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Defining Future Roles for Science Librarians: One Publisher's Perspective

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By way of introduction

My career has spanned 43 years and began as a librarian at Cornell. For the past 34 years I have been at Elsevier, focused on corporate strategy, industry relations, the journal migration from paper to electronic, and library relationships and policy. Despite this long involvement with libraries, it is with trepidation that I presume to talk about what librarians should do to ensure their future relevance. I recognize that however closely I have worked with academic and special librarians since I left Cornell in 1972, I have been in a parallel world and there is no way I can really know how it is to walk in your shoes. I have never appreciated non-publishers telling publishers what to do and I assume the same is true for librarians.

How we differ, what we have in common

A former colleague of mine, Tony McSean--a long-time medical librarian--gave a presentation that included some of the differences between librarians and publishers. He noted that publishers--and particularly commercial publishers--have the freedom to act in different ways from librarians.

- We can change course more easily.
- We can stop doing (some) things with fewer repercussions.
- We can generally get funding for a proposal if we can make a good case for the return on the investment, which also means that we can (sparingly) add staff.

That does not mean that all is rosy, however.

- We can also be abruptly downsized or outsourced if someone else can do our job less expensively and at an acceptable standard.
- We can be sold.
- We can be the unit or service whose product or service is stopped.
- We can fail and go out of business completely.

All of which means that publishers and others in a commercial environment have to tolerate

and accept higher risk day to day than one typically does in a library. I'll come back to this.

If we differ in some potentially significant ways, we also have many things in common. Publishers and librarians have both been faced with the need to re-evaluate and redefine our roles. Traditionally (post-World War II), both of us have focused on the provision of content. We have, in different ways, both been responsible for:

- The selection of content and the certification of its authenticity, originality and value.
- The financing of all of steps necessary to make that content available.
- The storage/warehousing of the content.
- The provision of access interfaces, whether cataloging, coverage by a & i services and Google, the provision of online platforms or citation linking and data mining.
- The marketing and promotion of the existence of this content to those who might have the need or interest in it – which starts with understanding the needs of those whom we serve.
- A commitment to providing permanent archival access to both the paper and electronic editions.

While our respective roles within each of these categories has been different and, for each, changed with the transition from paper to electronic, this largely defined our jobs.

The new mission

We are still both responsible for the provision of vetted, quality content and access tools. We are still both responsible for the assurance of appropriate storage and lasting preservation archives. While again our respective roles have changed somewhat, these basic responsibilities to our author and research user communities remain at the core of what we do.

But it is no longer enough. We both know that neither of us will survive if that is all we do. Allow me to once again try to use publishing as an example of what we both need to do.

Elsevier's general mission statement says: "Elsevier is an integral partner with the scientific, technical, and health communities, delivering superior information products and services that foster communication, build insights, and enable individual collective advancement in scientific research and healthcare." There is nothing wrong with this, but to me it is too passive, drawing an "and...?" reaction or a "so what?". It is not actionable and measurable. And however "feel good," it is not really motivating.

Recently our Science & Technology Division (half of the company, the other half being Health Sciences) adopted a new mission statement for itself, to "Provide information and workflow solutions that help institutional decision-makers and researchers create significant value by building insights, enabling advancement and improving research-driven returns-on-investments."

In other words, our services must make researchers, research administrators, and health-care professionals more efficient and more productive. If we haven't done that, we've failed. We must produce solutions that are results-driven, as defined by our customers/users. This mission applies equally to science libraries and librarians.

To accomplish this, we must embed ourselves in the workflow of our customers. How do we do this? At Elsevier, we have what we call our User-Centered Design (UCD) group: specialists who go out to libraries and labs and other customer workplaces and work with users in the design of services. They sit next to the researcher to study exactly what they do. In order to be effective, we need to understand their actions and what frustrates them currently, their "pain points." We want to know what is difficult now and why it is difficult. We want to know, in an ideal world, what would be the solution to their problems. We test and test and retest with our development partners around the world.

Librarians are also UCD experts. When it comes to information-related problems and their solutions, it is librarians who are increasingly embedding themselves in their users' workflow and demonstrating their specific expertise in providing information solutions. I am not saying anything you don't already know if I say that science librarians need to get out of the

library and become members of user teams, either on a "permanent" basis (i.e., your office is in the research group) or on a changing project-by-project basis. Getting accepted as part of the team means taking the initiative to get buy-in from the start as an integral contributor to the work of the team. It may take a while to achieve this, so persistence will be needed.

