A Bimonthly Report from ARL, CNI, and SPARC

A Special Issue on Liaison Librarian Roles

Introduction: Positioning Liaison Librarians for the 21st Century . . 1–2
Karla Hahn, Assistant Executive Director, Research, Teaching, and Learning, ARL

A Framework for Articulating New Library Roles ................. 3–8
Karen Williams, Associate University Librarian for Academic Programs,
University of Minnesota Libraries

Amplifying the Educational Role of Librarians ................. 9–14
Elizabeth A. Dupuis, Associate University Librarian for Educational Initiatives
and Director of the Doe/Moffitt Libraries, University of California, Berkeley

The Last Mile: The Liaison Role in Curating Science
and Engineering Research Data ............................ 15–21
Tracy Gabridge, Co-Head, Engineering and Science Libraries, Massachusetts Institute of Technology (MIT)

Scholarly Communications: Planning for the Integration
of Liaison Librarian Roles .............................. 22–28
Joy Kirchner, Librarian for Collections, Licensing and Digital Scholarship,
University of British Columbia Library

New Roles of Liaison Librarians: A Liaison’s Perspective ........ 29–32
Kara M. Whatley, Life Sciences Librarian and Head of the Coles Science Center, New York University
Introduction: Positioning Liaison Librarians for the 21st Century

Karla Hahn, Assistant Executive Director, Research, Teaching, and Learning, ARL

Liaison positions exist at nearly every research library, and a recent ARL member survey documented a substantial broadening of liaison roles. Many believe that liaison librarian functions are becoming more central to fulfilling the library’s mission in a digital age. While research libraries may agree on the importance of the position, how to reconfigure liaison work has become a topic of broad concern. Identifying emerging roles and determining how to develop corresponding liaison capabilities are common challenges.

The articles in this special issue highlight several new roles that are being fostered in research libraries and offer different leadership perspectives on the change process. Two authors are associate university librarians with broad responsibilities for managing the development of new functions and responsibilities of their institutions’ public services staff (Williams and Dupuis). Two are programmatic experts leading the development and delivery of services that require liaison support for effective engagement with faculty clients—scholarly communication (Kirchner) and data management (Gabridge). Our fifth author is a liaison librarian with a personal commitment to reinvention (Whatley) describing the change process from the inside.

Amidst the diversity of stories and assessments gathered here, several recurrent themes stand out. New forms of relationship building, particularly with faculty, are central to effective liaison functions. New kinds of relationships are needed to respond to the changing work of faculty and researchers and to constantly evolving learning outcomes, research processes, and communication practices. In addition, research libraries are increasingly seeking to influence
larger dialogs about changing practices that are occurring on campuses and within disciplines. Liaison librarians need well-developed, high-trust relationships to create strategic opportunities to participate in and influence disciplinary and departmental decisions.

It is also evident that the range of activities addressed through liaison work is growing. As a consequence, liaison librarians increasingly need the ability to acquire new skills and leverage more specialized expertise among their library colleagues in service of their clients. Liaisons cannot be expert themselves in each new capability, but knowing when to call in a colleague, or how to describe appropriate expert capabilities to faculty, will be key to the new liaison role. Just as researchers are often working in teams to leverage compatible expertise, liaison librarians will need to be team builders among library experts where this advances client research.

New liaison roles are not emerging de novo, but rather in continuity with established roles. Consequently, the articles describe developmental processes from the perspective of particular roles and institutions. While there may be growing consensus on where to go, how to make the journey is a pressing question. Organizations will need to map out different routes to address their particular circumstances, but for fellow travelers the authors have some helpful observations and astute insights to offer.


A Framework for Articulating New Library Roles

Karen Williams, Associate University Librarian for Academic Programs, University of Minnesota Libraries

In the last decade, new technologies have fueled fundamental shifts in the behavior and expectations of students and faculty. Digital content abounds and new forms of information access are evolving, giving rise to changes in the ways scholars communicate and disseminate their research. Libraries, traditionally focused on the products of scholarship, are now prompted to understand and support the processes of scholarship. The University of Minnesota Libraries have been a player in this paradigm shift, and are deeply engaged in the teaching, learning, and research processes.

Over the past several years, themes of engagement, of “getting in the flow of users,” whether in virtual or physical contexts, have shaped the University of Minnesota Libraries’ planning and activity. During this time, a shift in our vision and mission statements reflects the changing paradigm. Our current mission affirms that the library is no longer the center of the information universe; rather, its strategic advantage comes from a broader portfolio of assets: our expertise and value-added services have become paramount. The University Libraries have two roles: as leader in areas such as information literacy, copyright, and authors’ rights and as provider of extraordinary information experiences — that is, engaging fundamentally in the lives of students, scholars, and citizens to improve individual productivity and the achievement of their goals.

Thinking at the system level is always important, but it becomes critical during times of significant change. Moving from a collection-centered model to an engagement-centered one does not happen overnight. Systems thinking affects how we revise goals and priorities and how we reevaluate the infrastructure in place. We cannot look at parts of the organization in isolation but must examine how the pieces support and reinforce each other. Systems thinking helps us to keep department goals and
position descriptions in alignment with institutional goals and hire the right staff. And, in turn we must develop staff education efforts to support new roles and implement appropriate performance evaluation systems. At the University of Minnesota we have been working for several years now to transform the roles of University Libraries’ and reconceive essential infrastructure to support those roles.

