Critical Roles for Libraries in Today's Research Enterprise

December 11, 2019 in Washington, DC

Symposium Proceedings

Prepared by John Brosz, University of Calgary, January 28, 2020

Today many academic libraries are seeking ways to better align with current research practice and to engage as vital partners in campus research. This is particularly necessary in an age of multidisciplinary, 'grand challenges' inquiry, with digital scholarship creating opportunities to engage throughout the research lifecycle. How are libraries responding?

To address these issues more than 120 attendees from 86 institutions in the United States and Canada, as well as attendees from France, Germany, and Nigeria, met at this one-day symposium. The symposium was organized a part of a University of Calgary research project funded by The Andrew W. Mellon Foundation, *Academic Research and University Libraries: Creating a New Model for Collaboration*.

This report represents a summary of the symposium, including speaker slides and biographies, invited expert commentaries, and notes from the facilitated group discussions.

Critical Roles for Libraries in Today's Research Enterprise is part of a conversation taking place in many academic libraries today.

On behalf of the symposium organizers, I would like to thank all those who contributed to making this event so successful.

Thomas Hickerson
Principal Investigator, *Academic Research and University Libraries: Creating a New Model for Collaboration*
Former Vice-Provost and University Librarian, University of Calgary

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1 Speakers and Panels

1.1 Welcome

Thomas Hickerson welcomed attendees and introduced the event, urging the need for libraries to reposition themselves in campus research. He noted, "Early last year, at the Research Libraries UK conference, my presentation was titled Research Has Changed, Have Libraries? After my presentation, I was asked if I really thought libraries hadn't changed sufficiently to match research. I continue to think about this question, and conclude that in spite of significant steps some libraries are making, the answer is 'they haven't.'

"In so many ways – whether in organizations still modelled on a print paradigm, in the utilization of staff, and in the image libraries have on many of our campuses – I believe we are behind the pace of change. And yet, research continues to evolve. If we do not create a new prism through which to envision and realize a redefined role, our relevance in this vital area will diminish. This is the urgency, and this is why we are here today."

1.2 Keynote Address

Wolfram Horstmann (Georg-August-University of Göttingen) provided the keynote talk *Aiming at Two Moving Targets – The Changing Landscapes of Research and Libraries.* Slides available at LINK.

1.3 Session 1: New Directions and the Research Enterprise

Moderator: Mary Lee Kennedy (Association of Research Libraries)

Current Projects At Three Academic Libraries

Working from their experiences leading libraries in new initiatives that explore new roles for libraries in research, these speakers discuss the lessons they have learned and their thoughts on how best to engage libraries with campus research.

Charles Eckman (University of Miami) presented *Interdisciplinary Research – A Case for Library Engagement.* Slides available at LINK.

Xuemao Wang (University of Cincinnati) presented *Leading and Enabling Enterprise-wide Trans-*

disciplinary Digital Scholarship. Slides available at LINK.

Thomas Hickerson (University of Calgary) presented *Redefining Our Role in Academic Research.* Slides available at LINK.

Research Administrators: Reflections on Developments at These Three Institutions

The talks on current projects were followed by responses from senior research administrators from these same institutions. These research leaders offered their perspectives on how libraries can contribute in advancing the university's research agenda.

Susan Morgan (University of Miami) highlighted areas where research administration seeks collaboration with the library:

- A means of finding good collaborators when forming new research teams

- Meeting spaces; libraries provide great spaces that are welcoming, supportive, and neutral

- Multidisciplinary teams can have translational challenges; librarians are often skilled in identifying and cutting through these differences

- Deciding on an optimal venue of publication is challenging for cross-disciplinary teams

- Assistance in finding reviewers; it's challenging to identify great external reviewers for multidisciplinary efforts who can provide a balanced look from outside their discipline

Pat Limbach (University of Cincinnati) emphasized making an impact as opposed to focusing on providing a service. Some of his points of discussion included:

- Libraries and research offices should act in partnership, working together and contributing to enhance impact

- Consider moving staff between the library and research office

- Libraries can help in connecting researchers, focusing on the problem being addressed not the discipline of the people contributing

- Libraries cannot be all things, they need to prioritize where they can make an impact

Penny Pexman (University of Calgary) started by noting specific challenges to researchers and research administration that librarians may assist in confronting:

- It is challenging for scholars used to solitary work to shift to team and multidisciplinary research

- Scholars need to move beyond familiar, traditional approaches to research. There are limited incentives in encouraging scholars to pursue new research questions, methodologies, collaborations, or means of disseminating results

- There are many barriers to skills development for faculty adopting new research techniques

Pexman continued in describing examples of how libraries can help:

- Providing expertise, familiarizing faculty with new skills/methodologies

- Neutrality of library staff; not in competition with faculty

- Libraries can provide common ways to frame data as well as often have a different sense of outcomes that can amplify impact

- Space is hugely helpful

1.4 Session 2: Key Strategies for Transformational Change

Moderator: John Brosz (University of Calgary)

The second panel of speakers focused on specific key strategies for aligning libraries to better contribute to campus research.

Joy Kirchner (York University) presented *Full Scale Restructuring to Optimize Capacity to Enable Campus Research Intensification Priorities*. Slides available at LINK.

Greg Raschke (North Carolina State University) presented *The Collection as Platform: Synthesizing Content, Computation, and Experience*. Slides available at LINK.

Leonora Crema (University of British Columbia) presented *Building Partnerships with Research Administration*. Slides available at LINK.

