

2016-03-09

Making new discoveries from old data: Utilizing digital scholarship to foster new research in Special Collections

Carruthers, Matthew

<http://hdl.handle.net/2027.42/138108>

Making new discoveries from old data

Utilizing digital scholarship to foster new research in
special collections

Slides: goo.gl/smvkvf

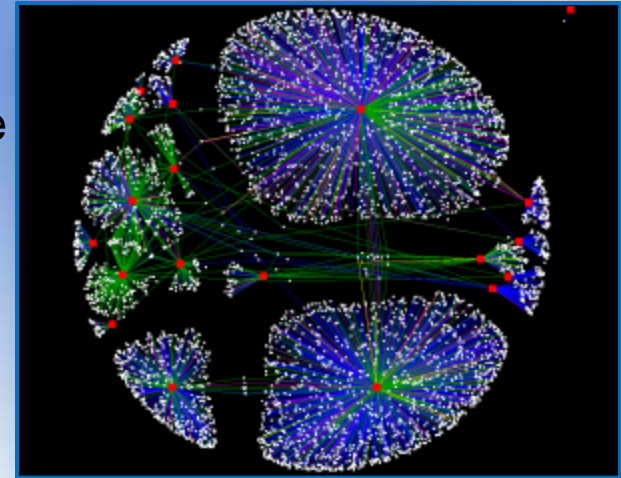
Goals

1. Explore using digital scholarship methods and tools to enhance user experience in special collections and potentially provide new services.
2. Develop a pilot project as a proof of concept for a new service.
 - Utilize existing open source technologies.
 - Little to no need for dedicated IT support.

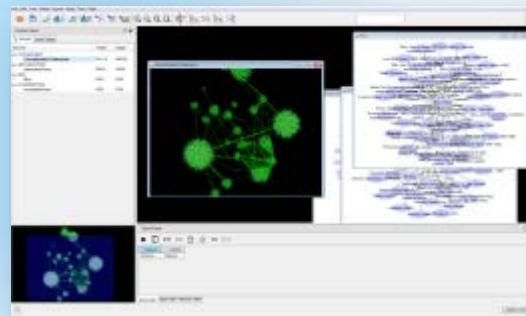
Result

Provide visualization on demand, customized to a patron's individual research question.

- Use data from finding aids and publicly accessible databases along with open-source tools to create interactive visualizations of social networks of the creators of our archival collections.
- Make connections between entities more apparent and provide a discovery tool to spur further inquiry and research.



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Data Processing: Tools

EAC-CPF record creation:

Social Networks and Archival Context

<http://socialarchive.iath.virginia.edu/snac/search>

Remixing Archival Metadata Project

<http://rampeditor.info>

xEAC

<https://github.com/ewg118/xEAC>

More Data Processing

Information extracted:

- Name of connection
- Type of entity
- Type of connection
- Link to more information (when available)

```
<cpfRelation
  xlink:arcrole="http://socialarchive.iath.virginia.edu/control/term#associatedWith"
  xlink:href="http://n2t.net/ark:/99166/w6f48mrk"
  xlink:role="http://socialarchive.iath.virginia.edu/control/term#Person"
  xlink:type="simple" xmlns:xlink="http://www.w3.org/1999/xlink">
  <relationEntry>Zirlin, Larry.</relationEntry>
</cpfRelation>
```


More Data Processing

Information extracted:

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```
<cpfRelation
  xlink:arcrole="http://socialarchive.iath.virginia.edu/control/term#associatedWith"
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  xlink:role="http://socialarchive.iath.virginia.edu/control/term#Person"
  xlink:type="simple" xmlns:xlink="http://www.w3.org/1999/xlink">
  <relationEntry>Zirlin, Larry.</relationEntry>
</cpfRelation>
```

More Data Processing

Information extracted:

- Name of connection
- **Type of entity**
- Type of connection
- Link to more information (when available)

Entity types:

- Person
- Corporate Body
- Family
- Archival Resource
- Bibliographic Resource

```
<cpfRelation
  xlink:arcrole="http://socialarchive.iath.virginia.edu/control/term#associatedWith"
  xlink:href="http://n2t.net/ark:/99166/w6f48mrk"
  xlink:role="http://socialarchive.iath.virginia.edu/control/term#Person"
  xlink:type="simple" xmlns:xlink="http://www.w3.org/1999/xlink">
  <relationEntry>Zirlin, Larry.</relationEntry>
</cpfRelation>
```

The Process

Information extracted:

- Name of connection
- Type of entity
- **Type of connection**
- Link to more information (when available)

Connection types:

- Associated With
- Corresponded With
- Creator Of
- Referenced In

