Opportunities for systematic change in the academic research library: elements of the post-digital library

This paper, based on a talk delivered at the University of Leeds on 19 April 2011, seeks to outline a series of important trends that are influencing the roles and responsibilities of the academic research library, and a program of radical collaboration that would enable deeper integration of resources and a more systemic approach to the critical collection and service challenges. The academic research library must sustain its core responsibilities, albeit in an increasingly digitized, networked and mobile condition, enrich fundamental relationships with its user communities, and assume powerful new roles in support of learning and scholarship. New measures of quality, impact, productivity, innovation and leadership must be advanced. The paper suggests that the evolution of the academic library will focus more on an evolving period of polygamy, parabiosis and particularism, as we think beyond the transition to electronic and more about a post-digital context.

The academic research library sustains its core responsibilities. In support of teaching and learning, and of research and scholarship, the library selects, acquires, synthesizes, disseminates and archives information. The library enables its users to navigate, interpret, understand, use and apply this information. This complex of activities, although massively influenced and altered by digital and network technologies, remains steadfast. An electronic/digital library still requires collection development, organization, access and preservation, and a suite of robust user services.

But the academic research library is also taking on important new roles. The library has grown in maturity as a consumer of information, negotiating more aggressively and successfully on matters of price, terms and standards in licensing content from publishers and vendors. The role of the library as the classic 'reader advisor' has been resurrected, as the need for intermediation and aggregation for our users has become so critical in the face of information fulmination. An excellent example is the plethora of web content, and the role that libraries are playing in capturing, curating and archiving websites and web documents. Libraries are moving beyond the traditional information literacy work to take on larger and more fundamental roles in teaching and learning. As libraries build digital collections and institutional repositories, and assume expanded responsibility for working with journal editors and book authors, the publishing function of the library has been rapidly enhanced. Examples would be our digital library programs and formal publishing units like the Center for Digital Research and Scholarship in the Columbia Libraries. There is wider recognition that too often librarianship is viewed as an 'information-poor information profession', not building a capacity for the creation and sharing of new findings about our work. Thus, there is a new focus on research and development, a capacity to investigate and solve real problems in the library context. Libraries are also learning how to leverage their assets of space, expertise and content, to become more entrepreneurial and to build capacity for change and hybrid approaches to the organization and staffing of the work. And finally, libraries are embracing their roles as policy advocates representing the public interest in the national and global international policy debates.

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This combination of traditional activities and new roles contributes to a shifting vision of the academic research library. The library is legacy, responsible for managing centuries of analog content. The library is infrastructure, physical facilities, technologies and expertise that require continuous review, renovation and refreshment. The library is repository, the agency that will be responsible for the long-term preservation of print and digital content in all media, and the tools to assure the continuing usability. The library is portal, the gateway for users to information that is relevant and reputable. The library is enterprise, building the capacity of revenue attraction through fundraising and new business development. And the library is public interest, advancing the principles of openness and barrier-free access to information, and the confidentiality of its use.

Following are 12 examples of trends that are redefining in fundamental ways the programs and services of the academic research library.

Customization of the library experience and the growth of the personal web

Library users are confronting us with rapidly shifting behaviors and expectations. The social networking and collective intelligence trends among both students and faculty have pushed the library to understand the complexity of the user communities served. Who are our users? There is the obvious and critical importance of serving students and teachers, but also the researchers and their tribal differences, the university administration and its 'bottom line' requirements, the local public including working professionals, alumni and donors (who are often ignored) and the world on the web – that new majority that increasingly turns to the academic research library for support.

Where do we intersect with these users? We continue to work with our users in our physical spaces, but increasingly more in our web spaces. We can understand our users more effectively as they interact with electronic collections, online services, applications and technologies. We have an expanded presence in the classroom, in the laboratory and at the bedside. We are truly creating more of an 'anyone, anywhere, any time, anyhow' library service model.

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What are the key user expectations that are driving library program development? Library users want more and better content and access, they want convenience and personal productivity, and they want new capabilities and the ability to participate in and control their information environments. As a result, the academic library must embrace the 'human objectives' of our users: success, happiness, progress, relationships, experiences and impact. How do we serve these needs?