2 Participatory Sessions

Following the formal presentations, Joan K. Lippincott of the Coalition for Networked Information (CNI) moderated a discussion in which attendees were asked for their ideas about potential strategies for change. Participants identified over twenty possible strategies and areas of focus and were then asked to vote on the one or two strategies they would most like to explore in small group discussions. Figure 1 provides the list of strategies as voted by the group.

2.1 Group Discussions Moderated by Joan K. Lippincott

Participants formed groups to discuss thirteen different topics, primarily based on those receiving four or more votes. For the highest interest strategies (Figure 1) more than one group was formed so all who were interested could discuss these high-interest topics. This occurred in two rounds of discussion, giving attendees the opportunity to move to a new discussion topic.

During group discussions, facilitators used flip charts to record the list of opportunities, challenges, and how following this strategy might enhance the library's role in research.

A summary of the flip chart notes follows. They have been edited for clarity, brevity, and to reduce undue duplication.

Reorganization to Support New Roles

We will need an all-encompassing effort to reshape and redeploy energies, aligning with university research priorities and collaborating in new ways within and beyond the library.

OPPORTUNITIES
- Pursue close partnerships in the research process
- Re-articulation of liaison/traditional roles
- Establish service levels for research taking a memorandums of understanding (MOU) approach
- Re-engage staff
  - vision about the future; shared understanding of why
  - reframe mindset and purpose
  - professional growth and development
  - introduce and develop new skills

Interest in Discussion for Strategies

Figure 1: *The tallied votes indicate the number of raised hands and should be treated as a 'straw poll' approximation.*

- support academic track recruitment; attract new and diverse professionals
- Communicate change, providing evidence to change the way the university community views the library
- Technology, digitization, spatial analysis, and special collections provide good opportunities for providing functional, cross-disciplinary research support
  - opportunities to create new alliances and collaboration
- Attract new funding streams
- Demonstrate strategic alignment with campus priorities
- Reallocate resources
- Improve our capacity for change management
- Establish an adaptive organization that can continue to evolve
  - e.g., creating communities of practice for adaptive change
- Redefine the library profession

CHALLENGES

- Aligning skills and mindset with what researchers need and value
- Traditional library organizational structure impedes change
  - we are thinking in old silos
- How does work get allocated?
  - already have issues meeting capacity
- Potential of losing subject-based expertise with function-centered models
- Balance between deep understanding and broad support
- Union/human resource (HR) constraints
- Purpose of changes must be clearly articulated

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within library and beyond, effectively conveying why this must be done

- lack of recognition of library's movement towards new roles
- obtain support from administration for library's move towards new roles
- Changes in institutional focus, incentives, and recognition
- Risk tolerance and reluctance to change; moving to an experimental mindset
- Creating seamless, shared, research support services
- Freeing up space for new initiatives

ENHANCING THE LIBRARY ROLE
- De-silo the library to fit campus needs
- Manage funds effectively; focusing on impact
- Reallocate resources to university priorities
- Develop library champions
- Become partners in the research lifecycle
  - contribute to the research experience
- Enhanced visibility of library expertise
- Improve research impact and the university's reputation
  - increase in research revenue (with library's involvement)

Communicating and Marketing New Roles

In order to make this shift, we have to disrupt traditional understanding of the library's role and communicate this both internally and externally.

OPPORTUNITIES
- Ability to create a new narrative about the library
  - redefine and rebrand our role in a manner that resonates with faculty
  - demonstrate and promote a new vision of research libraries
- Foster new opportunities with campus partners
- Have deep conversations with faculty about their needs
- Reach out to graduate students (easier to reach and will influence faculty)
- Leverage our success stories
  - showcase librarian-faculty partnerships on visual displays across the university
  - highlight alignment with university priorities
  - emphasize libraries' strengths as effective stewards of resources

- Create a strategic mapping from library resources/services to university needs
  - Make regular presentations at deans and department meetings, conveying library responses to the specific needs of particular programs
- Use a diversity of forms and venues of communication

CHALLENGES

- You cannot sell what you cannot describe
- Access to marketing and communication expertise
  - lack of experience in developing compelling narratives (the importance of storytelling skills)
  - although the details may be complex, we need an impactful message – 'a new elevator speech'
- Competition for attention in the academy
- Reaching researchers where they are (not being library centric)
- Researchers do not know how the library has changed
  - countering stereotypes and entrenched conceptions of libraries and librarians
- Overlap with other organizations on campus (e.g., IT)
- Build understanding among library staff of new common goals

ENHANCING THE LIBRARY ROLE

- Celebrate successes
- Strengthen buy-in by building a better understanding of new roles for libraries
- Learn from failure
- Successful marketing plan that involves agreement of critical stakeholders (IT, VP Research, researchers)
- Success measures for addressing library and campus priorities
- Stakeholders will be well prepared to promote new library roles
- Reduce redundancy of services within the institution
- Higher profile for library among administrators, donors, and funders

Single Customer Facing Service for Research Technology Support

As described in the keynote, the idea of libraries collaborating with campus partners to provide one-stop support was of interest to many participants.
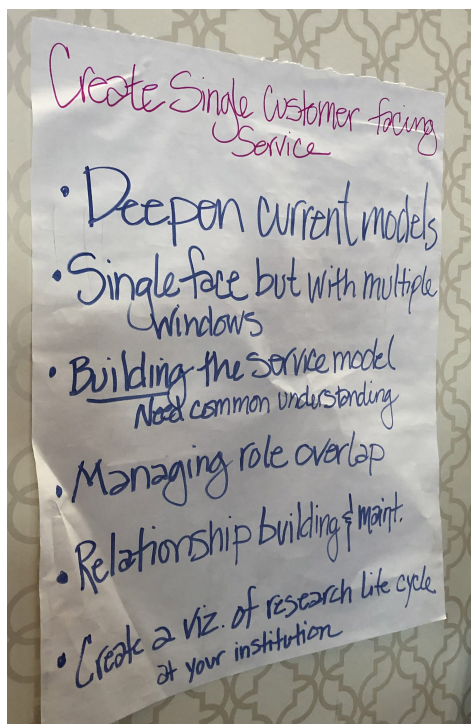
Figure 2: *Group notes on Single Customer Facing Service*

