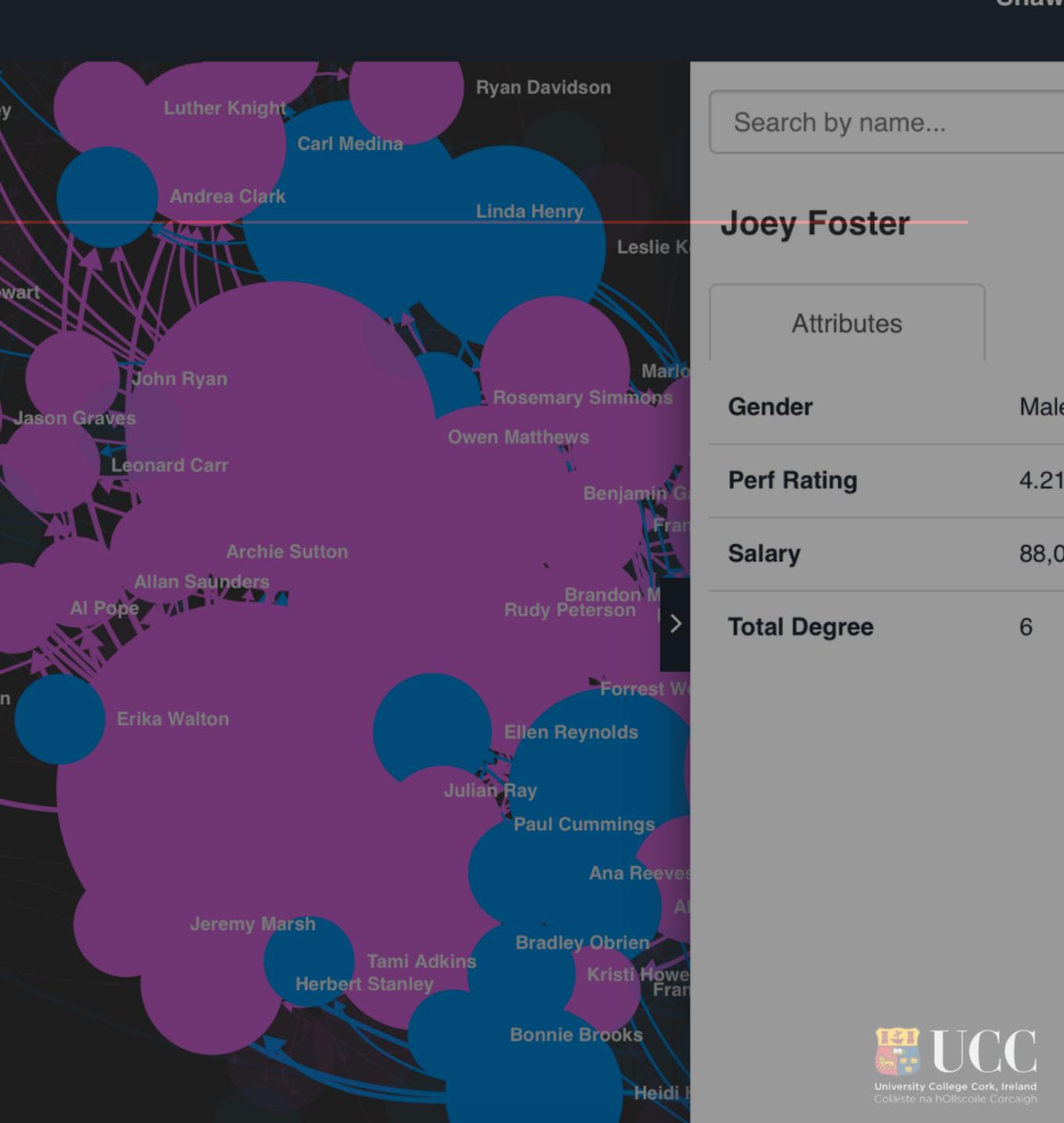
Luke Harvey

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# Polinode

- Web-based Application
- Positive Aesthetics
- Accessible
- Good Analysis
- Nicely Shareable
- Bult in Survey Engine

Hugo Johnson



### **Additional Resources**

- Two Books
  - Mastering Gephi Network Visualisation- Ken Cherven Network Graph Visualisation and Analysis with Gephi- Ken Cherven
- Scott: Social Network Analysis
- Weingart : Demystifying Networks
- **Network Visualization of Historical Sources**
- Lemercier: Formal network methods in history: why and how? Düring: From Hermeneutics to Data to Networks: Data Extraction and
- Meeks: More Networks in the Humanities or Did books have DNA?
- Hanneman: An Introduction to Social Network Methods
- Green: Practical Social Network Analysis Using Gephi Derek Greene Easley: Networks, Crowds and Markets







# Thanks Shawn Day @iridium