Creating the Future of Digital Scholarship Together: Collaboration from Within Your Library

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June 24, 2017

Co-sponsors:  
LITA  
ALCTS Cataloging and Metadata Management Section  
ACRL Digital Humanities Interest Group
Using Digital Scholarship Methods to Facilitate New Modes of Discovery in Special Collections

Matt Carruthers
Metadata Projects Librarian
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Problem Statement

Distinct archival collections can often be very interrelated, containing materials by or about the same people, institutions, or families.

This interrelation can be key to a researcher’s understanding of the materials.

However, many current discovery interfaces for archival materials are not very good at representing the complex relationships between collections or entities represented in collections.
### Alternative plans for publishing my verse and plays should V. Gjolanczy's offer not materialize, 1948.

By Berezine, Maurice. 1891-1955. Published: 1949

**Archive**

<table>
<thead>
<tr>
<th>Location</th>
<th>Status</th>
<th>Call Number / Description</th>
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<tbody>
<tr>
<td>Special Collections Archive and Manuscript Collections</td>
<td>Building use only</td>
<td>V-48 Berezine Works</td>
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</tbody>
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### Jo Labadie papers, 1880-1931.

By Labadie, Jo. 1859-1933. Published: 1883

**Archive**

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<th>Location</th>
<th>Status</th>
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<td>Special Collections Archive and Manuscript Collections</td>
<td>Building use only</td>
<td>V-48 Labadie</td>
</tr>
</tbody>
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### Check, 1875 Jan. 6, on the First National Bank, Hartford, to pay to the order of Fisk Harte two hundred dollars.

By Americans Publishing Company (Hartford, Conn.). Published: 1875

**Archive**

<table>
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<tr>
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<th>Status</th>
<th>Call Number / Description</th>
</tr>
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<td>V-48 Am.Lt. Authors</td>
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By Redstone Press. Published: 1968

**Archive**

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<tbody>
<tr>
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<td>Building use only</td>
<td>V-48 Press Records</td>
</tr>
</tbody>
</table>
**David Cope papers, 1972-**

- **Main Author:** Cope, David, 1946-
- **Contributors:**
  - Adler, Andi, 1946-
  - Cohn, Jim, 1953-
  - Creeley, Robert, 1928-2008
  - Davis, Frank
  - Forber, Lawrence, 1940-1997
  - Gindberg, Allen, 1949-2004
  - Katz, Ely
  - Kipnis, James
  - Langston, Thomas
  - Marshall, Paul
  - Marquart, Bill, 1946-
  - Myers, Ed
  - Pfeiffer, Michael
  - Rillos, Carl, 1963-2004
  - Rice, Bob
  - Rogers, James
  - Silverman, Steve
  - Snyder, Gary, 1930-
- **Description:**
  - **Format:** Archive
  - **Language:** English
  - **Published:** [exact date unknown]
  - **Summary:** Collection includes: correspondence, consisting of letters, some enclosing manuscripts and other items, from poets Adler, Andi; Forber, Lawrence; Robert Creeley; Allen Ginsberg; Carl Rillos; and an extensive series from Jim Cohn, to name a few. Topics largely concern the writing and study of poetry, especially Cope's association with the poets of the Beat Generation. (full summary)

**Holding**

<table>
<thead>
<tr>
<th>Description</th>
<th>Subjects</th>
<th>MARC View</th>
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</table>

**Electronic Resources**

Access to the online version: finding aid available online
Problem Statement Pt. 2

Relationships among archival collections and entities represented in collections are often not linear.

There is often a high level of interconnectedness and context that can be lost in traditional discovery environments.
Special Collections Digital Scholarship Team

Team:
Associate Director of Special Collections
Information Resources Specialist, Special Collections
Digital Scholarship Librarian
Metadata Projects Librarian

Goals:
1. Explore using digital scholarship methods and tools to enhance user experience and resource discovery in Special Collections.

2. Develop a pilot project as a proof of concept for a new service.
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 entities and resources in our archival collections.
- Make connections between entities more apparent and provide a discovery tool to spur further inquiry and research.
Data Processing

Encoded Archival Description (EAD)
- Metadata standard for the encoding of finding aids for use in a networked (online) environment.

Encoded Archival Context – Corporate Bodies, Persons, and Families (EAC-CPF)
- Companion standard to Encoded Archival Description (EAD).
- Describes the entity responsible for creating (or who is represented in) one or more archival collections.
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

Use XSLT to extract information about connections and format output files as tab-delimited text.
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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```xml
<cpfRelation
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  <relationEntry>Zirlin, Larry.</relationEntry>
</cpfRelation>
```
More Data Processing

Information extracted:

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Entity types:

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

```
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  xlink:href="http://n2t.net/ark:/99166/w6f48mrk"
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</cpfRelation>
```
The Process

Information extracted:

- Name of connection
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- Type of connection
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Connection types:

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

<cpfRelation xlink:arcrole="http://socialarchive.iath.virginia.edu/control/term#associatedWith"
xlink:href="http://n2t.net/ark:/99166/w6f48mrk"
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</cpfRelation>
```
Visualizing the Data

Cytoscape – http://cytoscape.org/

- Open source desktop application for visualizing complex networks.
Visualizing the Data

### Edge Color (Unselected) Mapping

<table>
<thead>
<tr>
<th>Edge Color (Unselected)</th>
<th>interaction</th>
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<tr>
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<tr>
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<td>referencedIn</td>
</tr>
</tbody>
</table>
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
- Enter Style URL
- Visualize!
Sharing the Visualizations

googl/eHYLUi
Sharing the Visualizations
Results

• Developed a proof of concept for a new service.
• Produce customized interactive visualizations of archival collections in less than 10 minutes.
• Requires no investment of money, digital infrastructure, or support from library IT.
Next Steps

• Consider accessibility issues
Next Steps

• Consider accessibility issues
• Continue to streamline the workflow
Next Steps

• Consider accessibility issues
• Continue to streamline the workflow
• Perform user testing  (Incorporate feedback into service model)
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• Consider accessibility issues
• Continue to streamline the workflow
• Perform user testing (Incorporate feedback into service model)
• Explore more options for using and manipulating the data
Final thoughts

In general, the viability of a visualization or discovery service hinges on metadata.
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But it’s also only one piece of the puzzle in creating a viable product.
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So metadata processing and manipulation techniques will play a crucial role.

But it’s also only one piece of the puzzle in creating a viable product.

Use existing technologies and tools to help you whenever possible.
Thanks!

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@mattadata2