A New Position Description Framework

The liaison model is still very powerful, with librarians possessing both subject expertise and strong knowledge of the interests, activities, and priorities of local faculty and academic departments. The ability to build strong relationships is critical for most of the identified new roles and is something that good liaisons have always done well. For the last three years, we have been engaged in reinventing the liaison model. Key to our process has been the Position Description Framework, a document that serves as the foundation for all librarian position descriptions. This framework redefines traditional roles (the “holy trinity” of reference, instruction, and collection development mentioned elsewhere in this issue by Kara Whatley) and integrates the new roles that librarians increasingly find themselves occupying. A key challenge we face in this process is that it is not unusual to find ourselves occupying and defining a new role at the same time. The Library Department Directors and I used an iterative process to create the framework. We wrote an initial draft, which was distributed to liaisons. Their comments and suggestions were then incorporated into the document. The Framework has evolved to encompasses ten areas:

- Campus Engagement
- Content/Collection Development and Management
- Teaching and Learning
- Scholarly Communication
- E-Scholarship and Digital Tools
- Reference/Help Services
- Outreach (to the local community)
• Fund Raising
• Exhibit and Event Planning, and
• Leadership

The ten elements of the Position Description Framework articulate ten key roles for liaisons. Each element poses different challenges for redefinition. Some are relatively well understood and involve broadening the role to a wider range of staff. For others there are internal or external models that can be applied. Other roles represent virgin territory where the organization must grapple with how to move into the terrain. Implementing the Framework has required somewhat different strategies for different areas. Some elements focus on improving individual skills while others call on staff to work collaboratively with colleagues, faculty, and other campus professionals in new ways.

Lest this seem overwhelming, note that not all of the roles require the same amount of time to fulfill. Two key liaison activities in fund raising, for example, are generating funding ideas for use by the development officer and the grant writer (who are not librarians) and spending time with potential and key donors. These are important, but not time consuming, activities.

As we develop a framework for new roles, we must be aware that even our more traditional roles are undergoing significant changes. The University of Minnesota has developed seven undergraduate student learning outcomes (SLOs) for all undergraduate students at the University of Minnesota Twin Cities. While all seven could be library related, the second, “can locate and critically evaluate information,” clearly calls for our involvement. To reach our approximately 32,000 undergraduates, we need models that scale. The one-shot invited lecture, a staple in most librarians’ instructional toolkits, does not.

We are challenged to engage with faculty (who are participating in the required course mapping for learning outcomes) in designing integrated learning experiences for students that will help them develop their skills over the course of their undergraduate careers. This partnership role is one very different from that of invited guest lecturer.

Support for Change

The Framework clarified and created a shared understanding of new roles, but developing the needed capabilities is a different challenge. The addition of
new roles to liaison portfolios automatically raises the question of whether existing liaisons feel comfortable and competent in these roles. At the University of Minnesota Libraries, we engaged in a knowledge, skills, and abilities inventory that allowed individuals to identify areas where they felt they had expertise and areas where they needed to learn more. Results of the inventory were returned by department, not individual, so that liaisons would not feel constrained in their self-reporting. The results of the inventory are being used to guide staff education efforts. Each year, liaisons set individual goals as part of the performance evaluation process and are encouraged to write both stretch and learning goals. The performance evaluation process itself was revised several years ago to bring evaluations into alignment and more accurately reflect
the expectations and the roles of librarians. We have also created some specialized positions to support and extend the work of liaisons. Examples of this include the Information Literacy Coordinator, the Grants Coordinator, and the Media Outreach and Learning Spaces Librarian.

The institution has also supported working groups that investigate roles that are wholly new, like that of supporting e-scholarship. Our campus VP for Research, the CIO, and the University Librarian recently created a group called the Research Cyberinfrastructure Alliance and charged them with “exploring research infrastructure needs and evaluating models that might align existing and new resources for more robust and effective support.” Both liaison and technology librarians are working with this group and, to date, they have developed a conceptual map of cyberinfrastructure components. Going forward, they will be developing guiding principles, identifying resource requirements, documenting existing capacity, and evaluating budget models.

**What Gives?**

While roles for liaisons are expanding, the number of hours in a day is not. Like libraries everywhere, we face the inevitable question of what we stop doing in order to accommodate new demands on librarians’ time. We have done several things to address this so far. A process improvement project entitled “From Selection to Access” resulted in much streamlined ordering processes and a significant increase in the use of approval plans, freeing up liaison time. We have made a distinction between what patrons can expect from on-demand reference services (walk-in desks) and expert help services, available by appointment. We are consolidating service points and decreasing the amount of time that librarians spend at reference desks. These changes have helped, but there is more work to do in this arena.

**Parting Thoughts**

Libraries face an ever-changing landscape with no shortage of opportunities to enhance the research, teaching, and learning enterprise. We consider our Position Description Framework a living document that needs regular review for alignment with a constantly evolving environment; in fact, some areas mentioned above are the result of a very recent revision. This working document reflects one institution’s view of new roles for liaison librarians, but there are many others who are grappling with and outlining new roles as well. In a talk at
the ACRL 2009 conference entitled “Subject Librarian 2.0,” Jim Neal, University Librarian at Columbia University, outlined several new roles for libraries including intermediaries and aggregators, publishers, entrepreneurs, policy advocates, and research and development organizations. The other authors in this issue present their institutional experiences and discuss the new roles that their librarians have undertaken.


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Amplifying the Educational Role of Librarians

Elizabeth A. Dupuis, Associate University Librarian for Educational Initiatives and Director of the Doe/Moffitt Libraries, University of California, Berkeley

Our libraries and universities are continuously adapting, seeking effective ways to respond to the fundamental and interconnected missions of research, teaching, and public service. To name just a few recent shifts: institutions and departments have drafted and adopted student learning outcomes for all graduates of their programs; curricula have evolved to include problem-solving and research-based learning; research projects incorporate various media and take more technological and creative forms; online programs have increased exponentially; and national studies and educational research have informed our understanding of factors that enhance student engagement¹ and result in deeper learning.²

As institutions respond to these changes, librarians can, and should, offer valuable perspectives and expertise to initiatives such as accreditation planning and strategic goal setting, development of student learning outcomes, design of course management systems, assessment of student learning, and promotion of teaching-effectiveness programs. My focus within the process at Berkeley, and for this article, will be the often under-emphasized educational role of librarians.