OPPORTUNITIES
- Create a broader approach to supporting research at your institution
  - simplifies service for research and library staff
  - improves user experience
- Start from a virtual service
- Create a visualization of the research lifecycle for your institution
- Provide equity of opportunity for faculty in smaller units
- Reduce duplication
- Funnel research support to one place so that support can be sustained
- Expose more people to library services
- Leverage existing relationships with partners and individuals on campus
- Be open to needs expressed by faculty

CHALLENGES
- Creating a common understanding (internal and external)
- Competition and struggle to get buy-in
- Managing overlap of roles

- Building and maintaining relationships

ENHANCING THE LIBRARY ROLE
- Ensures the library is a key contributor to the research process
- A new model can raise the visibility of library and the institution

Partnering with the Research Office

There are many opportunities for closer interaction with research administration. This will be vital to linking libraries with campus research priorities and outcomes.

OPPORTUNITIES
- Research compliance support is an ongoing effort on campuses
  - growing need for libraries in research data management and cyberinfrastructure support
  - help faculty relieve practical burdens and reduce pain points such as project space and skills training
- Act as expert finder
  - help find faculty/staff collaborators within and outside the institution
- Library can offer data and metrics that complement research office tools
  - rankings, standings, research intelligence and funding metrics
  - information to assist in recruiting
- Stimulate campus-wide successful partnerships
- Create mutual understanding with research office of respective roles and expertise
- Partnerships can alleviate capacity challenges in research offices
- Knowledge mobilization and transfer is of interest to the research office and the library
- Good potential to establish sustainable funding for new areas
- Actively participate in campus grant development workshops
- Neutrality in providing shared access and support to research resources
  - includes services, equipment, resources, space, expertise
  - even well-resourced disciplines need holistic support (e.g., authorship, copyright, open access publishing)

- E-portfolios can highlight undergraduate research and create a recruitment and retention pipeline for graduate students

CHALLENGES
- Providing offices of research with an understanding of library's potential and areas for collaboration
    - providing a sustained sense of what is possible
- Building this relationship is labor-intensive

ENHANCING THE LIBRARY ROLE
- Partnerships can provide a more cohesive experience for researchers
- Increased visibility and reputation building
- Focus on the "entire institution" as an approach to foster interdisciplinarity
- Closely link libraries with campus research

Collection As Platform

How can we shift from collections as relatively static, to a synthesis of the materials, data, analysis tools, and computational infrastructure necessary to support emerging research methodologies.

OPPORTUNITIES
- Build (not buy) the corpus
- Create new tools
- Utilize engagement analytics
- Create a platform for community engagement
- Potential to develop new scholarly outputs
    - e.g., new analyses of historic records or scientific data
    - e.g., annotations of meta-collections
- Develop the collection as a network of related objects
    - show connections within this network in new ways
- Partner with other institutions to negotiate common licensing terms (e.g., Canadian Research Knowledge Network's role in Canada)

CHALLENGES
- Should this be paid through the collections budget?
- Sustainability
- Impermanence of vendor supplied/customized views
- Ethical challenges to reuse of historic content
    - original deposit agreements may not have anticipated current and future uses/capabilities

- Licensing and intellectual property issues
- Staff skills need to be developed to support use of the collections in this way

ENHANCING THE LIBRARY ROLE
- Seen as partners, not just as "bill payers"
- Help researchers create machine-actionable collections
- Advance efforts to create reproducible data/code/computing environments
- Differentiate our focus on discovery from information use through the tools and layered services that libraries can provide
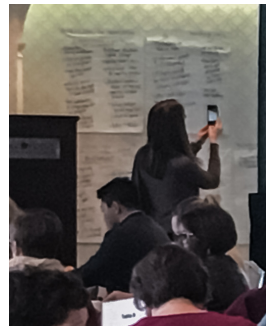
Figure 3: *Participant recording the group summary.*

Research Impact Analysis

Universities and funding agencies care about impact, and so should libraries. How can libraries add value?

OPPORTUNITIES
- Identity management (scholar IDs) already a library area of expertise
- Strong interest in new definitions of impact
    - libraries can support data models to understand and assess impact
    - qualitative, stories, altmetrics, natural language analysis, reputation, meta-science, analysis of open science practices, authorship, citations
- Work with university communications to share, express, and interpret metrics
- Priority is research funding
    - more strong proposals lead to more successful applications
    - metrics can enable more effective grant development activities leading to more successes

CHALLENGES
- Need to evaluate metrics. Which matter most? Who is providing them?

- Establishing a library role in grant pursuit

ENHANCING THE LIBRARY ROLE

- Metrics are an area where libraries have an established reputation and must build upon this to establish deeper contributions to research within the institution

Measurement for Prioritization

Libraries need to develop methods for selecting and prioritizing projects and partnerships. What takes precedence? How to measure success?