```
<cpfRelation
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  xlink:href="http://n2t.net/ark:/99166/w6f48mrk"
  xlink:role="http://socialarchive.iath.virginia.edu/control/term#Person"
  xlink:type="simple" xmlns:xlink="http://www.w3.org/1999/xlink">
  <relationEntry>Zirlin, Larry.</relationEntry>
</cpfRelation>
```

More Data Processing

Information extracted:

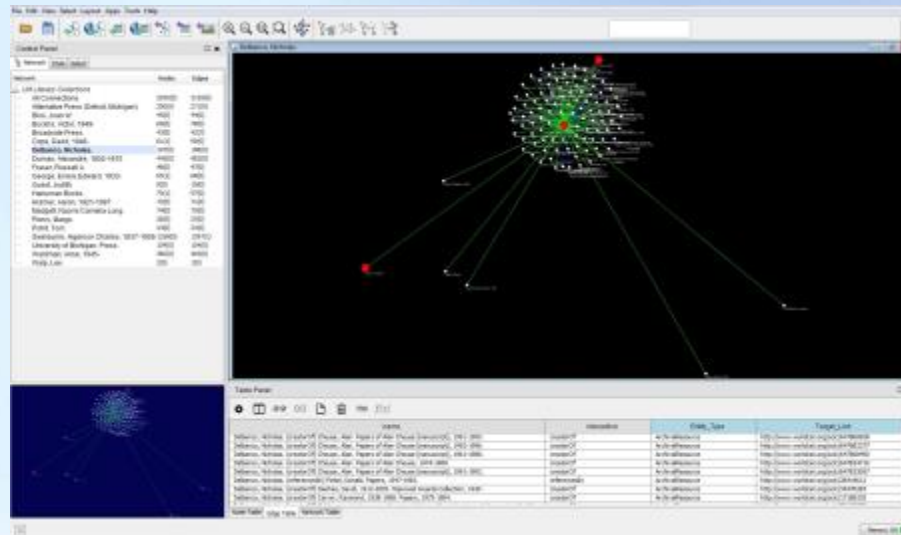
- Name of connection
- Type of entity
- Type of connection
- **Link to more information (when available)**

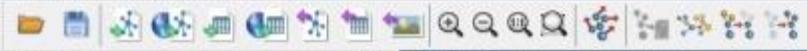
```
<cpfRelation
  xlink:arcrole="http://socialarchive.iath.virginia.edu/control/term#associatedWith"
  xlink:href="http://n2t.net/ark:/99166/w6f48mrk"
  xlink:role="http://socialarchive.iath.virginia.edu/control/term#Person"
  xlink:type="simple" xmlns:xlink="http://www.w3.org/1999/xlink">
  <relationEntry>Zirlin, Larry.</relationEntry>
</cpfRelation>
```

Visualizing the Data

Cytoscape – <http://cytoscape.org/>

- Open source desktop application for visualizing complex networks.





Enter search term...

Control Panel