Responding strategically to economic pressures, many libraries are taking a fresh look at the changing needs of faculty and students and realigning the library’s priorities and models to best meet current and future needs. As with many ARL libraries, the University of California, Berkeley has a decentralized library system and a campus with research interests that are both wide and deep; identification of lower priorities or lesser-used functions is neither easy nor obvious. However, the librarian’s role as an educational partner is recognized as one area of strategic importance for the long-term vitality of research libraries and the effectiveness of campus teaching and learning initiatives.
The model of library liaisons dedicated to serving particular disciplines and cohorts is regularly mentioned by our campus partners as effective and valuable. While the potential of the library liaisons is clear, a re-conceptualization of the model is underway at Berkeley, as it is in most of our organizations.

**Integrating the Liaison into the Curriculum**

At Berkeley, library liaisons are assigned to each academic program and department and the Berkeley Library culture traditionally mirrored the faculty culture with its emphasis on subject specialization. This emphasis was reshaped several years ago when we extended the library liaison model to include academic support units (i.e. Academic Achievement Programs, Centers for Transfer, Re-entry and Student Parents; Educational Technology Services; Graduate Student Instructor Teaching and Resource Center; Undergraduate Research Apprenticeship Program).

Further shifts in thinking about the librarian role in education arose from a six-year initiative focused on enhancing undergraduate education and supporting a community of faculty dedicated to teaching and learning. Our experience with the Mellon Library/Faculty Fellowship for Undergraduate Research initiative—funded by a grant from The Andrew W. Mellon Foundation with co-principal investigators from the University Library and Vice Provost’s Office—gave the Library increased insight about challenges, opportunities, and value of richer instructional partnerships.

The initiative provided library staff with the opportunity to elevate their role in contributing to the campus’ teaching mission. Supporting individual faculty selected for the program each year, library liaisons were part of Implementation Teams with an educational technologist, a pedagogical specialist from the Graduate Student Instructor Teaching & Resource Center, and an assessment specialist. Throughout the year the librarians honed their skills for collaboration and project management, and were pushed into less familiar instructional terrain, analyzing draft assignments and recommending alternatives that would more effectively benefit student learning in the process of research rather than simply focusing on differences between sources and the mechanics of searching various databases.

I can attest to the crucial role of librarians with professional backgrounds and expertise related to assessment, instructional design, learning outcomes, and pedagogy as applied in traditional and e-learning environments.
Consultations between librarians and faculty began in advance of the semester, when the assignment and the course syllabus were in nascent stages. For most participants—faculty and librarians alike—this conversation was new territory. This approach allowed faculty and librarians to collaboratively build a framework for understanding research processes, using library resources, and designing in-person and online learning environments. Faculty were asked to expand their notion of the types of expertise librarians could offer, and to see the library as an extension of the classroom, incorporating use of library collections and research-based learning as an integral component of their courses. Librarians needed to develop an in-depth understanding of information literacy as it applied to specific disciplinary foci and practices, and expand their repertoire of approaches for providing effective instruction beyond the traditional one-shot lectures.

**Engaging Faculty, Students, and Administrators Through New Roles**

An extensive evaluation of the initiative’s impact has helped us begin reflecting on our collective experiences. The Library’s Educational Initiatives Council has begun creating a new framework for the instructional role of liaison librarians and the organizational support required. The Council is comprised of library staff from various disciplines and specializations, many of whom are library liaisons to an academic department or academic support unit. In a recent structured brainstorming process, the Council members created a list of possible instructional roles and activities for library liaisons, then indicated which ideas they felt would have the most substantial impact and which ideas they felt comfortable personally implementing at this time.

One area of particular interest was a deeper engagement of library liaisons with Deans, Department Chairs, and key faculty to better understand the School’s, College’s, and department’s teaching focus, objectives, and challenges for undergraduate and graduate students, and identify courses in which library support would be most relevant. Currently no such conversations involve the library liaisons. During the Mellon initiative, the AUL for Educational Initiatives and Vice Provost for Undergraduate Education met with selected Department Chairs annually to pilot these types of conversations; universally they revealed a great deal of information about opportunities with individual faculty and larger programmatic directions. When thoughtfully designed to elicit key information,
these conversations would contribute to stronger relationships between the library and academic programs, and would potentially inform a broad span of library functions. Additionally the information gleaned would help develop mutually agreed-upon priorities that could help elevate the library liaison’s contributions from benefiting individual courses one at a time to impacting the department on the “network level.”

Another core function identified was the provision of instruction through in-person course-integrated sessions, synchronous and asynchronous online environments, and alternative models that better support deep learning. While librarians are familiar with the traditional in-person, one-shot, lecture model, all other formats were newer for most library liaisons. As librarians worked with faculty for the Mellon initiative they developed excellent models of new types of “deliverables” for a broad spectrum of disciplines. With a solid grounding in the differences, benefits, and design of other models for instruction, library liaisons would be prepared to suggest alternatives that best suit the course goals, support student learning, and utilize the librarian’s time effectively.