OPPORTUNITIES, CHALLENGES, ENHANCING THE LIBRARY ROLE

- Create opportunities for bounded investments limited by time and resources
- Assess prioritization by the following factors:
  - readiness
  - capacity
  - funding/incoming resources
  - university strategic goals
  - core values
  - degree of risk/uncertainty
  - mutuality of benefits
  - potential for short, medium, and long-term impacts
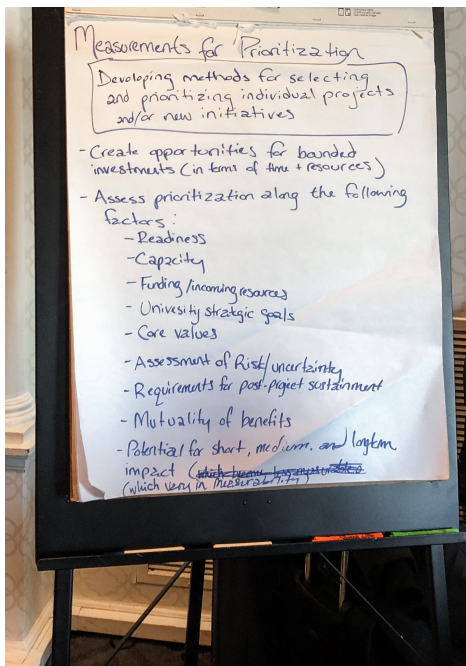
Figure 4: *Notes on measurements for prioritization.*

Funding Strategies

What approaches will libraries take to resource and sustain new initiatives?

OPPORTUNITIES

- Communicate impact on faculty and students
- Seek new sources of revenue
  - fundraising
- Consider/pursue multi-institutional services/collaboration
- Library as partners in the distribution of research funding
- Staff and faculty as consultants
- Seek university investment in new library collaborations

CHALLENGES

- Research support can be more challenging to pursue compared to student services

ENHANCING THE LIBRARY ROLE

- Effective funding strategies enhance campus recognition

Research Information Management

This is an evolving area with many new systems emerging, and in some cases intersecting with the scholarly communications tools familiar to libraries. Adoption of and interoperability among these will increasingly be an issue on campus.

OPPORTUNITIES

- Use unique identifiers to enable interoperability
- Expertise in library record management can be directly applied to other data in this area

CHALLENGES

- New methods are producing a multitude of data types
- Reuse and analysis of data requires structure and provenance
- Identifying primary stakeholders
- Emerging systems challenge sustainability

ENHANCING THE LIBRARY ROLE

- An increasing focus on impact by libraries better aligns the library with the institution's research management strategies.
- Established expertise in library record management can establish role in research information management.

Building Staff Core Competencies

How do we move from traditional library skillsets to developing the expertise necessary to contribute as full partners in research?

OPPORTUNITIES
- Staff are excited to take on new roles/growth opportunities
- Involve graduate students
- Share in cross-departmental "internships" with research teams to foster on-the-job learning
- Programs like The Carpentries provide learning paths

CHALLENGES
- Demand for technology skills is highly competitive; hard to hire people
- Library Information Science (LIS) curriculum must adapt quickly
- Always more demand than staff
- Employment regulations can make movement to new roles difficult

ENHANCING THE LIBRARY ROLE
- Provide bridges to other campus units; a front door to campus services
- Bringing new competencies to campus researchers
- Provide opportunities for meets-ups sharing knowledge and experiences in new/emerging research areas

Staff Resource Allocation and Workload

Creating space and time within job descriptions for collaboration at different levels.

OPPORTUNITIES
- Articulate priorities and modify job descriptions
- Define new core work vs traditional library work
- Pilot projects

CHALLENGES
- Creating research and development time for librarians and staff
- Sustainability
- Modeling collaboration across staff categories

ENHANCING THE LIBRARY ROLE
- Increases capacity to engage in research and develop deep research partnerships with scholars

Trans-Institutional Collaboration

This is an area where libraries have experience that can be applied in their home institutions.

OPPORTUNITIES
- Collaboration is desired to forge partnerships among research libraries for comprehensive service delivery: 'consortial galaxies'
- Libraries can build on long history of collaboration

CHALLENGES
- Not all partnerships are constructed equally
- Resources
    - managing internal and external commitments
    - will support a researcher across institutions

ENHANCING THE LIBRARY ROLE
- Reduce project-specific overhead through shared resources and services
- Creating synergies of institutional strengths to extend research support

Space

This is among our most valued assets. Libraries are seen as neutral spaces and crossroads, well suited to an age of growing interdisciplinarity in research.

OPPORTUNITIES
- Provide location to enact research partnerships
    - interdisciplinary, convivial, informal
    - libraries are already building these new spaces

CHALLENGES
- Campus competition for space
- Costs of audio-visual equipment, technology, and events
- Sustaining "the new" especially in terms of technology
- Reshaping conversations with administration around campus needs

ENHANCING THE LIBRARY ROLE
- Signals that the library prioritizes research and seeks to meet scholar's needs
- Onsite interaction maintains partnerships and staff awareness of changing research practice

Figure 5: *Pexman (left) and Morgan (right) providing reflections from the research administrator point-of-view on the discussions.*

3 Closing Panels

3.1 Research Administrators Reflections on the Day

Following the group breakouts, Morgan and Pexman took the stage (Figure 5) and offered their perspectives. For most universities, the key drivers are research funding and impact. Anything advancing these goals offers good prospects for partnership. They identified areas where prospects for collaboration with libraries are particularly strong.

