

A New Synthesis: Research Resources to Research Experiences

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ABSTRACT

Libraries should develop a new model for providing information resources and analytical tools for the use of scholars working in the current multidisciplinary research environment. This model, *A New Synthesis*, based on today's research experience should replace the present concept of the "collection budget."

Sources are proliferating and traditional scholarly resources are no longer at the core. Research itself has changed. Previously, finding information was primary, but now information is plentiful and today's challenges are to understand, analyze, and extract insight from these vast resources.

To address this challenge, newly designed libraries are appearing that are radically different, reconceptualizing learning spaces, technological infrastructure, and research labs for scholars and students. Yet, the concept of the collection budget is little changed. We must embrace a paradigm that allows us to envision holistically the development and investment necessary to support current research.

To enable expanded capacity for supporting today's Grand Challenge research and to ensure the critical relevancy of academic libraries in this endeavor, we must employ a new synthesis. Sources can no longer be viewed independently from the tools needed to analyze them. Critical elements include: redeploying funds to an array of open platforms; shifting the focus from access to knowledge creation; and investing in spaces, technology, and people that will help researchers solve problems in new ways.

We are at a moment when building these services and placing them at the heart of libraries requires fundamental organizational and financial change. Reconceiving current spending on collections is essential to this change.

A NEW SYNTHESIS

Open science, open access, open data, and all other forms of openness in the scholarly and research environment are transforming how knowledge is created and shared. My colleagues here on this panel are addressing programmatic initiatives and collaborative endeavors regionally, nationally and internationally to make scholarly content openly available to the academy and beyond. My component of today's discussion will focus on how we support academic researchers.

We already know that with the arrival of the World Wide Web and search engines, researchers no longer depend on libraries for "search" and that now the resources libraries purchase and license are of diminishing centrality. Sources are proliferating and traditional scholarly resources are no longer at the core. Study after study shows this is so, and with recent high-profile breaks in Germany¹ and California² from big journal vendors, we are crossing thresholds that formerly seemed impossible.

¹ <https://www.the-scientist.com/news-analysis/major-german-universities-cancel-elsevier-contracts-31208>

² <https://osc.universityofcalifornia.edu/open-access-at-uc/publisher-negotiations/uc-and-elsevier/>

This fundamental shift is possible because research itself has changed. Previously finding information was primary, but now information is plentiful and today's challenges are to understand, analyze, and extract insight from these vast resources. As Nancy Fried Foster from Ithaka S+R wrote, "The reality is that people work differently now, in vast scholarly communities, with immense bodies of literature and a wide range of new and changing tools." (Tancheva, et al., 2016, p. 4).

In libraries, we have recognized and have been adapting to these changes. Scott Bennett reported in his Council on Library and Information Resources (CLIR) study in 2003, *Libraries Designed for Learning*, that in the ten years between 1992 and 2001, \$449M was spent annually on expanding library space through renovations and new buildings and that this new space was primarily spent on growth space for collections. And while there were exceptions, most of the new shelving was not constructed in separate storage facilities (Bennett, 2003, pp. 3-7).



Figure 1. A New Generation of Libraries. Clockwise from top right: Charles Library at Temple University, Hunt Library at NCSU, and Taylor Family Digital Library at the University of Calgary visualization lab and exterior.

Contrast that with the nearly two decades that followed, in which we have seen newly designed libraries that are radically different, reconceptualizing learning spaces, technological infrastructure, and research labs for scholars and students. We have constructed a next generation of libraries like the Taylor Family Digital Library at the University of Calgary, the Hunt Library at North Carolina State University, and the Charles Library at Temple University. Numerous renovations are underway, and digital scholarship centers and graduate and faculty commons are evolving. Yet, the concept of the "collection budget" is still addressed in a manner pre-dating such changes.

We do not have in place a paradigm that allows us to envision holistically and program systematically the development and investment necessary to support current research. I am proposing that we adopt a *New Synthesis* that allows us to invest in digital content and the analytical tools necessary to its use in synergistic combination.

DIGITAL MEDIA AND ANALYTICAL TOOLS

The sources scholars use today are valued in association with the analytical tools that enable research outcomes

Our choices about content must be increasingly linked to analytic capacities

This creates a **new synthesis** driving our content decisions and expenditures



Figure 2: Digital Media and Analytical Tools.

In 2015, with the support of The Andrew W. Mellon Foundation, staff at the University of Calgary conducted an evidence-based study to determine what were the primary needs of today’s multidisciplinary researcher that might be provided through collaboration with the Library. With the support of the Vice President for Research, workshops conducted over three days involving 50 scholars from fifteen different disciplines addressed the question with the aid of outside moderators. A small number of library and research services staff attended, but only as observers, seeking to avoid influencing the deliberations.

There was a remarkable level of consensus across the spectrum of disciplines represented. And although the focus was on new services, at no point in the discussions did any of the scholars mention academic journals. Instead, the needs identified are shown here in Figure 3.