Equally compelling was the potential of systematic training for graduate student instructors (GSIs). The Berkeley campus is privileged to have the GSI Teaching & Resource Center that provides workshops, consultations, classroom observations, awards, and a Web-based course on professional standards and ethics in teaching for all interested GSIs, and for the faculty who mentor and guide them. The staff of the GSI Teaching & Resource Center were key partners for the Mellon initiative, and through that process became more aware of the pedagogical interests and expertise within the Library. The library liaison to the GSI Teaching & Resource Center contributes to professional development programs for these future faculty members, and works closely with the faculty leading seminars on teaching in the discipline (required for all first-time GSIs). Library liaisons have piloted other creative approaches for graduate students in general, such as integrating information literacy and research training as part of the preparation for graduate students who introduce visiting speakers throughout the year. Graduate students, whether conducting research on their own or learning to guide undergraduate students through the process, benefit enormously from interaction with their library liaisons and the Library could make the most of successful experiences by sharing them more broadly with all liaisons to emulate or adapt.
Supporting Change to Meet Current and Future Needs

It is clear that developing the educational role for library liaisons outlined in our early discussions at Berkeley will require significant organizational support. Library administrators, not just library liaisons, must provide compelling arguments about the value of including librarians in teaching and learning initiatives. I am grateful for our administrative model, which allows one of my colleagues to provide leadership for collections and scholarly communication, another colleague to provide leadership for public services, and affords me the opportunity to focus on the full spectrum of the Library’s educational initiatives. I can attest to the crucial role of librarians with professional backgrounds and expertise related to assessment, instructional design, learning outcomes, and pedagogy as applied in traditional and e-learning environments. They are able to juxtapose the general information literacy and critical thinking issues with the disciplines and bridge conversations between library liaisons, faculty, and other pedagogical specialists on campus. As research libraries explore ways to impact instruction in new and systemic ways, these librarians are essential.

One of the challenges of rethinking liaison roles is that the functions identified as having the potential for greatest impact were also the areas that Library’s Educational Initiatives Council members indicated that they did not feel were areas of personal strength. In 2008 the Berkeley Library launched the Instructor Development Program, designed to provide all library instructors with opportunities to improve their skills and expand their knowledge through a structured program that meets their needs and rewards their participation. Chaired by two librarians who apply for a two-year position, this program aims to create a strong community of practice within the organization which will aid us in supporting library liaisons as they take on new and enhanced roles.

Many questions remain about the breadth and depth of responsibilities for library liaisons at Berkeley. For at least the next few years, campus conversations are likely to focus on approaches for operating effectively and creatively with fewer resources and fewer staff. While we can hope that the economic pressures relax, on my campus we discuss the current budgetary situation as “the new normal.” As we come to terms with the realities of “the new normal,” develop a clearer vision of the future needs of our faculty and
students, and explore areas of collaboration with partners on campus and externally, I believe our efforts to amplify and support the educational role of library liaisons will be one of our most fruitful and valuable endeavors.

1 For example the National Survey of Student Engagement (NSSE) launched as a pilot in 1999, http://nsse.iub.edu/.


3 See the project Web site at University of California, Berkeley. Mellon Library/Faculty Fellowship for Undergraduate Research. http://www.lib.berkeley.edu/mellon/.


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The Last Mile: Liaison Roles in Curating Science and Engineering Research Data

Tracy Gabridge, Co-Head, Engineering and Science Libraries, Massachusetts Institute of Technology (MIT)

A new generation of cyberinfrastructure programs, including NSF’s DataNet program, is setting high standards for collaboration among all the parts of the research enterprise, including researchers, information technology organizations, and libraries. These new programs envision widespread collaboration as necessary to addressing the urgent and enormous challenge of managing and sharing research data to enable new scientific insights and drive innovation. Studying the research needs of individual researchers and of the institution as a whole is a major component of the work of library subject liaisons. As such, these librarians are well positioned, and will be essential in building the “last mile” of research data cyberinfrastructure—the part of the network that will provide connections between the systems and the researchers, and ultimately, to new users of the data.

As daunting as the challenge of building infrastructure is the challenge of filling it. What will encourage researchers to deposit their research data for others to see and use for new purposes? To answer this question we may learn from libraries’ experiences in building institutional repositories. Filling the virtual shelves of these brave new digital commons has been a non-trivial challenge. Successfully filling a repository requires careful study of the needs both of the individual researchers, and of the institution, and then finding solutions that provide valued benefits to both sets of stakeholders.

To play a credible role in data curation, librarians must overcome significant challenges. In science and engineering disciplines, faculty do not often see librarians as being equipped to help them solve their data problems: they are...
more likely to approach information technology departments for such help. It is in our institutions’ best interest for librarians to demonstrate in compelling ways the strengths and capabilities libraries can bring to bear on these problems, based on libraries’ long and successful record of providing efficient, long-term, and convenient access to the world’s information. To demonstrate that libraries can provide the right data curation solutions for both research institutions and individual researchers, libraries will need to attack the problem from both ends. First, libraries will need to build data curation systems in collaboration with other university partners; and second, libraries will need to create credible and valuable data services using the combined efforts of subject liaisons, other library staff, and drawing upon applications built on the infrastructure.

At MIT, the Libraries are tackling the data curation challenge in both of these ways. To tackle the infrastructure challenge, the Libraries’ Technology Research and Development Group is offering the DSpace platform, developed in partnership with Hewlett Packard, as a key resource in an NSF DataNet grant proposal developed in partnership with MIT faculty and the MIT Information Services and Technology organization. Concurrently, starting at the end of 2005, a group of science and engineering liaison librarians, calling themselves the Data Initiatives Group (DIG), formed a study group to learn collaboratively about the needs of researchers and the current state-of-the-art in providing services to manage research data, and to identify the skills required to actively respond to their faculty’s data curation needs.