Research intelligence:

- Where are the opportunities for the university to partner in grants?
- Where does the university have critical mass of expertise?
    - e.g., if a call for research in 'healthy cities' comes out, which faculty members should be involved and what other institutions might be logical partners?
- Libraries have access to valuable tools and networks

Faculty roles in research:

- Connect faculty with complementary interests and abilities in developing compelling funding proposals

Spaces for researcher support:

- Centrally located, well equipped, for project work or multidisciplinary exchange
- Programs could highlight collaboration opportunities

Assessing outcomes especially of community engaged research:

- How to know our research has had an effect
- Ways of knowing impact besides traditional measures
- Appetite on many campuses to revise merit, tenure, and hiring criteria
- How to evaluate interdisciplinary contributions arising from team science

Metrics:

- How to make more informative assessments
- Link activities to university strategic plans

Meta science:

- Publication trends, open science tools, social justice issues

Compliance, including with new open science mandates.

3.2 Summary Comments from Clifford Lynch

At the end of the day, Clifford Lynch of CNI reflected on the proceedings, offering observations and advice on what libraries should consider as they engage more fully with research. A summary of his key points follows:

Today's research landscape is complex and being a researcher harder than it ever has been:

- Overproduction of research papers
- More compliance and community practice concerns
- Libraries must help researchers with their pain points providing seamless service.
- For example, as researchers change institutions, we can support their on-boarding and off-boarding

Research data management:

- Not just "parking" their data
- Also how it's aggregated, cross-referenced, made portable

The research office and campus IT are critical partners:

- Just because you have talked to the CIO it does not mean that the library is well connected with research computing

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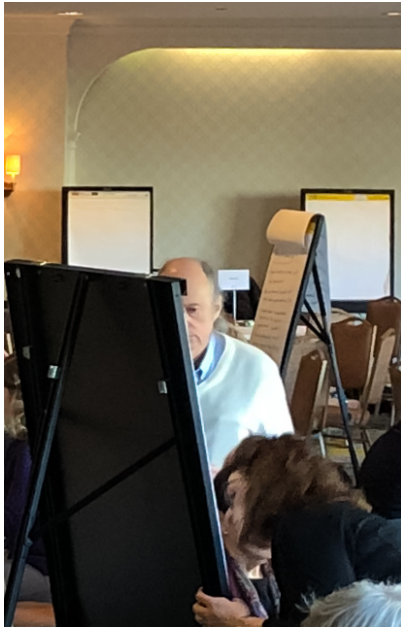
Figure 6: *Clifford Lynch examining group notes.*

- A large amount of research technology is grant funded and short-lived
- Find the key people and be in communication
- Give visibility to disciplinary expertise

The challenges of cross-institutional efforts tend to be underestimated but can offer sustainable solutions.

Cyberinfrastructure enabling the sharing of data across institutions and platforms:

- We must work at national as well as local levels

Think about where research is going not just where we are right now:

- Active platforms for scholarship must be built and sustained
- Libraries can help these platforms flourish but we need new models and funding mechanisms
- For libraries, these new research roles will be "and" rather than "instead of" their stewardship of cultural heritage and the scholarly record

4 Contributions

4.1 Symposium Organizers

Thomas Hickerson (University of Calgary), Charles Eckman (University of Miami), Xuemao Wang (University of Cincinnati), Leonora Crema (University of British Columbia), Joan Lippincott (Coalition for Networked Information), Jacqueline Eudell (Coalition for Networked Information), and John Brosz (University of Calgary).

4.2 Group Facilitators

Theresa Byrd (University of San Diego), Leonora Crema (University of British Columbia), Charles Eckman (University of Miami), Harriette Hemmasi (Georgetown University), Holly Jeffcoat (Southern Methodist University), Joy Kirchner (York University), Vivian Lewis (McMaster University), Rebecca Lubas (Central Washington University), Kelly Miller (University of Miami), Karen Munro (Simon Fraser University), Catherine Murray-Rust (Georgia Institute of Technology), Greg Raschke (North Carolina State University), Kathlin Ray (University of Nevada, Reno), Megan Senseney (University of Arizona), and Jill Sexton (North Carolina State University).

4.3 Special Thanks

The organizers extend special thanks to the speakers, facilitators, and all those who participated in these discussions. We also wish to extend our thanks to The Andrew W. Mellon Foundation and to Senior Program Officer Donald J. Waters.

4.4 Speaker Biographies

Wolfram Horstmann

Wolfram Horstmann is the director of the Göttingen State and University Library at Georg-August-University of Göttingen since 2014. Prior to his current position he was Associate Director at the Bodleian Libraries of the University of Oxford, UK. He is currently leading several strategic projects in the areas of scholarly communication, open access, research data and digital transformation for the University of Göttingen and for the library in Göttingen. He worked as executive member and Chair of the

Steering Group on Scholarly Communication and Research Infrastructure for the European research library association LIBER and the Consortium of European Research Libraries CERL. He is active in the Research Data Alliance (RDA), e.g. as co-founder of the working groups, e.g. "Libraries for Research Data" and "Long Tail of Research Data". He acted as advisor to several bodies and initiatives, e.g. the European Commission, the German Research Foundation DFG, or the Nature journal "Scientific Data". Prior, he was Chief Information Officer for Scholarly Information at Bielefeld University, where he was responsible for the strategic development of the institutional services for content, data and tools in research and education between 2007 and 2011. He is a biologist by training, having worked in the field of computational neuroscience, did a PhD in the context of Philosophy of Science before he actively turned his attention towards scholarly communication and libraries.