Redundant and inefficient library operations

As libraries over the decades have embraced new systems and technologies, the tendency has been to automate old workflows and to retain control for 'backroom' operations in individual libraries. We must raise the question why we maintain duplicative programs and staff for such areas as acquisitions, cataloging, e-resource management and preservation. This often leads to shallow expertise and limited staffing commitments on the local level. Can we embrace new combinations of library operations to support these aspects of our work, and break down resistance to outsourcing?

Aging and ineffective service paradigms

Our users expect to interact with our libraries in very different ways. They do not intend to walk up to a desk in the physical library, pose a question and get a response. Faced with numerous discovery failures in their use of library catalogs and websites, and with the availability of many competitive alternatives for quick and easy access to information, users will 'shop around' for convenience and perceived quality of service. Academic libraries are building more diverse and responsive service models, abandoning the 'sage at the desk' philosophy, in favor of online interactions, scheduled consultations, and in some cases point-of-need tutorials and artificial intelligence-based services.

Polycentrism

The academic library community is characterized by disconnected and uneven development. It is supported by weak professional communication systems and forums. That is why we tend to duplicate effort without sharing information about our experiences, about our successes and failures. Although the library literature is often described as 'glad tidings and testimonials', there would be enormous value in creating structures and systems for regular distribution of R&D results.

Mutability

These days, the academic library is characterized by constant change, hybrid structures and maverick strategies in the face of sustaining responsibilities and taking on new roles on campus and in the academy. But our ability to plan and transform is routinely undermined by the characteristics of our cultures and practices. There is too much planning, and too little strategic thinking and action. The existing structures and processes are built for a slower pace of change. Academic library program planning is often not linked to institutional priorities. Our resource allocations are typically not aligned with our strategies. The planning cycles tend to be expenditure-based rather than strategic. And there can be staff resistance to rapid and challenging change.

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The organizational structures we maintain need to advance away from conventional administrative hierarchy wedded to academic governance and bureaucracy. Can we create structures that combine centralized planning and resource allocation systems with loosely coupled academic structures with innovative units and entrepreneurial enterprises? Will new structures like the 2CUL project between Cornell and Columbia become more commonplace?

New economic context

The academic library is discovering ways to respond to reduced or at best steady budgets, declining purchasing power, less political support and expanded competition for resources. Libraries should not fall into the traps of 'doing less with less' or even 'doing more with less', but find repositioning, structural and new resource tactics that leverage resources in new ways. New resource funding strategies must embrace: substantive operating budget reallocation, external fundraising from government and foundation and individual sources, co-investment with other units of the university and with other academic libraries, public-private partnerships, and new business development.

Accountability and assessment

We are increasingly being asked how we know if our academic library collections and services are advancing institutional goals, if we are supporting our user objectives, and if we are serving community and even national interest. The demands for accountability are coming from the expectations of our institutions and from government and funder mandates. We must develop new measures of user satisfaction, market penetration, success, impact, cost effectiveness and system design for usability. There is a tendency to look for complex analyses like return-on-investment (ROI), but in the hands of novice researchers, ROI can lead to problematic and inaccurate outcomes. We need rigorous quantitative and qualitative tools that can document clearly our continuing value and relevance, and there are teams of researchers at libraries and in information schools developing and testing these strategies.

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Collective innovation

The academic library is finding ways to achieve positive scale and network effects through aggregation, moving operations and services to the cloud when it makes economic, technical and service sense, and participating in the explosion of applications that

support the 'cool' functionality requirements of our users. Linked to these developments is the pressure of geo-everything, seeing information as geo-located, tagged and smart, and the expectation that we will be able to deliver content and services, and library 'apps' to all types of mobile and tablet devices.

Focus on unique resources

As more and more information important to faculty and students is licensed across the academic library community in large e-journal, e-book and e-media packages, and as historical and public domain content is digitized and made openly available, there is recognition of a growing and shared scholarly and educational resource. This raises questions about the future of collection development in the academic library, the focus on the licensing of e-content, the co-ordination of library collections programs (which has never been substantively realized), the growing importance of collecting and preserving websites and web documents, and the renewed focus on the importance of special, distinctive and unique resources in library collections.

