DISCOVERY SYSTEMS AS CONVERGENCE: 
**BLURRING** THE BOUNDARIES BETWEEN PUBLIC AND TECH SERVICES

Jenny Bossaller and Heather Lea Moulaison
SISLT, the iSchool at the University of Missouri
KLA/MLA 2016, October 1, 2015
AGENDA

Rationale
Quiz time!
Where we’re coming from
Our study
What can you take away from this presentation about discovery systems going forward?
Technology as driving force of change in libraries.

Discovery systems as an emerging case study

- How are librarians talking about it, in general?
- *Front of house vs. back of house* concerns, and how they approach change
- Discovery system: driving departmental convergence, or still a point of separation?
- Evolving inquiry about discovery systems
INTERACTIVE MOMENT...

Who has a discovery system in here?

When did you implement it?

Did you do any research--for instance, usability testing?
  ▪ Did you share or publish your results, and how?

Do you think that discovery systems have changed discoverability of library materials?
  ▪ Is it easier or harder for your patrons, and why?
  ▪ Has it changed since they were first released?
ABOUT DISCOVERY SYSTEMS

Dedicated systems that provide access to a variety of library resources through a single search interface.

- Central index
- Single search box
- Relevancy ranking
- Facets

(Breeding, 2014; Chickering & Yang, 2014; Hoeppner, 2012; Rowe, 2010).
MAJOR DISCOVERY SYSTEMS

EBSCO Discovery Service (EDS) (EBSCO)
Primo (Ex Libris)
Summon (ProQuest)
WorldCat Discovery (OCLC)
BiblioCore (BiblioCommons)
AquaBrowser Library (ProQuest)
1. **Cow**
   by [Velten, Hannah](https://example.com/author)
   2007
   [Permalink](https://example.com/permalink)

   ...Contents
   Introduction: Reintroducing the Cow, Bull and Ox 7 1
   Wild Ox to Domesticates 10 Bull-Gods, Bull-Kings 2 31 3 Cow Mysticism and
   a Rural Idyll...

   ![Image](https://example.com/image)
   Book: NOT CHECKED OUT, SF197_V46 2007, MU Ellis

2. **Cows**
   by [Pastan, Linda](https://example.com/author)
   The Gettysburg Review, 06/2010, Volume 23, Issue 2
   [Permalink](https://example.com/permalink)

   ![Image](https://example.com/image)
   Journal Article: FindIt@MU

3. **Cows** [electronic resource]

   ![Image](https://example.com/image)

   [MU Libraries](https://example.com/му)
WHAT IS AN INNOVATION?

**innovation (n.)**
1. The act of introducing something new.
2. Something newly introduced.

http://www.thefreedictionary.com/innovation

There is a connotation that an innovation, unlike something that is only “new” is also an improvement or is somehow incremental in its advancement over prior options.

Discovery systems are a technology that represents a major innovation over previous models for access.
Rogers (2003): Not everyone is going to adopt a new technology right away.

To adopt, or not to adopt?
- Appeal
- Cost
- Perceived benefits,
- Ability to prioritize, etc.
ROGERS’S INNOVATION ADOPTION CURVE

http://assets.hardwarezone.com/images/f04-eng.jpg
Each library community has its journals...

Kind of library
- Academic
- Special, etc.

Kind of librarianship
- Systems librarians/technologists
- Technical Services/Cataloging
- Public Services/Reference
- Library administration
Library research might be published
- as a research article in a scholarly journal
- as a white paper
- presented at a conference,
- circulated internally

Scholarly journals: arduous /writers probably have an external motivation (i.e., tenure requirements).
PEER REVIEWED JOURNALS

- Vetted end product
- Get the research out to a wider audience over time
- Audience predetermined audience due to aims and scope of journal/ expertise.
BUILDING LIBRARY SILOS?

Specialization yields task-based departments:
• Public or User Services, Technical Services, Systems, etc.
• Hierarchically organized, depends on size, mission, budget, etc.

Specialization can lead to divisions.

Franklin (2012) recommends grouping by university’s mission rather than task-based grouping of staff.
CONVERGENCE

• Reflects a need for holistic understanding of the library as a single unit

• Capitalize on strengths:
  • Staff reference with some technical services employees (Makinen, 1997)
  • Place public service librarians in tech services (vanDuinkerden, 2009).
  • Place Reference librarians in cataloging (Kennan, 2014).
This growing dichotomy of public service vs. technical service is a very disturbing element pervading libraries. The truth is that there is no division between reference and cataloging in terms of public service. You need both to keep your library functioning as a library.

--Bing (2000, p. 24)
Have been used across many scientific domains:
- social/psychological
- medical research.