Recently there was an article in *Inside Higher Ed* on embedded librarians,¹ which described the Welch Medical Library at Johns Hopkins University. Nancy Roderer, Director at Welch, talked about her plans. Her "informationists" are located in the departments of the medical school, not in the library. "We don't really need to have a central service point anymore," library director Roderer says. "By 2012 we do expect to be out of the building." The idea behind the embedded-informationist program is that researchers benefit from on-site access not only to the library's digital resources, but its human resources as well. "Research teams tend to be made up of experts in a number of categories ... but they don't always have an information expert on them," says Roderer. "So the idea was, shouldn't we have one? And we think the answer is yes." This level of distribution of library services may be at the extreme, but the principle is fundamental for the future.

To summarize: our shared current mission is to answer the questions "How do we make our users more productive, make their work easier, in all aspects of information-related activities?" and "How do we provide solutions for our users' pain points, their frustrations?" I recall a decade ago being told by a savvy consultant in the e-transition: if you can make it easier for someone to do that which they have to do anyway, you will succeed. It's still true.

Stepping out of your comfort zone

As I said earlier, one thing that is different for publishers is that we have to accept more risk. I would carefully suggest that perhaps some librarians are too risk-averse. It's time to take more risk and step out of your comfort zone. Let me give an example of what I mean.

We have a new product called SciVal Spotlight that allows a university to analyze its research strengths and weaknesses. We described this to a group of European library directors who advise us and we asked them how they saw

the library's role in such a service. All but two wanted the library to be in a supportive role, while someone else on campus would actually "own" and use such a service. Only two--a German university library director and the head of a major Swedish medical library--said they wanted the library to be the "owner" and champion of such a service. It was not a budget issue --it was a question of positioning the library as the center for a wide range of information services and solutions. The other librarians were explicitly reluctant to take on such a role. They said they might be criticized for the evaluations made on the basis of using such a service tool and the risk was too great.

There is a clear need for science librarians to redefine their roles, to engage more with their clients. The *Ithaka S & R Survey 2009: Key Strategic Insights for Libraries, Publishers, and Societies* examines the relationship between researchers and the library. It notes that "[o]f all disciplines, scientists remain the least likely to utilize library-specific starting points; only about 10% of scientists start there..."² The report goes on to note "[t]he declining viability and importance of traditional roles for the library and the librarian may lead to faculty primarily perceiving the library as a budget line, rather than as an active intellectual partner... [the] dilemma for...libraries...[is that] if the library shapes its roles and activities based on what is currently most highly appreciated by faculty, it may lose a valuable opportunity to innovate and position itself as relevant in the future. On the other hand, if the library develops new and innovative roles and services that meet unmet needs, becoming newly relevant and even essential to those scholars who have moved farthest away from it, in the near term it may lose the support of its most ardent supporters. Can the academic library reengage with scientists?"³

Let's consider some more positive examples of librarians providing workflow solutions. At the University of Prince Edward Island, the library creates Virtual Research Environments (VREs) for its faculty. These are collaborative websites that also provide data stewardship services. When funded by a research group, more extensive development help is available from the library. They have established over 100 VREs on campus, over half of which are described as "production research sites." "Faculty love our service and our biggest challenge is keeping up

with demand."⁴

There are more familiar ways in which libraries have expanded their reach into their communities. Much has been written and discussed in the last five years about institutional repositories as a gathering point for campus output. Tyler Walters of Georgia Institute of Technology recently described their SMARTech IR.⁵ They have gone way beyond the basics, archiving 36 categories of campus documents, including images, performances, posters, recordings and web pages.

At the Digital Library Symposium that Elsevier organized during the 2010 ALA Midwinter meeting, Winston Tabb, the Sheridan Dean of University Libraries and Museums at Johns Hopkins, described a number of ambitious projects for which they have obtained external grant money. Together they define an expansive new paradigm for the library in partnering with other institutions to create new scholarly resources. Among the projects he described:

- Data Conservancy⁶: Johns Hopkins Sheridan Library won a \$20 million NSF grant to build the infrastructure for a program now involving 24 partner institutions with a shared vision: "Data curation is not an end, but a means to collect, organize, validate and preserve data to address, grand research challenges ... [and] to support new forms of inquiry and learning to meet these challenges through the implementation and sustained management of an integrated and comprehensive data curation strategy." In this program, the library is a key part of a distributed data network; data involves both collections and services; librarians are data scientists; and data centers are the new library stacks.
- With funding from the Andrew W. Mellon Foundation, three initiatives:
 - *Roman de la Rose*: a joint program with the Bibliothèque Nationale de France in which Johns Hopkins librarians worked on the digitization of approximately 130 versions of this poem.⁷
 - Sheridan Libraries' three-year collaboration with the Whiting School of Engineering with librarians and scientists working together to change the ways conservators address the needs of research library collections.⁸
 - Afro-American Newspaper archive, cre-

ated by the librarians in partnership with the newspaper and including clippings, photographs, correspondence, and reports related to the history of clippings.