Network Style Select

| Network | Nodes | Edges |
|--|---------|---------|
| UM Literary Collections | | |
| All Connections | 2930(0) | 3159(1) |
| Alternative Press (Detroit, Michigan) | 200(0) | 271(0) |
| Blos, Joan W. | 45(0) | 44(0) |
| Bockris, Victor, 1949- | 69(0) | 78(0) |
| Broadside Press | 43(0) | 42(7) |
| Cope, David, 1948- | 61(1) | 90(0) |
| Delbanco, Nicholas | 107(0) | 106(0) |
| Dumas, Alexandre, 1802-1870 | 445(0) | 482(0) |
| Fraser, Russell A. | 40(0) | 47(0) |
| George, Emery Edward, 1933- | 65(1) | 68(0) |
| Guest, Judith | 9(0) | 10(0) |
| Hanuman Books | 70(1) | 97(0) |
| Kramer, Aaron, 1921-1997 | 72(0) | 71(0) |
| Madgett, Naomi Cornelia Long | 74(0) | 75(0) |
| Piercy, Marge | 26(0) | 15(0) |
| Pohrt, Tom | 23(0) | 23(0) |
| Swinburne, Algernon Charles, 1837-1912 | 1258(0) | 1297(1) |
| University of Michigan Press | 104(0) | 104(0) |
| Waldman, Anne, 1945- | 360(0) | 493(0) |
| Walp, Lee | 2(0) | 1(0) |

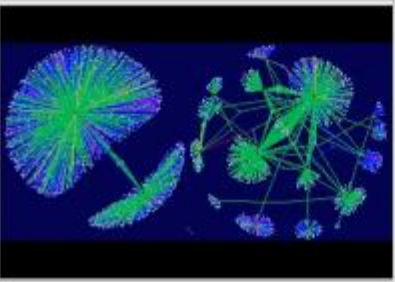
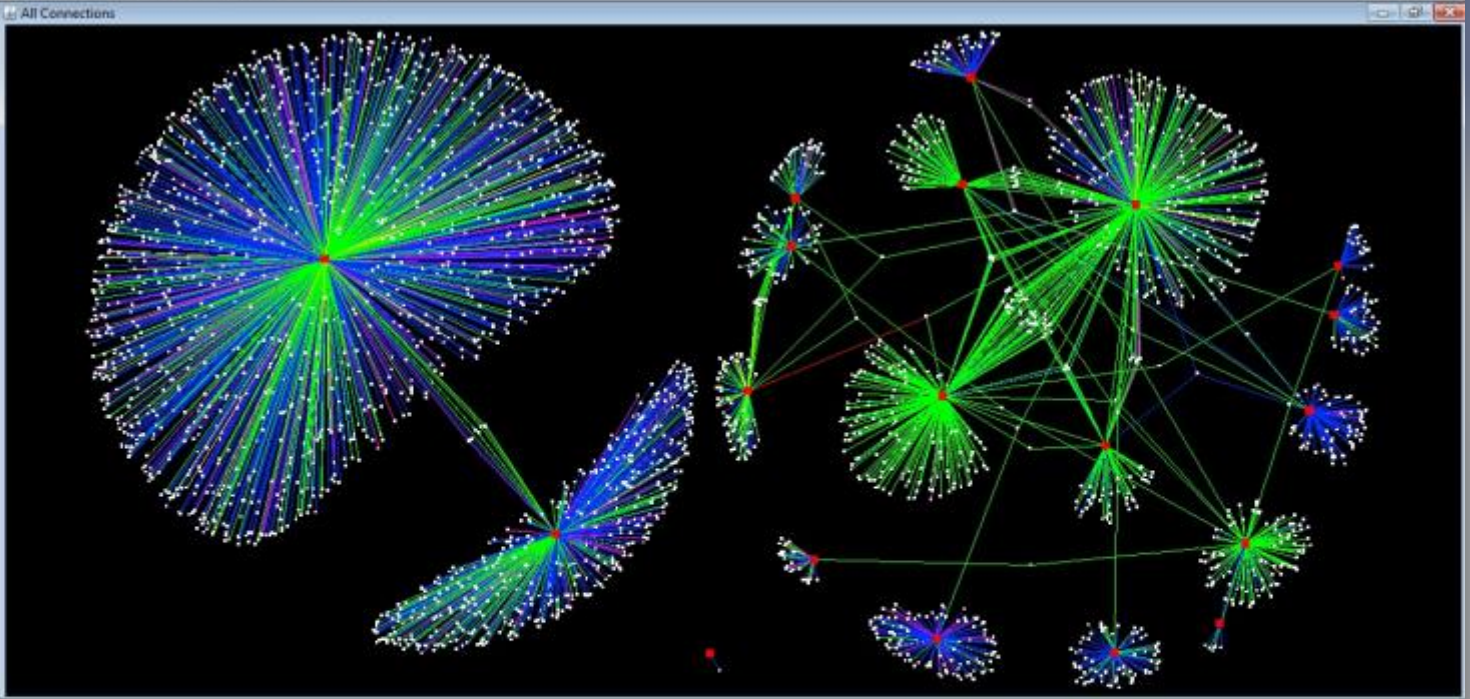


Table Panel

| name | interaction | Entity_Type | Target_Link |