FINDINGS



Identified Needs

- Data Curation and Repositories
- Analytics and Visualization
- Digitization
- Metadata Services
- Rights Management and Dissemination
- Collaborative Spaces
- Expertise and Skills Training

Figure 3: Identified needs from the 2015 faculty workshops.

This initial investigation was followed by two years of competitively selected multidisciplinary research projects employing a common research platform and conducted in explicit collaboration with the library. The goal of this evidence-driven endeavor, sponsored by The Andrew W. Mellon Foundation, was to instantiate these new capabilities, build library knowledge and expertise, and expand scholarly awareness of library capabilities. Twelve funded projects were conducted in two phases, after each of which an external team reviewed the outcomes.



Figure 4: The Academic Research and University Libraries: Creating a New Model for Collaboration Project. The wordle highlights the departments of the researchers involved in the twelve research projects.

The project included two external reviews conducted by a diverse panel of international experts. The review team appraisals, conducted after each phase, were very positive and they highlighted the level of engagement and pride exhibited by library staff directly engaged in the research projects and the new spirit of awareness and enthusiasm conveyed by the researchers.

Conclusions drawn from this study were that for academic libraries to remain relevant in today's research enterprise, substantial organizational, structural, and operational changes are necessary. These include: moving from disciplinary to functional roles; focusing on research partnerships rather than counting transactions; and fundamentally shifting our focus from resources to the experiences of researchers themselves.



Figure 5: Research Resources to Research Experiences.

Critical to this new focus on the research experience will be reconceiving and repurposing of what is still largely referred to as the “collection budget,” to enable expanded capacity for supporting today’s Grand Challenge research and to ensure the critical relevancy of academic libraries in this endeavor.

To this endeavour - what is now being classed The New Synthesis. So, what is meant by this?

- What this does not mean is continuing to collect and spend in the way we have historically with the goal of building the “comprehensive research collection.” Due to the exponential increase in resources this is less possible today than it ever was, and our growing awareness of diversity increasingly causes us to question the inclusiveness of what we have previously collected. Now that content lives everywhere and is updated in real time, the capacities to analyse, synthesise, validate, and disseminate are now as important as static collections. Sources can no longer be viewed independently from the tools needed to analyse them.
- What it will also mean is redeploying funds to an array of open platforms and doing so very strategically. Included in this is investing in our university presses to ensure their support of the core mission of our universities. For example, the University of Calgary has created one of the largest Open Access University Presses in North America, balancing revenue sales with thousands of views per Open Access title.
- It is critical that we support our researchers and their growing reliance on analytic tools. For example, geospatial analysis today is something undergraduate students learn and is core to scholarly inquiry in many fields. Likewise, visualization tools will be essential to mining and analyzing vast quantities of data. These are the new places for investment – yes, even if it means we lessen investments in licenced content. It will be about repositioning supports like metadata and digitization from serving collections to becoming frontline services that researchers need in their projects.
- And ultimately, it will be about shifting our focus from access to knowledge creation. This includes investing in spaces and technology and people that will help researchers see and solve problems in new ways. While it is true that we haven’t seen the return of faculty en masse to the physical library, the new spaces for collaborative research, project launches, and community outreach, are showing real signs of promise and success.

*THIS IS THE MOMENT
A PROFESSION-WIDE REDEFINITION IS UNDERWAY*

**This redefinition of the Library’s
role in research is essential to
our continuing relevance**

Figure 6: A moment for redefining the library's role in research.

We are at a moment where building these services and placing them at the heart of what libraries do requires fundamental organisational and financial change. I would suggest that reconceiving the 40-60% we currently spend on collections is essential to this change.

In spring 2018, the Association of Research Libraries changed its membership criteria to reflect these evolving roles. The criteria now include “engagement and partnership with campus and other research organisations to collectively support the full research lifecycle and its impact.” (Association of Research Libraries, 2018). The new criteria were adopted unanimously. I took part in this effort, and believe it came from the wide recognition that if we do not make this shift, our libraries may continue to be wonderful spaces for students, and licensors of content, but that our relevance in research will steadily decline.

I urge you, then, to question the assumption that the licenced resources libraries provide are our central contribution to research. I urge you instead to take evidence-based responses to researchers and their needs, and let these inform our choices.

And in that spirit, I’ll leave you with these words from one of our researchers, Suzanne Goopy (Associate Professor, Nursing), who summed it up best, when she said, “Recently colleagues have been asking where I am, and I tell them I’ve been working at the library. I used to come to the library for the books and journals. These days, I come for the people.”

REFERENCES

- Association of Research Libraries. (2018). *Principles of Membership*. Retrieved from <https://www.arl.org/wp-content/uploads/2019/05/2018.04.24-PrinciplesOfMembership.pdf>
- Bennett, S. (2003). *Libraries designed for learning*. Washington: Council on Library and Information Resources.
- Tancheva, K., Gessner, G., Tang, N., Eldermire, E., Furnas, H., Branchini, D., . . . Foster, N. F. (2016). *A Day in the Life of a (Serious) Researcher: Envisioning the Future of the Research Library*. doi:<https://doi.org/10.18665/sr.277259>