While the idea of librarians supporting the curation of engineering and science research data is relatively new, there is a long tradition of subject liaisons offering a variety of services for social science and GIS data. This tradition offers a good starting model for envisioning how libraries might provide other types of research data curation. At many institutions, social science data services were once provided by faculty, not librarians. Over time, libraries have taken on the responsibility of providing these services to their campuses. Social Science data services librarians play a valued and recognized role, selecting and curating data sets and connecting new researchers to data deposited by others. At MIT, the libraries’ social science data curation role has evolved to encompass loading both purchased and locally produced data sets into repositories. Despite the long tradition of social science data services, however, finding faculty who wish to deposit their own data sets into repositories remains one of the most challenging aspects of social science data librarianship.
The results of investigative studies done by the MIT librarians’ DIG study group (including study of data curation efforts at several of our peer institutions3), as well as the insight of MIT’s Social Sciences Data Services Librarian and MIT’s GIS Services department, show that there are many roles that liaisons can play in engineering and science data curation.

- **Analysis of data set deposit requirements**: The biggest part of the “last mile” problem is to get faculty-created data sets into a permanent home so that the data can be found and used again. Liaisons can do the project analysis and management required to accomplish this major step. Based on their analysis, librarians can determine the best home for the data and the manipulation required to make it reusable by others. By taking on this role, the librarian addresses a major obstacle for faculty, who recognize that the overhead necessary to make the data reusable is insurmountable for them personally. Liaisons, who have deep knowledge about the research practices within disciplines, can neatly fill this void. In doing so they serve effectively as “bankers” or “investment managers,” securing a higher yield for the faculty on the investment they originally made in creating the data.

- **Data management planning**: Liaisons can help researchers set the stage for depositing their data by consulting with them at the point of data creation. Librarians can put researchers in touch with standards applicable to their need, create a plan for managing the life cycle of the data in compliance with their grants, and create organizing strategies for documentation, files, backups and more.

- **Teaching good data practices to students**: Academic communities have a constantly revolving community of students who arrive with varying degrees of knowledge of good scholarly communication practices, including, perhaps most acutely, uneven skills in data management. Librarian subject liaisons already teach students how to be self-sufficient, independent information consumers. This role can be easily extended to include instruction on data management and planning. Liaisons can offer seminars and other support mechanisms (Web page, tutorials) to help student researchers understand what to do with their data and increase their awareness of library resources.

- **Collecting and disseminating data sets**: In addition to making locally produced science and engineering data sets available to the world, the
liaison can make other similar data sets available and known to local researchers for reuse and new discoveries. This role builds naturally on the collection building and searching experience librarians already have with traditional information resources.

- **Standards for data preservation:** Behind the scenes, liaisons can work with domain experts to create preservation models for data and can document data needs to help work towards metadata and data standards.

Given the current state of liaison roles and responsibilities it might seem that these roles are too big a stretch for librarians to develop, but they do build upon a rich tradition of current practices that can ensure the success of liaisons in extending their reach into engineering and science data curation:

- Liaisons know their disciplinary communities, their information practices, and understand a community’s data needs and can help shape the services that will meet them.
- Liaisons are experienced in negotiating and coordinating between many organizations, internal and external to the libraries, to coordinate delivery of excellent services to users.
- Liaisons have a long track record of building bridges with others in similar roles at other institutions in order to bring best practices into local practice.
- Liaisons are experienced in selection and appraisal for collection building and can extend that knowledge to helping researchers ask the right questions for possible long-term reuse of their data.
- Liaisons are experienced in helping researchers find difficult-to-locate materials.
- Many liaisons have domain-specific advanced degrees and experience and can readily add knowledge of data management practices unique to their discipline.

Despite a rich tradition of practices and the outstanding opportunities that lie ahead, it is clear that incorporating engineering and science data services into a library’s service portfolio requires certain skills in individuals who want to fulfill the role of a “data liaison.” Engineering and science data is often heterogeneous: data sets are created to fulfill a unique need. The highly self-motivated liaisons who want to work in this realm will need to have very strong analytical, project management, and problem solving skills, as well as
the ability to work independently at the intersection of digital data, technology, and metadata. These core skills are the base on which training in digital preservation concepts, data modeling, data standards, policy, and data collection and management can be added to round out a data liaison’s preparation. In addition, because data services are in their infancy, it cannot hurt for a data liaison to be skilled in building library programs and services.

There is a long-standing debate over whether it is more important for engineering and science data curation liaisons to have domain expertise or information science expertise. The answer is that data liaisons must have both. To create data liaisons with this combination of skills, libraries can develop existing liaisons with interest, passion, and strong analytical skills; or they can recruit domain experts, and teach them about excellent information science practices. Consider the following four potential data liaison personas:

- A subject liaison with a domain-specific education and work experience in a field such as civil engineering or chemistry.
- A subject liaison with no domain-specific expertise, but with excellent analytical and technical skills who has a passion for understanding and manipulating data.
- A researcher in the life sciences who fell into managing data for a lab because they were the only one available to do it and they find the work enjoyable.
- A newly minted Masters of Science candidate from a library and information science program with a specialization in research data curation.

One important feature of data curation in engineering and science fields is that curatorial needs vary widely across each discipline. In physics there are large, established data repositories and a hugely collaborative culture; therefore the data curation services needed by individual physicists may be fewer and necessarily very different from services that might be useful in the neurosciences, where disciplinary repositories are not as common and the proliferation of data types and formats prevents easy standardization. For this
reason, there is room for a wide variety of approaches in developing our future engineering and science data liaisons.

Libraries that wish to develop data liaison competence face big challenges as they respond to the staggering opportunities ahead. First and foremost, underlying systems and organizational structures must be in place in their libraries and universities, so that the library system can offer a strong suite of services to the community that are backed up by a robust and continually improving infrastructure. Leaders in the organization need to seek out and foster existing liaisons’ interest in data services by bringing like-minded individuals together, introducing them to faculty and community members involved in data work, and providing funding for directed skill development and conference attendance. In addition, experimentation, proposals, and constant investigation of the disciplinary landscape must be the order of the day. Library organizations must also seek to recruit liaisons with strong analytical skills or with domain-specific knowledge. These activities, in concert with strong staff effort will produce outstanding data liaisons on whom to base a program of data services.