|---|----------------|-------------|---|
| Madgett, Naomi Cornelia Long. (associatedWith) Reed, Ishmael, 1938- | associatedWith | Person | http://hdl.net/ark:/99166/w6f2qjg |





Node Table Edge Table Network Table

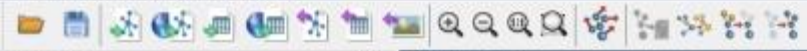
Memory: OK



Visualizing the Data

Edge Color (Unselected) Mapping

| Edge Color (Unselected) | interaction |
|---|------------------|
|  | associatedWith |
|  | correspondedWith |
|  | creatorOf |
|  | referencedIn |



Enter search term...

Control Panel

Network Style Select

| Network | Nodes | Edges |
|--|---------|---------|
| UM Literary Collections | | |
| All Connections | 2930(0) | 3159(1) |
| Alternative Press (Detroit, Michigan) | 200(0) | 271(0) |
| Blos, Joan W. | 45(0) | 44(0) |
| Bockris, Victor, 1949- | 69(0) | 78(0) |
| Broadside Press | 43(0) | 42(7) |
| Cope, David, 1948- | 61(1) | 90(0) |
| Delbanco, Nicholas | 107(0) | 106(0) |
| Dumas, Alexandre, 1802-1870 | 445(0) | 482(0) |
| Fraser, Russell A. | 40(0) | 47(0) |
| George, Emery Edward, 1933- | 65(1) | 68(0) |
| Guest, Judith | 9(0) | 10(0) |
| Hanuman Books | 70(1) | 97(0) |