As we build the digital library of published and licensed content, digitized primary materials, open web resource and institutional records, we recognize the challenges of managing and preserving multimedia and dynamic information, increasingly integrated with services and dependent on software for effective access and use. The academic library faces a renewed focus on preservation, on its role as repository and curator and steward of digitally converted and born-digital content. Joint efforts like Portico and LOCKSS/CLOCKSS, and new initiatives like the Digital Preservation Network, HathiTrust, and the Academic Preservation Trust in the US are noteworthy.

New majority learner

More and more students at our universities have an episodic, distant, other-directed and career-focused relationship with their degree programs. The challenges of working with this expanding element of education has not diminished our continuing focus on our more traditional and resident students. But even on campuses, learning is moving out of the traditional classroom into online and collaborative systems. We need to understand what our students want and how that influences academic library services. They want: technology and network ubiquity; point-of-need and web-based services; technology sandboxes for experimentation and fun; privacy but also openness for relationships and social success; support services and expertise when desired; information fluency but probably not traditional bibliographic instruction; career assistance in finding internships and jobs and continuing post-graduate access to the electronic library.

New scholarship

The rhetoric of openness for networks, access, learning, research data, computer software and many other areas is touching scholarship in powerful ways. It is pushing the deformalism and destructuring of research communication. We are questioning the survival of the packaging of research works in scholarly journals, the survival of the extending research argument in the scholarly monograph, the need for new forms of quality control and peer review of scholarly work, and the long-term preservation and integrity of born-digital scholarly work. The repository movement has become chaotic, with scholars under the umbrella of open access moving quickly beyond the traditional publisher repository for sharing of their work, to also deposit papers in discipline, institutional, school, personal, government and national repositories. Does this pose an important opportunity for academic libraries to play a more fundamental role in the scholarly publishing arena?

Advancing from kumbaya to radical collaboration

Academic libraries have over decades developed important forums for co-operation, including shared cataloging, inter-library loan and document delivery, off-site shelving facilities, joint licensing of electronic content, and many similar activities. It is time, however,

to move beyond these traditional systems to build new approaches to co-ordinated centers of content and service excellence, mass production operations in libraries, new technology infrastructures, and new initiatives that can be integrated effectively across institutions. The goals must be: quality, productivity and innovation.

It will require risk capital, new multi-lateral combinations, sustainability and business plans, a legal and governance structure and a new spirit that collaboration is the new competition.

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From polygamy to parabiosis to particularism

We are advancing through a period of polygamy, with many partners and many relationships, to a period of parabiosis, with deep bi-lateral integration between peer institutions, to a period of particularism, with library quality defined by the singular expertise and capacity in content, technology and service that it brings to the larger learning and research communities.

Finally, with this future vision in mind, here are some examples of a more systemic approach to library collections, operations and services in an increasingly post-digital academic research library:

- national systems for last copy print repositories, like the work among western US research libraries on a print journal archive

- national and continental public digital libraries

- national content licensing programs with open access agendas

- co-ordinated approach to the capture, curation and archiving of websites and web documents

- creation of an e-research cyberinfrastructure to preserve and provide access to research data, with a focus on the needs of 'big science'

- forging of a global resources network to guarantee the acquisition, cataloging and availability of international works with a focus on developing countries and critical languages

- national network of regional library service agencies for outsourcing of acquisitions, cataloging, e-resource management, digitization and preservation

- creation of an information discovery and management apps enterprise to support the needs of the education and research sectors

- launch of a co-ordinated library research and development consortium for sharing of resources, expertise, methodologies, practices and results

- launch of a co-ordinated library marketing and quality assessment consortium for sharing resources, expertise, methodologies, practices and results

- new standards for library space that move beyond statistical and operational formulas, and focus more on adaptability, agility and diversity, and on the need for learning, social, intellectual and collaborative environments

- rigorous and co-ordinated assessment of information literacy as a core commitment of the academic library, and questioning of its impact and resource requirements

- recognition in our standards of the diversity of information professional expertise needed in the academic research library, the multiple backgrounds and credentials which are required, and the urgency for mandatory continuing education

- creation of more sophisticated approaches to political action and legislative and legal influence, with focus on intellectual freedom and privacy, funding for libraries, telecommunication policy, access to government information and publicly funded research, and copyright.

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