At first glance it may appear that adding data liaison services on top of an already full service portfolio at a university library system is too much to ask right now. But it is important to realize that services like this are a major component of libraries’ future. Ensuring that the complex output of the research enterprise is collected and is reusable by others is central to the ongoing mission of research libraries. Liaison roles are already undergoing an evolution that has reduced their role in traditional areas such as on-site reference service and acquisition of collection content. Researchers’ needs are evolving and data liaison services have great potential to offer a new model for subject liaisons. Where subject liaisons have created value and enjoyed great intellectual satisfaction from their work carefully building subject collections or tracking down difficult-to-locate literature, future data liaisons will find rich and varied intellectual challenges in tackling the data needs of our science and engineering researchers.

Many thanks are due to a host of people who wrote about these issues, talked with me and provided inspiration and the insights contained here: MacKenzie Smith, Anna Gold, Katherine McNeill, Anne Graham, Amy Stout, Erja Kajosalo, Patsy Baudoin, Katherine Clopeck, and Howard Silver.
In the telecommunications industry the “last mile” refers to establishing the last section of connectivity from the network to the user. This part of the network is often the most expensive and difficult to implement, yet it is just as essential as all the previous miles in making a robust communications system.


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Scholarly Communications: Planning for the Integration of Liaison Librarian Roles

Joy Kirchner, Librarian for Collections, Licensing and Digital Scholarship, University of British Columbia Library

Note: Joy Kirchner was seconded from some of her other duties so that she could focus more fully on scholarly communications in the role of Project Manager for Scholarly Communications from late 2007 to March 2009.

The University of British Columbia designated Scholarly Communications as one of its major focus areas from late 2007 to spring 2009. To this end, we seconded a Project Manager and a project team to develop a formal scholarly communications project plan. The aim of the project was to develop a set of recommendations to define the Library’s role in scholarly communication, to conduct formalized discussion and education of these issues with campus stakeholders, and to begin to identify recommended and sustainable service models.

The project first identified campus stakeholders, including faculty, researchers, administrators, library, and publishing constituencies and constructed a Steering Committee made up of representatives from these stakeholder groups to help guide the project. As the front line librarians to our researchers and faculty, the Steering Committee identified liaison librarians as a key stakeholder group to not only help us engage with our community as we began the process of formalized discussion and education, but also to help us and the Library to develop a picture of scholarly communications activities on our campus at the discipline level. Since the major thrust of the project was concerned with information gathering for future planning and decision making, liaison librarians’ disciplinary networks could be crucial to formulating a picture of changes at the system level and in bringing that back to the Library. With such information we believed we could also better understand how liaison roles could potentially shift to meet new scholarly practices and research behaviour.
Ultimately, I felt this could potentially be another path to bring liaison librarians closer to the research and faculty research processes on our campus.

To begin the process of utilizing liaison librarians for data gathering at the discipline level and potentially shaping new roles for liaison librarians in scholarly communication, it was essential to involve them in the process early on. Their buy-in was considered critical to the success of the project in the short term and in the future operationalization of scholarly communications activities and services. The first step was to recruit several liaison librarians to work with the Steering Committee to develop a scholarly communications training program for liaison librarians that would serve two purposes:

1. To serve as a vehicle for eliciting librarian and library staff input on the shape of scholarly communications activities in the Library and in conceptualizing new roles in this arena

2. To give liaison librarians requisite tools and a coordinated approach to begin the work of engaging their faculties in a discussion of the issues

Specific objectives for liaison development included the following:

- Library staff will have an awareness of changes to the traditional model of scholarship.
- Librarians will have a base understanding of scholarly communications issues.
- Liaison Librarians will have greater confidence and expertise in their understanding of scholarly communications activities, particularly at a discipline level, and be able to educate their faculty on trends in scholarly communications; be resource people on scholarly communications issues at the discipline level; and be resource people for identifying new models of scholarship in their discipline.

As Project Manager and leader of the steering committee, my overall vision for liaison development, and indeed for the broader Scholarly Communication Project, was that our outreach programming was guided by the principle of open and shared dialogue about the issues with our community and is based on relationship-building and partnership with campus stakeholders. While we, like many research libraries, took on a leadership role in campus dialogue, we were very conscious of the necessity of gaining the acceptance and active participation of our faculty colleagues and knowledge creators on campus. In this sense, at the center of the project was our determination to engage our campus stakeholders in
a discussion. Our training with liaison librarians was developed with this understanding. From the outset, liaison librarians reported they felt comfortable with this approach and that it lent itself to a natural engagement with their faculty that could be easily integrated into their liaison practices.

**Increasing Involvement With New Models of Scholarly Communication**

Moving forward with the project, the Steering Committee identified several areas to bring liaison librarians into broader interaction with campus faculty. This included involvement in new models of scholarly communication, investigating new scholarship practices at the discipline level, and supporting emerging grant funding for open access mandates.

Earlier work with our Institutional Repository (IR) Project and with our journal-hosting program offered important insights into new models, which we integrated into the liaison development program. Our IR Coordinator had already had success including liaison librarians in the implementation of the IR (launched a year earlier) and in content recruitment. Her workshop on liaison roles in the success of the IR was an important element in our liaison training program. Likewise, our Digital Initiatives Librarian, who supports our faculty and editors in the development of their open access journals using OJS, was also able to share her experience engaging with faculty in the use of these new models.

In addition, we felt it was critical to involve liaison librarians in exploring other new models of scholarly publishing and communication that might be occurring elsewhere on campus. This fit our goals for engaging liaison librarians to identify and describe the scholarly communication cultures and practices in a diversity of fields at UBC. We hoped this work would allow us to examine the broader issues related to the organization and curation of UBC’s scholarly output and consider how services the Library supports such as OJS\(^1\) and the IR, could potentially advance these activities.