John Brosz

John Brosz is Project Coordinator at the University of Calgary's Libraries and Cultural Resources working on the Academic Research and University Libraries: Creating a New Model for Collaboration project funded by The Andrew W. Mellon Foundation. John also specializes in providing data visualization and research data management support, consultation, and training to scholars. He manages the Library's Visualization Studio, a space for researchers to explore visualizations and data with the large, 35 million pixel high-resolution display. Through his past position as a post-doctoral researcher and his PhD in computer science, he has been actively involved in research related to information visualization and computer graphics.

Leonora Crema

Leonora Crema is Scholarly Communications Librarian at the University of British Columbia. From 2006-2015, Crema served terms as UBC's Associate University Librarian for Client Services & Programs, AUL for

Planning and Community Relations, and Director of External Relations for the Irving K. Barber Learning Centre. Prior to this she held management roles spanning public services, project management, and IT. Active in professional associations, including serving as President of the British Columbia Library Association, Crema speaks regularly on topics such as leadership, technology innovation and library space design. She has led the programmatic design or renovation of three library buildings on the UBC campus. Her recent focus has been projects incentivizing OERs and open publishing.

Crema has received a variety of career recognitions including a national award for innovation from the Canadian Association of University Business Officers, and the Council of Prairie and Pacific University Libraries' award for outstanding contributions to the consortium. She holds Master of Arts and Master of Library Science degrees from the University of British Columbia.

Charles Eckman

Charles Eckman is Dean and University Librarian at the University of Miami. He previously served as University Librarian and Dean of Library Services at Simon Fraser University (2010-2013), Associate University Librarian and Director of Collections at the University of California, Berkeley (2006-2010), and Principal Government Documents Librarian and Head of the Social Sciences Resource Group at Stanford University (1997-2006).

Dean Eckman currently serves on the board of directors for the International Association of University Libraries. He has served on the boards

of directors for the Association of Southeastern Research Libraries, Canadian Association of Research Libraries, and Canadian Research Knowledge Network. He served on the Depository Library Council to the Public Printer (2003-2006).

Dean Eckman's research interests include information policy, open access, digital scholarship, history of scholarly communication and cultural organization administration. He has managed and consulted on a variety of digital library initiatives including several Federal grant-funded projects. He is currently serving as co-principal investigator with his colleague Dr. Jill Deupi at the Lowe Art Museum on a four-year project funded by The Andrew W. Mellon Foundation focused on promoting campus-based academic library and museum collaboration, faculty engagement and the conservation of special collections, archives and works of art on paper. Charles Eckman holds a master's degree in library and information studies from UC Berkeley, a PhD and master's degrees in politics from Princeton University, and a bachelor's degree in political science from Indiana University.

in recognition of his contributions to the "use of information technologies for the benefit of society."

He is a Fellow and former President of the Society of American Archivists and served on the Executive Committee of the International Council on Archives. Since coming to Calgary, he has served as President of the Canadian Association of Research Libraries, as a Steering Committee member of the Scholarly Publishing and Academic Resources Coalition (SPARC), and as a member of the Board of Directors of the Association of Research Libraries. He is also founding-creator of the "Designing Libraries for the 21st Century" conference series.

He has recently served as lead investigator for Multidisciplinary Research Infrastructure: The Role of 21st Century Libraries and for Media Reformatting and Digital Preservation Planning Project: The EMI Music Canada Archive at the University of Calgary. Presently, he serves as a lead investigator for Academic Research and University Libraries: Creating a New Model for Collaboration and Renewing Access to Culturally Significant Audiovisual Recordings (all sponsored by The Andrew W. Mellon Foundation).

Thomas Hickerson

Thomas Hickerson formerly served as Vice Provost for Libraries and Cultural Resources and University Librarian at the University of Calgary, 2006-2018. Libraries and Cultural Resources is a principal division of the University, combining the university libraries, university art museums, and the University of Calgary Press. Hickerson exercised principal responsibility for the programmatic design of the Taylor Family Digital Library and a high-density storage facility, a $205 million capital project of the University of Calgary.

Tom came to Calgary after an extensive career as an archivist, technology innovator, and library administrator at Cornell University. In 2001, he was named a Computerworld Honors Program Laureate

Mary Lee Kennedy

Mary Lee Kennedy is the Association of Research Libraries' (ARL) executive director where she leads the development of and implements ARL's strategic direction. She builds on ARL's strengths as a leader and partner in the research and learning ecosystem, as a catalyzer of global opportunity and value through its suite of programs and initiatives, and as a culture that embraces innovation, diversity, and inclusion.

Prior to coming to ARL, Mary Lee was principal of the Kennedy Group, where she partnered with organizations to empower local and global communities to create and use knowledge that enhances lives. She has a wealth of experience in academic research libraries and knowledge corporations, most recently at New York Public Library (NYPL), where she held

the position of chief library officer (2013–2016). Before going to NYPL, she served at Harvard University as senior associate provost for the Harvard Library (2011–2013) and executive director of Knowledge and Library Services, Harvard Business School (2004–2011). Prior to her roles at Harvard, she was director of the Knowledge Network Group at Microsoft (1998–2004).

Mary Lee earned her BA in social psychology and classics at University of Alberta and her master of library science at Louisiana State University. She has lived in Canada, the US, and Mexico; is bilingual in English and Spanish; and has a working knowledge of French.