Synthesis:
- defined by purpose or research question:
- methods, theories, perspective

...attempts to integrate empirical research for the purpose of creating generalizations (Cooper & Hedges, 2009, p. 6).
METHOD

Problem definition
- What to include?
- Exclude?
- 80 articles retained for study

Collect research evidence
- Evaluate for inclusion

Coding procedures

Analyze

Present synthesis methods and results
# Discovery System Research Articles in Lista, by Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Total DS articles in year</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>10</td>
</tr>
<tr>
<td>2010</td>
<td>5</td>
</tr>
<tr>
<td>2011</td>
<td>11</td>
</tr>
<tr>
<td>2012</td>
<td>38</td>
</tr>
<tr>
<td>2013</td>
<td>16</td>
</tr>
<tr>
<td>total</td>
<td>80</td>
</tr>
</tbody>
</table>
# Community of Users, by Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Academic</th>
<th>Public</th>
<th>Children</th>
<th>Other/Mixed</th>
<th>Total articles in year</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>2010</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>2011</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>2012</td>
<td>34</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>38</td>
</tr>
<tr>
<td>2013</td>
<td>14</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>total</td>
<td>70</td>
<td>1</td>
<td>0</td>
<td>9</td>
<td>80</td>
</tr>
</tbody>
</table>
The pie chart shows the distribution of journal types.

- **Reference/public services**: 19
- **Systems**: 7
- **Cataloging/tech services**: 6
- **Academic**: 4
- **General**: 23
- **Medical**: 16
- **Management**: 3
- **Other**: 2

The chart indicates that the majority of journals are in the 'General' category, followed by 'Reference/public services' and 'Medical'.
## Journal Type by Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Reference/Public services</th>
<th>Systems</th>
<th>Cataloging/Tech services</th>
<th>Academic</th>
<th>General</th>
<th>Medical</th>
<th>Management</th>
<th>Other</th>
<th>Total articles in year</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>0</td>
<td>7</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>2010</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>2011</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>2012</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>19</td>
<td>7</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>38</td>
</tr>
<tr>
<td>2013</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td>total</td>
<td>7</td>
<td>19</td>
<td>4</td>
<td>23</td>
<td>16</td>
<td>3</td>
<td>6</td>
<td>2</td>
<td>80</td>
</tr>
<tr>
<td>Year</td>
<td>VuFind</td>
<td>Aqua-browser</td>
<td>Biblio-commons</td>
<td>Summon</td>
<td>Encore</td>
<td>EDS (EBSCO)</td>
<td>OCLC Worldshare</td>
<td>Primo</td>
<td>Home-grown</td>
</tr>
<tr>
<td>------</td>
<td>--------</td>
<td>--------------</td>
<td>----------------</td>
<td>--------</td>
<td>--------</td>
<td>-------------</td>
<td>-----------------</td>
<td>-------</td>
<td>-------------</td>
</tr>
<tr>
<td>2009</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2010</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2011</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2012</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>11</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>2013</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>total</td>
<td>8</td>
<td>1</td>
<td>1</td>
<td>21</td>
<td>5</td>
<td>9</td>
<td>2</td>
<td>8</td>
<td>4</td>
</tr>
</tbody>
</table>
Methods Used in Papers by Year
(NB each paper may have more than one method)
TRENDS IN PUBLICATION:
METHOD TYPE AND TYPE OF LIBRARY
CONVERGENCE LITERATURE? AND WHAT IS MISSING?

Everyone loves talking about discovery systems!
But they’re not writing about them.
  • Public librarians???
  • Children’s interests???
ODI (NISO RP-19-2014): a recommended practice document from the National Information Standards Organization (NISO)

- “A technical recommendation for data exchange including data formats, method of delivery, usage reporting, frequency of updates and rights of use”
- A way for libraries to assess content providers’ participation in discovery services
- A model by which content providers work with discovery service vendors via fair and unbiased indexing and linking”

A BRIEF HISTORY OF THE ODI

2011: JISC Discovery Open Metadata Principles
Librarians partnering with vendors and content providers

2014: ODI published as a recommended practice document
- Not a “standard” like MARC or Dublin Core
- Work was done by librarians and vendors

2015: Marshall Breeding’s white paper for NISO
THE PROBLEM WITH DISCOVERY

What’s going on under the hood?

Differences in interface features are clear, search algorithm and search details are proprietary

Belief: relevancy ranking favors the vendor's own products and/or excludes competitors' content (Is EBSCO’s EDS prioritizing EBSCO database content?)
ODI’S PROPOSED SOLUTION

Guidelines and recommended best practices for both discovery system providers and for content providers:

• rank results objectively
• provide adequate metadata for the discovery system to search content effectively

Conformance checklists made available by ODI
• Discovery system: what’s being indexed?
• Content Providers: how about that metadata?
MOVING FORWARD

Conformance checklists completed and posted.

• **Content provider** statements: Credo, Gale, IEEE, SAGE (all worked together), EBSCO

• **Discovery service provider** statements: EBSCO, Ex Libris, ProQuest

More work is needed!

• Upcoming ODI event

• Open Discovery Mailing List [opendiscoveryinfo@list.niso.org](mailto:opendiscoveryinfo@list.niso.org)

• New Twitter account: @NISO_ODI
CONCLUSIONS

We have a solid foundation to move forward.

Librarians should:
• Work with vendors and content providers
• Be assertive.
• Work together.
• Identify problems and promote solutions

Convergence?
Be ready to watch your organizational structure change. We found that our traditional work silos are collapsing. Lines are blurring among Public Services, Technical Services, and Library Systems. We are considering a major reorganization along work group lines and flattening the organization.

--Ours (2012, p. 30)
REFERENCES


Hoepnner, A. (2012, April). The ins and outs of evaluating web-scale discovery services: Librarians around the world are trying to learn what WSD services are and how they work. *Computers in Libraries*, 32(3), 6-10.