To build this broader picture, we asked liaison librarians to conduct an environmental scan of scholarly communications activities in their discipline using a data-gathering tool adapted from Lee Van Orsdel’s *Faculty Activism in Scholarly Communications – Opportunity Assessment Instrument*.\(^2\) We named our tool “Delving into your discipline” to emphasize the exploratory purpose of the exercise and to increase liaison librarians’ ownership of the tool. In addition, seventeen UBC liaison librarians took advantage of the fortuitous
This kind of liaising effort allowed me to see firsthand how the faculty researcher communicates, networks, keeps informed, and gets up-to-date information...

Involvement in the study demonstrated to our liaison librarians that faculty engagement about new models of scholarship can be a natural progression from their usual liaison activity. Further, it afforded them the opportunity to learn more about faculty research needs and where they could potentially advance their liaison roles in scholarly communications. Many librarians observed that their faculty loved talking about their research, making this kind of engagement an easy and enjoyable experience. One liaison librarian reported, “the conversation [with the faculty member] led her to a greater understanding of the larger nature of how this faculty member conducted research and how he built up a network of contacts.” Another said: “this kind of liaising effort allowed me to see firsthand how the faculty researcher communicates, networks, keeps informed and gets up-to-date information via blogs, RSS feeds, RSS feed aggregates, Wikis, YouTube, and various other online groups and mechanisms.”

In addition, several liaison librarians became involved with working with a faculty member to further develop their new publishing.

**Developing Service Models to Facilitate Compliance with New Public Access Mandates**

In response to the Canadian Institutes of Health Research (CIHR) and the US National Institutes of Health (NIH) and similar emerging mandates in Canada from the Natural Sciences and Engineering Research Council of Canada (NSERC) and Social Sciences and Humanities Research Council of Canada (SSHRC) that are expected to follow, the Project Manager constructed a working group of key medical faculty, the Director of the Office of Research Services, UBC grant fund managers, and key medical and health liaison librarians to deliberate on support for UBC researchers who must comply with these mandates. As part of the project plan, health sciences liaison librarians were...
recruited to help define the library’s strategy to support our faculty and researchers who receive grants with new public access mandates.

This resulted in a UBC Library/Office of Research Services collaboration to devise both short-term and long-term strategies and methods for creating linkages between the Library’s institutional repository and the UBC’s Office of Research Services systems. The links will enable UBC researchers to easily deposit their CIHR and NIH grant-funded publications into an open access repository within the workflow of the Research Office’s grant funding management system. These cross-campus partners agreed to continue to act in an advisory capacity for these developments and future developments in a more formalized campus advisory body.

It became clear to the Working Group that ongoing education strategies are needed to inform UBC researchers of their public access compliance obligations. It was felt that the Library was best positioned to develop a consistent training template that cross-campus partners could collectively use for campus-wide education and that librarians should be involved in this process and work on this is progressing in Fall 2009.

Although this collaboration is still in its early stages, the Library is already realizing significant marketing benefits from this cross-departmental collaboration. We are getting new visibility and exposure from University Administrative offices. The Research Office and cross-departmental grant managers are promoting our work to others. Grant managers, with new awareness of the value of the Library’s expertise, are actively encouraging the researchers they work with to contact our liaison librarians to help strengthen the research component of their grant application. Liaison librarians are partnering with grant managers as plans are developing to offer workshops targeted at researchers to improve grant writing. Also conversations with grant managers have led to plans to include a segment on author rights and managing copyright transfer agreements in upcoming grant writing workshops that will be taught by librarians in partnership with our Health Research Resources Office.

Other Engagement with Campus Stakeholders

While members of the project team established fruitful connection and partnership with the UBC Press and UBC editors, to date this work does not yet include liaison librarians to any great extent. However as our work with both
groups evolves, we are beginning to identify potential library roles in this arena. Many of our journal editors, for instance, are struggling with transitioning their journals to an open access model. We think there may be ways the Library can support our journal editors in this endeavor. It remains to be seen how this work may filter into liaison roles in the future.

Next Steps

The Scholarly Communications project set out to align with two Library goals:

1. To pursue new directions in order to sustain its relevance and impact in the support of academic and research needs of the University, the provincial and the larger scholarly communities in the 21st century
2. To consider ways to expand library liaison activities that brought the Library closer to the research on our campus

I believe we were successful in supporting these goals. The Steering Committee that guided the project, through a set of associated activities was able to advance the library’s role in campus-wide dialogue about the system of scholarship, establish significant cross-departmental partnerships, create new and enriching models for faculty-librarian interaction and collaboration, make significant progress in both identifying the use and creation of new models of scholarship on our campus (and contributed that data to the broader ARL New Models study) and considering new roles for the Library in supporting this new arena.

Of course we still have a long way to go. While we were successful in building strong interest and enthusiasm about scholarly communications amongst most of our liaison librarians during the project term, and there was traction in our overall outreach activities leading to substantial involvement for liaison librarians, post project liaison librarian activity in this arena has dropped off. This, however, has more to do with the need to develop operational models for liaison librarian involvement in scholarly communications moving forward rather than anything else. At this point, project assessment is needed to strategize next steps. I will be conducting a post-project assessment and follow up with subject liaison librarians and others. This will help guide our next steps as we move scholarly communication activities to operational status.

Postscript: It should be noted that a number of our enterprising and innovative liaison librarians have established their own connections with faculty research outside of
the scholarly communications project. Some are involved in joint research with faculty, some have been involved in writing grant applications with faculty, and others are involved in editorial boards with faculty-produced or edited publications.