Joy Kirchner

Joy Kirchner is the Dean of Libraries at York University. A new full scale organizational restructure has been implemented to reinforce the Libraries' expertise in digital scholarship, data and repository infrastructure, scholarly communications and research in alignment with the University's academic plan and its research intensification priority. Joy is the chair of York's campus-wide Steering Committee on Open Access and Open Data; she is Executive Chair of the Ontario Council of Research Libraries; she serves on the SPARC Steering Committee and SPARC's OER Advisory Group, and she is past chair of the Canadian Association of Research Libraries Advancing Research Committee. As the first chair and one of the initiators and developers of the ACRL Scholarly Communication roadshows, she has provided consultation to other North American institutions on advancing open access policies and scholarly communications programs and has been thrilled to see the success of the roadshow continue and serve as a model for others to adopt. Prior positions include her roles as Associate University Librarian for Content & Collections at the University of Minnesota where she launched a new Open Scholarship and Publishing Office and Scholarly Communications Coordinator at the University of British Columbia where she headed UBC's Scholarly

Communication & Copyright office and launched a new service model for copyright services. Previously she was a Collections Coordinator, E-resources Librarian and Science & Engineering Librarian. Her current research and scholarship is focused on organizational modelling to advance, resource and provision emergent areas in libraries.

Pat Limbach

Pat Limbach is the Vice President for Research, an Ohio Eminent Scholar and Professor of Chemistry at the University of Cincinnati. He is a bioanalytical chemist with research interests in mass spectrometry, modified ribonucleic acids (RNAs), ribonucleoprotein (RNP) complexes and protein translation. After earning an undergraduate degree from Centre College in 1988, he studied under the direction of Dr. Alan G. Marshall at The Ohio State University. While there, his graduate research focused on instrumentation improvements to Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. He received his PhD from OSU in 1992. He then took a postdoctoral position at the University of Utah working with Dr. James A. McCloskey. While in Utah, he worked in the areas of RNA chemistry and nucleic acid mass spectrometry. In 1995, he joined the faculty at Louisiana State University as an Assistant Professor and was promoted to Associate Professor in 1999. In 2001, he moved to his current position in Cincinnati, being promoted to Professor in 2005. He has served as Department Head in Chemistry at UC from 2005-2010 and as Interim Associate Dean for Research and Graduate Studies in the McMicken College of Arts and Sciences in 2013. He has served as the VP of Research since 2016. Dr. Limbach and his group seek to advance the area of mass spectrometry within modified RNAs and RNPs and collaborate extensively with researchers inside the state of Ohio and throughout the world. Dr. Limbach is an active member of the American Chemical Society, American Society for Mass Spectrometry, Sigma Xi and a lifetime member of Phi Kappa Phi. He also serves on the Scientific

Advisory Board for RiboNova, Inc. and is a fellow of the American Association for the Advancement of Science (AAAS).

Joan K. Lippincott

Joan K. Lippincott is the Associate Executive Director of the Coalition for Networked Information (CNI), a joint program of the Association of Research Libraries (ARL) and EDUCAUSE, based in Washington, DC.

At CNI, Joan has provided leadership for programs in teaching and learning, learning spaces, digital scholarship, and assessment. She has served on the advisory boards of the Learning Spaces Collaboratory and the Learning Space Toolkit project. In addition to consulting with many academic libraries for their space renovation projects, she has been on the planning committee for the Designing Libraries for the 21st Century conference since its inception.

Previously, Joan was a librarian at Cornell, Georgetown, and George Washington universities, and SUNY Brockport. Joan received her Ph.D. in higher education policy, planning, and administration from the University of Maryland, an M.L.S. from SUNY Geneseo, and a B.A. from Vassar College.

Clifford Lynch

Clifford Lynch is the Executive Director of the Coalition for Networked Information (CNI), a joint program of the Association of Research Libraries and EDUCAUSE, based in Washington, DC.

Prior to joining CNI, Lynch spent 18 years at the University of California Office of the President, the last 10 as Director of Library Automation. Lynch, who holds a Ph.D. in Computer Science from the University of California, Berkeley, is an adjunct professor at Berkeley's School of Information. He is both a past president and recipient of the Award of Merit of the American Society for Information Science, and a fellow of the American Association for the Advancement of Science and the National Information Standards Organization.

He served as co-chair of the National Academies Board on Research Data and Information (BRDI) from 2011-16, and he is active on numerous advisory boards and visiting committees. His work has been recognized by the American Library Association's Lippincott Award, the EDUCAUSE Leadership Award in Public Policy and Practice, and the American Society for Engineering Education's Homer Bernhardt Award. In 2017, Lynch was selected as an Association for Computing Machinery (ACM) Fellow.

Susan E. Morgan
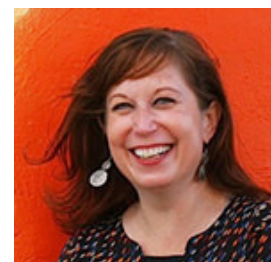
Susan E. Morgan is currently the Associate Provost for Research Development at the University of Miami in Coral Gables, FL, where she also holds an appointment as Professor in the Communication Studies department. Until 2017, Morgan served as the Associate Dean for Research as well as the Director for the Center for Communication, Culture, and Change at the University of Miami.

Dr. Morgan's research interests involve the design and evaluation of persuasive messages targeting health behavior change in multicultural populations. Her research has been supported by over $9 million in grant funding from the National Institute on Drug Abuse, the National Institute for Occupational Safety and Health, and the Department of Health and Human Services.

Much of her recent research involves conducting and evaluating multimedia campaigns to promote organ donation in worksite and community settings.

Additionally, Dr. Morgan has conducted large-scale studies of how the mass media frames organ donation and the effects of that framing on public attitudes and behaviors.

Dr. Morgan's current research continues to utilize qualitative and quantitative research methodologies to investigate message design features that increase the effectiveness of health-promotive campaigns. Her current area of interest is the development of interventions designed to improve accrual rates of patients to clinical trials.