| Kramer, Aaron, 1921-1997 | 72(0) | 71(0) |
| Madgett, Naomi Cornelia Long | 74(0) | 75(0) |
| Piercy, Marge | 26(0) | 15(0) |
| Pohrt, Tom | 23(0) | 23(0) |
| Swinburne, Algernon Charles, 1837-1912 | 1258(0) | 1297(1) |
| University of Michigan Press | 104(0) | 104(0) |
| Waldman, Anne, 1945- | 360(0) | 493(0) |
| Walp, Lee | 2(0) | 1(0) |

All Connections

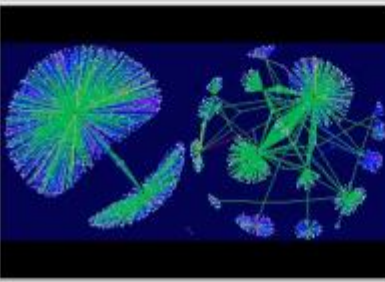
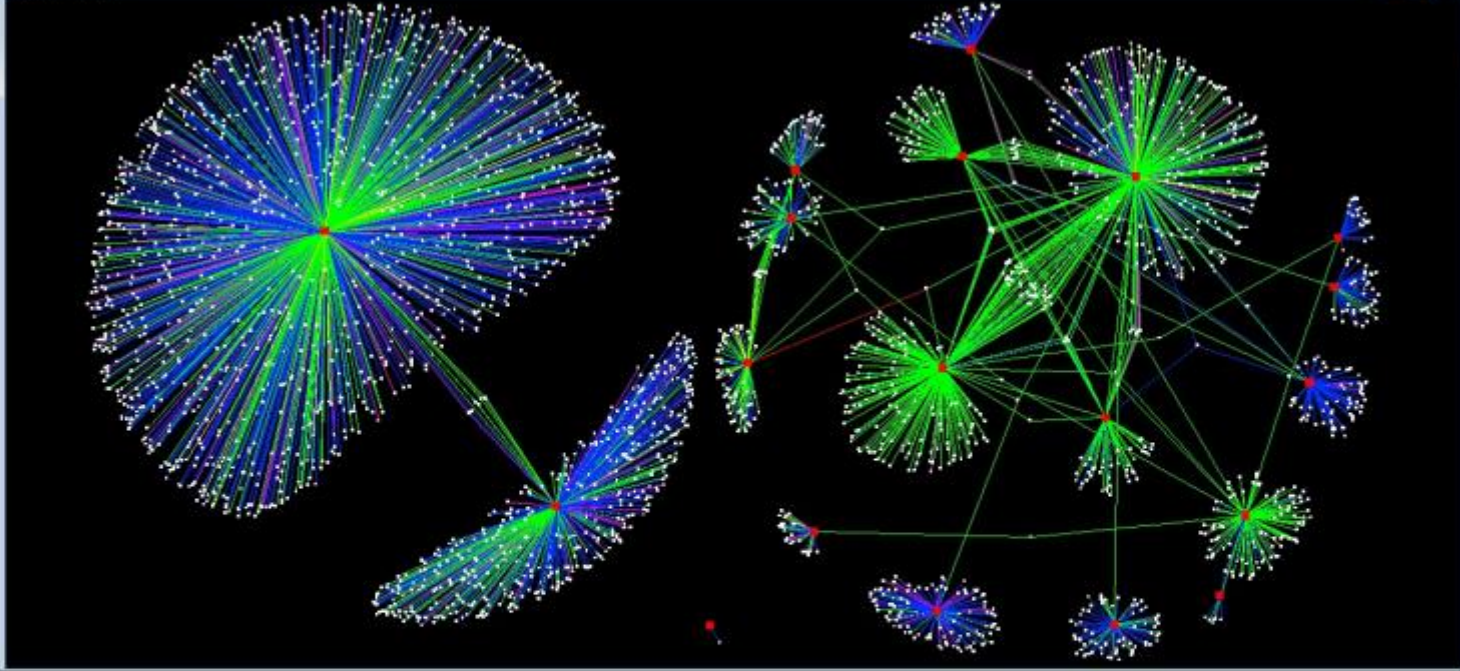
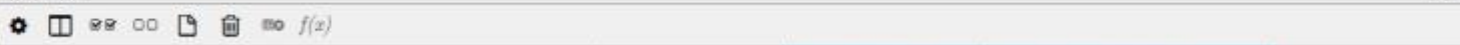


Table Panel



| name | interaction | Entity_Type | Target_Link |
|---|----------------|-------------|---|
| Madgett, Naomi Cornelia Long. (associatedWith) Reed, Ishmael, 1938- | associatedWith | Person | http://hdl.net/ark:/99166/w6f2qjg |

Node Table Edge Table Network Table

Memory: OK



Control Panel

Network Style Select

| Network | Nodes | Edges |
|---------------------------------------|---------------|---------------|
| UM Library Collections | | |
| All Connections | 2930(0) | 3159(1) |
| Alternative Press (Detroit, Michigan) | 200(0) | 271(0) |
| Blos, Joan W. | 45(0) | 44(0) |