Tabb concluded that he wanted to broaden the library's horizons. In that process "collaboration is essential; libraries lead, but users must drive; and [librarians should] expect and revel in unanticipated outcomes."⁹

At the same Digital Libraries Symposium, Wendy Pratt Lougee, University Librarian at the University of Minnesota, presented another example of a new paradigm for the library in shaping a sustainable virtual community. The library worked to leverage distributed content and enable collaboration to improve researcher productivity. The specific community described by Lougee is called EthicShare.¹⁰

Back to basics

I want to step back a few years to a small invitational meeting on the future of the research library. There were participants from all stakeholders groups, including university presidents and provosts. I was the publisher representative. At one point the question was raised: "What are the questions or problems on campus that the president turns to the university librarian for the answer?" There were no answers offered to respond to that question--only silence.

I don't think there would be silence in a similar situation on at least some campuses today--not at Johns Hopkins, not at Minnesota, not at Columbia and others I could name. Here are some of the questions on which, I think, the university librarian should be the obvious person to consult:

- How do we improve our efficiency of information usage?
- How can faculty better store and share their personal and research team data? What is the university's role in this effort?
- Which of the university's resources should be digitized and shared with the broader community and which have insufficient ROI?
- How can researchers better identify potential collaborators?
- Which researchers at which institutions can best fill gaps we know we have in specific

programs?

The conference question speaks to the library's failure to create a distinctive, recognizable set of unique competencies. In strategic planning classes in business school you are taught about creating "sustainable competitive advantages." What skills and resources or products and services do you have that your competitors cannot easily replicate? Librarians have the same need to have unique skills, as you are in competition with every other group within your institution for funding and general support.

The bottom line

The bottom line for science and all special librarians is the need to be seen not only as the expert on the provision of content and of the tools to locate and use that content, but the place on campus or within a corporation where users naturally and automatically turn for any question relating to information, whether data acquisition, analysis, organization, retention or use all in the service of making researchers and administrators more productive.

Last year I had the opportunity to meet with the library advisory board at a major science-oriented ARL library. They were mulling over mottos or brand slogans (taglines) for the library and everything they were considering contained the word "knowledge." My view was that this was the wrong focus...it was too passive. Rather, I suggested these alternatives: "The Information Solutions Provider" or "Providing Information Solutions for Research and Education." I'm not a marketing expert and I'm sure the experts could do better, but the point is to position the library as an active partner in improving the research and education process.

In conclusion

In OCLC's 2010 *Research Libraries, Risk and Systematic Change*, concludes by calling for a shift in focus, from legacy roles to new ways to support research:

Most institutions continue to direct resources in traditional ways towards operations that are marginal to institutional and national research priorities, towards processes and services that are ignored or undervalued by their clients and towards staff activities that are driven more by legacy professional concerns than user needs.

To properly respond to the risks identified here, research libraries need to come together around an action agenda aimed at improvement of the research enterprise they serve...[otherwise] it will look the same but everything will have changed.¹¹

When I was at Cornell, one of my early bosses said: "Karen, you're good, but your mouth is going to get you in trouble." As I now approach retirement, I would argue that over the years it has been in speaking out that I have made my career. I do a lot of mentoring these days of really bright, talented people within the company. I regularly advise our younger staff to take risks and to not be afraid of offering your thoughtful opinion. This is the way to create new opportunities, new roles.

What I would equally urge is that those of you who are risk averse to reach out and accept risk as part of survival. Try new things – you're not going to always get it right, but you'll get it right enough times for it to be rewarding. Being right all the time isn't the goal. Trying out new ideas and pushing new paradigms is what is required. Good luck.

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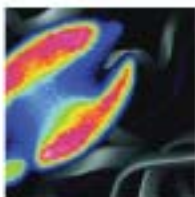
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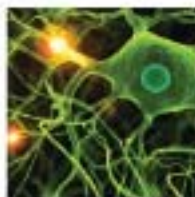
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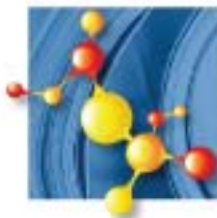
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