Dr. Morgan serves on the Editorial Board of five journals and is an active reviewer for 15 journals. She has published over 80 peer-reviewed articles and book chapters in the area of health communication. Her research has appeared in medical and leading social science journals including Clinical Transplantation, Communication Monographs, Journal of Communication, Communication Theory, Journal of Applied Communication Research, Journal of Applied Social Psychology, Health Psychology, and the Journal of the National Medical Association. She is also the author of a book, *From Numbers to Words: Reporting Statistical Results for the Social Sciences.*

Penny Pexman

Penny Pexman is currently Associate Vice-President (Research) at the University of Calgary. Penny earned her PhD in Psychology at the University of Western Ontario in 1998 and joined the University of Calgary the same year. Her research expertise is in cognitive development, psycholinguistics, and cognitive neuroscience. For the past two decades her research has been funded by both SSHRC and NSERC, including NSERC's prestigious Discovery Accelerator Supplement in 2008. She has served on multiple national grant adjudication panels, including NSERC Discovery, Research Tools and Instruments, and Banting Postdoctoral Fellowship committees. She was appointed the University of Calgary's SSHRC Leader in 2017 and in that role serves as a point of contact between SSHRC and the University of Calgary. An award-winning mentor and researcher, Penny is an elected Fellow of both the Canadian Psychological Association and the Association for Psychological Science.

Greg Raschke

Greg Raschke is the Senior Vice Provost and Director of Libraries at North Carolina State where he leads a system comprised of two main libraries, three branches, and over two-hundred FTE staff. He leads partnerships and strategic efforts in pursuit of its vision – to make the Libraries NC State's competitive advantage. He served for over a decade as the Associate Director for Collections and Scholarly Communication with the Libraries where he led programs to build, manage, and preserve the Libraries' extensive general and special collections. Greg served on the leadership team that envisioned, planned, and implemented the award winning James B. Hunt Jr. Library. He has significant experience managing fundraising, annual giving, and naming opportunity campaigns.

Xuemao Wang

Xuemao Wang is the Vice Provost for Digital Scholarship, Dean and University Librarian of the

University of Cincinnati. In these roles he oversees and facilitates the formation and execution of visions, strategies and plan implementation for university-wide Digital Scholarship and the University Libraries. In addition, he serves as a Special Advisor to the Provost on China Strategies. Prior to working at UC, he served as the Associate Vice Provost of University Libraries at Emory University. He has also held positions at Johns Hopkins University's Sheridan Libraries, the Metropolitan New York Library Council, Queens Borough Public library and worked as an academic librarian in China in his early career.

Xuemao has over 30+ years of diverse library and information technologies, services, management and leadership experience, with a career that spans the public, academic, large library consortium and international library worlds. He has held global leadership positions in the International Federation of Library Associations and Institutions (IFLA), American Library Association (ALA), Center for Research Libraries (CRL), Association of Research Libraries (ARL), Scholarly Publishing and Academic Resources Coalition (SPARC), and OhioLINK. He has been frequently invited to international conferences to give speeches on topics of digital scholarship, digital humanities, library strategic planning and implementation of transformational changes. He has strong connections and networks with global library community leaders, particularly with China's academic and library leaders. In his additional role as Special Advisor to the Provost on China Strategies, he has worked with multiple UC colleges to establish large scale, successful joint education programs with Chinese universities.

Xuemao received a Master of Business Administration (M.B.A.) from the Frank G. Zarb School of Business, Hofstra University, Hempstead, NY; a Master of Library and Information Science (MLIS) from the University of South Carolina, Columbia, SC; and a Master of Library Science (MLS) from Kutztown University of Pennsylvania, Kutztown, PA. He received his Bachelor of Arts (BA) from Wuhan University, China.

4.5 Registrant Institutions

Adeyemi Federal College of Education (Nigeria)
Association of Research Libraries
Auburn University
Born-Digital

Brigham Young University
California Institute of Technology
California State University, Dominguez Hills
California State University, Fullerton
Canadian Association of Research Libraries
Central Washington University
Coalition for Networked Information
Duke University Libraries
Emory University
ExLibris
Florida State University
Georg-August-University of Göttingen (Germany)
George Mason University
Georgetown University
Georgia Institute of Technology
Institute of Museum and Library Services
ITHAKA
Indiana University-Purdue University Indianapolis
Johns Hopkins University
Kent State University
Lehigh University
Library of Congress
Louisiana State University
Loyola University Chicago
Lyrasis
McMaster University
Michigan State University
Massachusetts Institute of Technology
Montana State University
North Carolina State University
New York University
North Dakota State University
OCLC
Old Dominion University
Princeton Theological Seminary
Rita Vine Facilitation & Training
Rutgers University
San Jose State University
Simon Fraser University
Smithsonian Institution
Southern Methodist University
Syracuse University
Temple University
Texas A&M University-Corpus Christi

Texas Christian University
Texas State University
Texas Tech University
The Claremont Colleges
Université de Bordeaux (France)
University at Albany
University of Alberta
University of Arizona
University of British Columbia
University of Calgary
University of California, Irvine
University of California, San Diego
University of California, Santa Cruz
University of Cincinnati
University of Colorado Boulder
University of Florida
University of Guelph
University of Kentucky
University of Manitoba
University of Maryland
University of Miami
University of Michigan
University of Missouri
University of Nevada, Reno
University of New Hampshire
University of North Texas
University of Notre Dame
University of Oregon
University of Ottawa
University of Rochester
University of San Diego
University of Tennessee
University of Texas at Austin
University of Toronto
University of Virginia
University of Wyoming
Virginia Commonwealth University
York University