| Bockris, Victor, 1949- | 69(0) | 78(0) |
| Broadside Press | 430(0) | 42(7) |
| Cope, David, 1948- | 61(1) | 90(0) |
| Delbanco, Nicholas | 207(0) | 108(0) |
| Dumas, Alexandre, 1802-1870 | 445(0) | 462(0) |
| Fraser, Russell A. | 48(0) | 47(0) |
| George, Emery Edward, 1933- | 65(1) | 68(0) |
| Guest, Judith | 9(0) | 10(0) |
| Hanuman Books | 70(1) | 97(0) |
| Kramer, Aaron, 1921-1997 | 72(0) | 71(0) |
| Madgett, Naomi Comelia Long | 74(0) | 75(0) |
| Piercy, Marge | 26(0) | 25(0) |
| Pont, Tom | 23(0) | 23(0) |
| Swinburne, Algernon Charles, 1837-19 | 1258(0) | 1297(1) |
| University of Michigan Press | 304(0) | 104(0) |
| Waldman, Anne, 1945- | 360(0) | 493(0) |
| Walp, Lee | 2(0) | 1(0) |

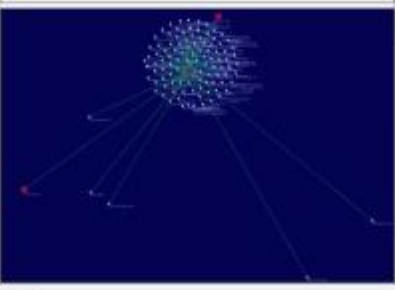
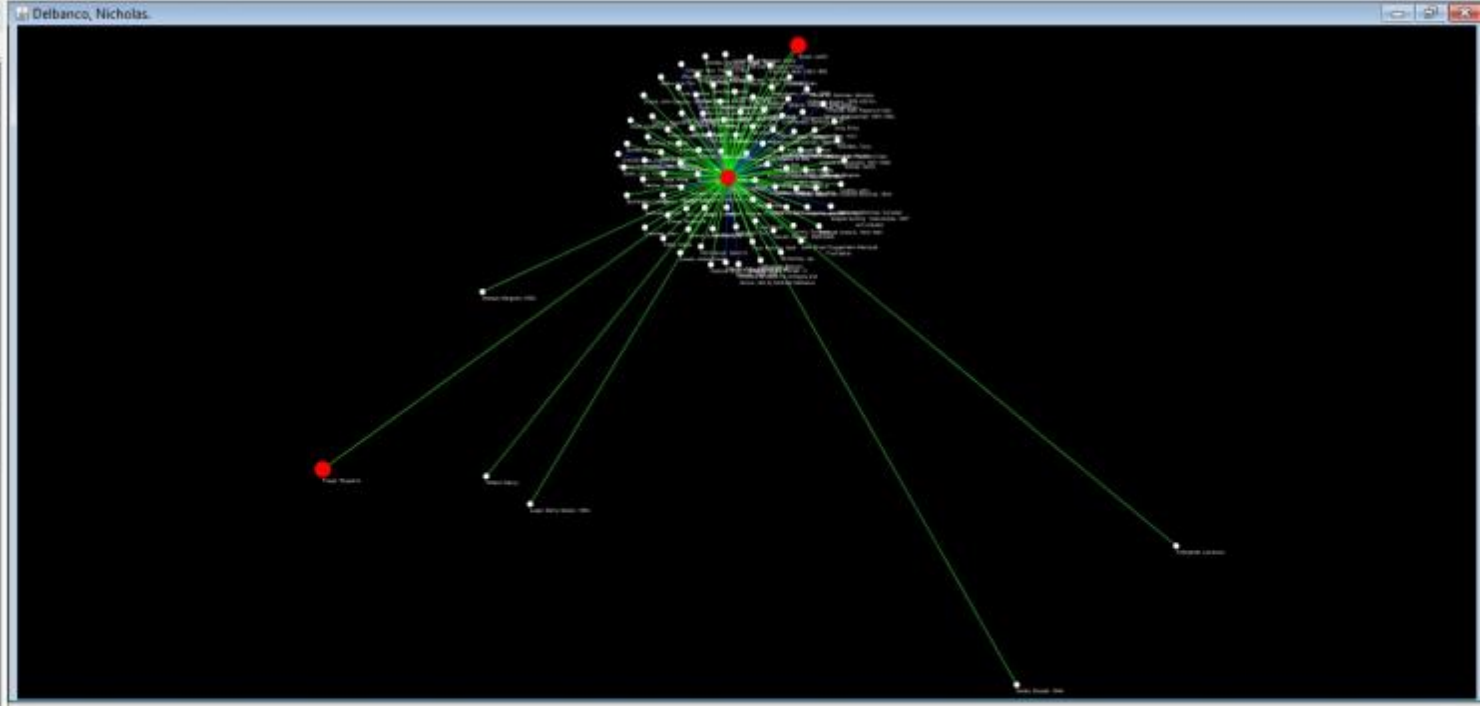


Table Panel

| name | interaction | Entity_Type | Target_Link |
|--|--------------|-----------------|---|
| Delbanco, Nicholas. (creatorOf) Cheuse, Alan. Papers of Alan Cheuse [manuscript], 1991-1995. | creatorOf | ArchiveResource | http://www.worldcat.org/oclc/647860658 |