1 OJS is open journal software developed out of the Public Knowledge Project.
2 This tool was developed for the ACRL/ARL Institute for Scholarly Communications by Lee Van Orsdel and is licensed under a creative commons attribution non-commercial share alike license: www.arl.org/bm-doc/opp.pdf.
3 The study and the final report can be found at: http://www.arl.org/sc/models/model-pubs/pubstudy/index.shtml

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New Roles of Liaison Librarians: A Liaison’s Perspective

Kara M. Whatley, Life Sciences Librarian and Head of the Coles Science Center, New York University

Librarians as Middleware

Liaison librarians have always been connectors between their patrons and the information that is collected in libraries. However, this role as connector, or middleware as it was termed by Rick Luce at the 2008 ARL and CNI Fall Forum, has taken on new twists for liaison librarians today, or liaison 2.0 as I have come to think of us. Liaison 2.0 represents more than a simple refinement of liaison librarianship; it represents a significant rewrite of the basic skills and services typically associated with liaison librarianship. As we move further and further into the age of Google, where faculty and administrators feel that all information is online and easily located, it is increasingly important that liaison librarians use the relationships that they have built to connect the library’s work to the academic mission of their university. This role as middleware is core to the liaison 2.0. Building relationships is becoming the essence of what it is to be a liaison librarian—one that connects users with their information needs, whatever the format and whatever the technology. The role of librarians as middleware is the real brains behind the traditional roles for liaison 2.0, and, if this connection works well, all the rest will be informed by it and flow from it.

At New York University we have spent a significant amount of time in the past academic year thinking about science library services, and a large part of that work has included reexamining our roles as liaison librarians and how we might evolve to better serve the changing needs of our students and researchers. In the process I have formed a new appreciation of the concept of librarians as middleware, as well as roles we leave behind as we offer new services and acquire new skills.
2.0 Takes on Traditional Roles

I have been a liaison for my entire nine-year career as a librarian, and my responsibilities have always been divided into what one colleague refers to as the “holy trinity” of liaison librarianship: reference, instruction, and collection development. I have seen each element of the trinity reconstructed in the past decade. Newer virtual reference services are transforming the ways in which librarians reach out to their patrons—and, more importantly, the ways in which their patrons communicate with them. This change has been so striking that many libraries, including my own science reference center, are doing away with their traditional reference desks in favor of virtual service. Additionally, we have noted in science reference services at NYU that we are seeing an increase in in-depth, sometimes in-office, reference consultations even though our science reference desk statistics are trending downward. Such consultations provide a cornerstone for me as I actively build relationships with students, faculty, and researchers. Those relationships, created with thoughtful, targeted outreach programs, are at the core of our role as middleware and will be an increasingly important component of the work of liaison 2.0. For example, one outreach effort I created in our science reference center at NYU is a research salon held three times each semester. Each salon features a presentation of one graduate student’s or faculty member’s research, bringing together researchers from across the sciences. These salons allow those researchers to network in ways that might not otherwise be possible, and it allows our science librarians to interact face-to-face with researchers that they might not otherwise be reaching.

The second arm of the liaison holy trinity, instructional services, has also been transformed by liaison 2.0. “Course embedded librarians,” who provide course-integrated information literacy instruction are the new norm. For the better part of the last decade, liaison librarians have been reaching out to the faculty members to partner in teaching students in new ways. My own participation in instruction has grown from an introductory library tour in an undergraduate chemistry class to a course-integrated week of instruction culminating in the completion of an assignment that I designed.

What do these trends mean for liaison librarians? I now need robust continuing education to enhance the effectiveness of my teaching and expose me to smart instructional design techniques. I need to hone my skills in developing
achievable learning outcomes and in assessing those outcomes, and I need to understand what I can accomplish using online tutorials, podcasts, and research guides and what I cannot. And, perhaps most importantly, I need to leverage my role as middleware to build the relationships necessary for the kinds of teaching partnerships with my faculty that allow me this place in their classrooms.

The third arm of this holy trinity is collection development. While I have always been supported by a robust approval plan in my book collecting, I also have always supplemented that plan by firm ordering titles not automatically selected by my approval plan. However, a few of my fellow science librarians have moved to on-demand purchasing as their only firm ordering and are focusing their attentions on other services. Other non-science librarians have expressed the need for redirecting their collection development efforts to “medium rare” items and “new media” that require the subject expertise of a liaison librarian to identify and collect. What does it mean for liaisons to focus on new kinds of library collections? Without careful planning for the future, it could mean research collections that are less abundant for tomorrow’s researchers. However, our role as middleware can come into play here as well. Cultivation of relationships with faculty members and their graduate students aid us in creating the appropriate approval parameters as well as in focusing our medium rare and new media collections. Liaison 2.0 must also carefully consider how we manage on a large-scale the collection and preservation of new media and medium rare materials. Significant changes to current workflows across our libraries will be required for liaison librarians to make such a shift.

**Beta Testing Liaison 2.0 Services**

Like many liaison librarians, I confront the challenge of functioning in the “2.0 mode” while continuing to provide all the services I have in the past. Some things cannot be carried over into the new version. But just what those things are, is still up for debate. Many libraries, including my own, are giving up multi-desk reference service. Some libraries are giving up firm ordering as we have known it. I think the functions and services that are superseded are unique to each research library. Grounded in the academic mission of the research institution and the strategic plan of that library, liaison librarians and library leaders will chart the course that fits their organization’s specific needs. However, one thing is quite clear: what remains core is our role as middleware. All emerging 2.0 liaison services grow from that role, and, if we sacrifice that, we
are ultimately sacrificing our effectiveness. We as liaisons must consider what partnerships we need to build, what skills are central to the 2.0 role, and how we can create more flexibility in our positions. We do not have to do it all or be it all, we just need to form the bridge between our patrons and their information needs, whatever new flavors those may come in in the twenty-first century library.

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