| Delbanco, Nicholas. (creatorOf) Cheuse, Alan. Papers of Alan Cheuse [manuscript], 1992-1996. | creatorOf | ArchiveResource | http://www.worldcat.org/oclc/647883377 |
| Delbanco, Nicholas. (creatorOf) Cheuse, Alan. Papers of Alan Cheuse [manuscript], 1961-1988. | creatorOf | ArchiveResource | http://www.worldcat.org/oclc/647808490 |
| Delbanco, Nicholas. (creatorOf) Cheuse, Alan. Papers of Alan Cheuse, 1974-1989. | creatorOf | ArchiveResource | http://www.worldcat.org/oclc/647824710 |
| Delbanco, Nicholas. (creatorOf) Cheuse, Alan. Papers of Alan Cheuse [manuscript], 1991-1992. | creatorOf | ArchiveResource | http://www.worldcat.org/oclc/647833097 |
| Delbanco, Nicholas. (referencedIn) Finkel, Donald. Papers, 1947-1983. | referencedIn | ArchiveResource | http://www.worldcat.org/oclc/28419612 |
| Delbanco, Nicholas. (creatorOf) Satches, David, 1912-2003. Hopwood Awards Collection, 1930- | creatorOf | ArchiveResource | http://www.worldcat.org/oclc/34370265 |
| Delbanco, Nicholas. (creatorOf) Carver, Raymond, 1938-1988. Papers, 1975-1984. | creatorOf | ArchiveResource | http://www.worldcat.org/oclc/17188335 |

Node Table Edge Table Network Table

Memory OK

Sharing the Visualizations

Share visualizations via web-publishing companion platform to Cytoscape:

CyNetShare

<http://cynetshare.ucsd.edu/#/>

Working example:

<http://goo.gl/eHYLUi>

Sharing the Visualizations

CyNetShare



An easy way to share your network visualizations

Project Web Site

Documentation

Public Files

Gists

Network Data URL

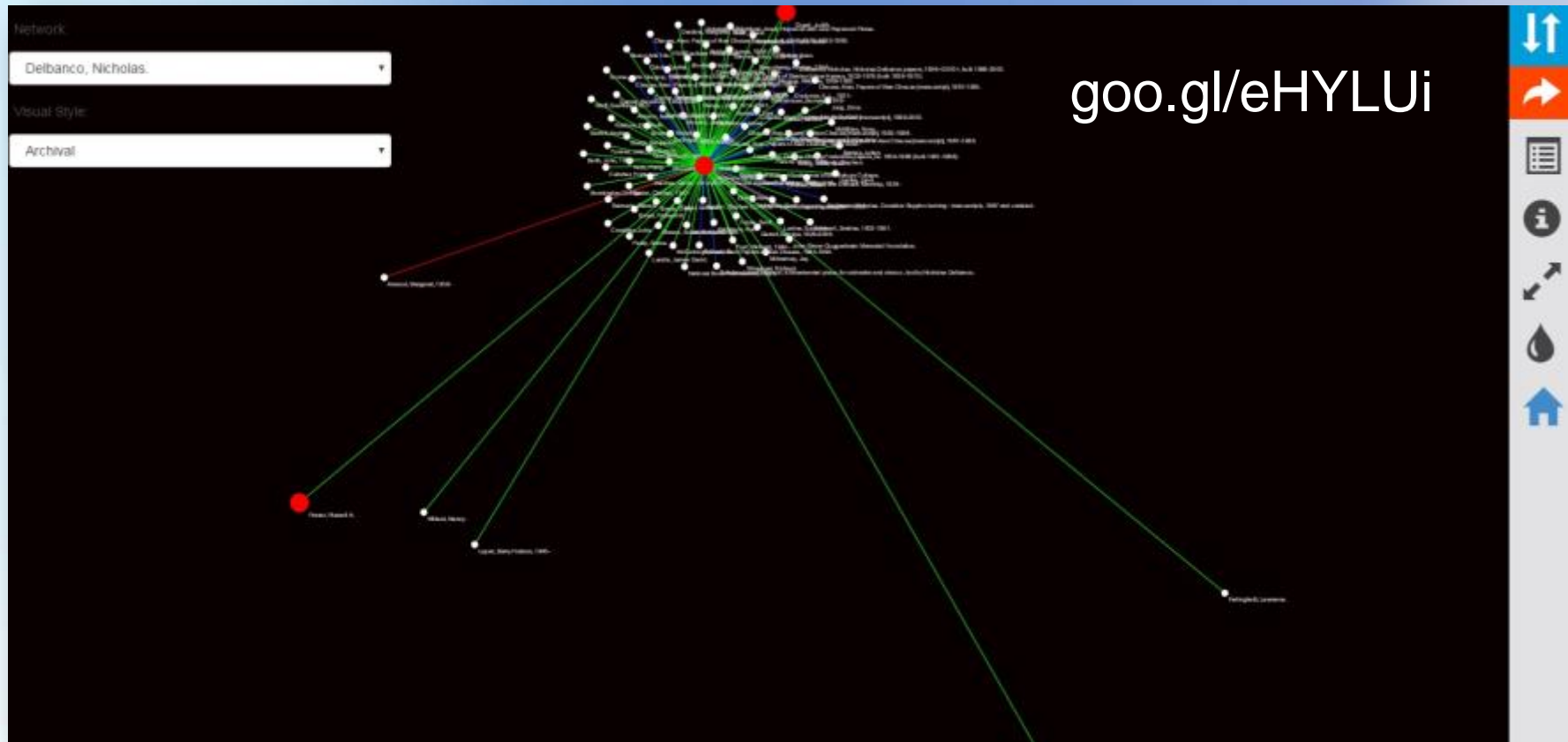
Enter Network File URL

Visual Style URL
(Optional)

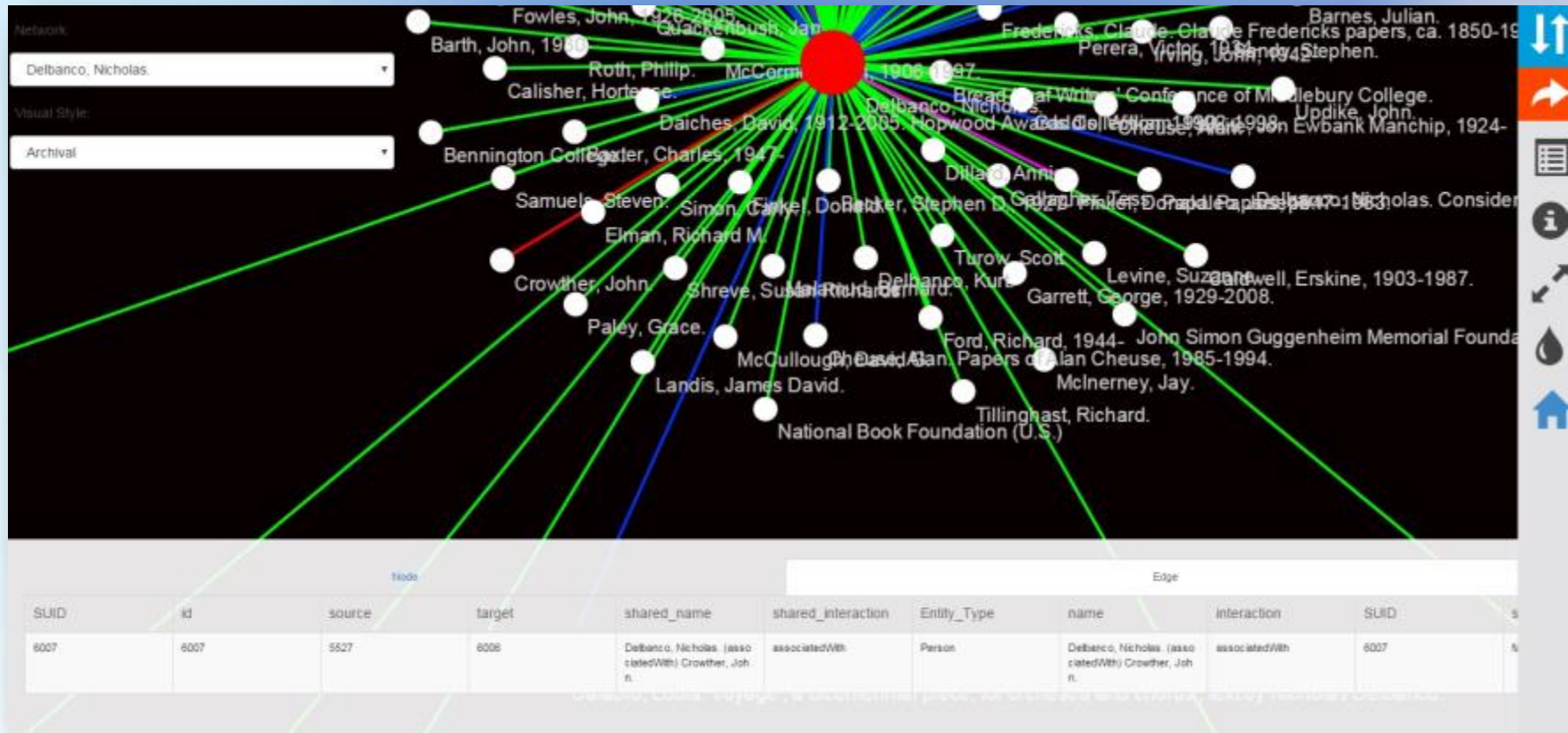
Enter Style URL

Visualize!

Sharing the Visualizations



Sharing the Visualizations



Next Steps

Continue to streamline the workflow

Next Steps

Perform user testing

(Incorporate feedback into service model)

Next Steps

Explore more options for using and
manipulating the data

(Customize and host local CyNetShare instance)

[http://www-
personal.umich.edu/~mcarruth/HanumanBooksVis/web_session/index.html#/
/](http://www-personal.umich.edu/~mcarruth/HanumanBooksVis/web_session/index.html#/)

Thanks!

Matt Carruthers

mcarruth@umich.edu

@mattadata2

Slides: goo.gl/smvkvf