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I Hear the Train A Comin' -- Institutional Repositories: The Promise of Tomorrow

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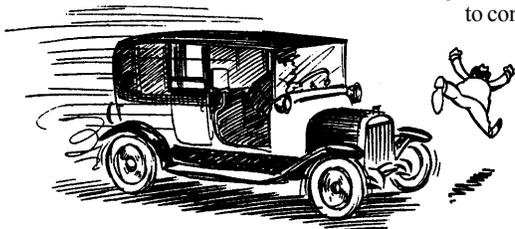<gtananbaum@gmail.com> *www.scholarnext.com*

In last issue's column, I wrote about what we have learned to date from the institutional repository experience some 7+ years after the category emerged. Here, I will bookend that piece by looking at the future of institutional repositories within the larger context of a rapidly changing scholarly communication landscape. What can an IR truly be counted on to deliver, and what are the impediments to a successful IR that institutions must face?

Let's dig in by rehashing just exactly why institutional repositories matter. IRs disseminate a wide range of scholarly information. There are thousands of repositories worldwide serving up millions of scholarly objects. This is a path to information which simply did not exist 7 years ago. It is neat to think about how institutional repositories have taken content which was heretofore buried and brought it to within a **Google** search of worldwide availability. Very much related is the notion that the IR helps *preserve* this accessibility for future generations. We don't always know today what will be important tomorrow. The reduction in storage costs mean repositories can err on the side of inclusion rather than exclusion. Thirdly, institutional repositories can, and sometimes do, push the envelope. They can be used to experiment with new publishing models, new ways of grouping content, new intramural and consortial partnerships, new forms of copyright management, and so forth. An IR is not a university press. In spirit it is more aligned with the **Web 2.0** world, which values less formal, less rigid forms of communication. **Web 2.0** sites tend to maintain a sort of "beta" feel, subject to evolve based on market feedback and the trends of the day. And while librarians aren't exactly the go-with-the-flowiest lot, there are numerous examples of IRs that experiment, adapt, and adjust, from **JISC's** exploration of mechanisms to ingest and display experimental chemistry data to **Boston College's** infrastructure integration with its digital asset management system.

While institutional repositories clearly matter, they nevertheless have a number of limitations. As I mentioned in last month's column, no one has yet developed a replicable formula for convincing faculty to participate en masse in the repository. Some schools rely on library staff to acquire and deposit materials. Some attempt to utilize the support staff associated with each department to do the grunt work. Others rely on a hodgepodge of content acquisition activities. This is a tough nut to crack. Seven or so years into the IR Era, I am not convinced it is crackable, to be quite candid. I'll revisit this momentarily.

A second big challenge is coordinating the repository with other units of the institution. Why, for example, can't promotion and tenure forms be synched up with the IR so that each faculty member deposits his/her scholarly output into the repository? Why doesn't the external relations department create a database of expert profiles using the IR? There simply have to be more ways to leverage both the technical sophistication and range of content the repository provides to advance the institution's mission and create internal efficiencies.

Another key limitation is the fundamental disconnect between how institutional repositories collect resources and how researchers search for information. Does a materials engineer go onto the Web and say "I want to find some new working papers on polymers and plastics. Let's check out the **University of Nebraska** or the **Texas A&M** repository"? Probably not. It is not efficient to conduct research this way, and it simply isn't how scholars are wired. They want one-stop-shops to access information. It is true that there are umbrella sites like **OAIster**, **ResearchNow**, **Google Scholar**, and **Scirus** that allow researchers to search across repositories, but they seem like primitive tools in many ways. There needs to be a better way for Joe or Jane Researcher to discover content by type, by subject, or other parameters, across repositories. This is important. The simpler, more inclusive, and more accurate such meta-repository searches are, the more traction they will get and the more visibility they will bring to repository content.

Given these benefits and limitations, how does the institutional repository impact the large scholarly communication landscape? Think about how scholars are communicating. Communication can be formal and it can be informal. It can be permanent or impermanent. It is interesting to think about just how effectively the institutional repository services each quadrant.

Figure 1: Scholarly Communication Quadrants
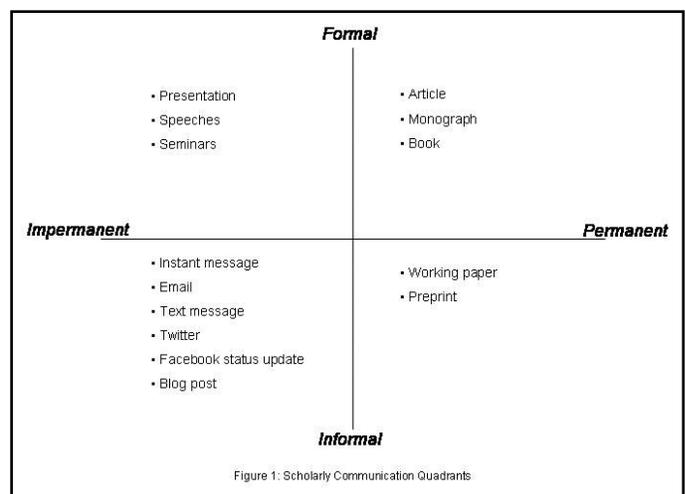
There are communications that are formal and permanent, like a journal article or a book. The IR plays a role in this quadrant by expanding access to alternative versions of commercially-held properties, and by changing the economic models for specialty publications and stretching the long tail as a result.

There are communications that are informal and permanent, like a working paper or a preprint. I would argue that the institutional repository has substantially impacted the scholarly communication landscape by making this quadrant a more arable place. Content that is not destined to end up in a journal, a bound volume, or a library stack is substantially more viable today as the result of the IR. It has found a home, as it were.

The fortunes of communications that are formal and impermanent — and by impermanent I mean they are delivered in the moment without much thought given to their long-term viability — have been similarly though less dramatically impacted by the rise of the IR. This information can now be captured and exposed to a wider audience. You don't just have to be there, or rely on someone else's interpretation of events that took place outside your presence. Video, audio, PowerPoints — it can all be captured, served, and curated. The impact of the IR here remains more hypothetical than practical in the sense that IRs provide the *capacity* to capture and serve this type of information, but the actual *uptake* has been slow.

Finally, there are communications that are both impermanent and informal — IMs, emails, texts, blog posts, and so forth. At present, the IR does very little here. Frankly, I am not sure whether it should.

Download counts and other metrics tell us there is an audience for informal works and for impermanent works. Is there an audience for informal *and* impermanent works, and, if so, how are these materials best captured, categorized, organized, and preserved? Or are some forms of scholarly communication simply too off-the-cuff and evanescent to be of widespread and/or long-term value?

This is but one of the questions we will encounter looking forward. Institutional repositories face many interesting challenges and opportunities as they approach adolescence. Common deposit mechanisms such as those envisioned by **NISO**, **SWORD**, and other initiatives may expose scholarly objects to their creator's choice of multiple deposit domains, such as journals, content management systems, subject matter repositories, learning object repositories and, of course, IRs. The current reality that a scholar creates something and then must follow several submission paths to give it life in all the places where it could have life certainly impedes the success of the IR. The consolidation of effort, in which the institutional repository deposit is no harder than checking another box, seems like a promising way to clear this hurdle.

Web 2.0 considerations will also continue to impact institutional repositories. The emerging generation of scholars spends its time on the Internet sharing things — pictures, videos, theories, gripes, thoughts, and so forth. Looking ahead, it seems likely that scholars, especially students and younger professionals, will want access to more real-time information and more unfettered communication. And they will want it with lower barriers — quicker, at less expense, delivered in a format and medium of their choosing to a device of their choosing. IR infrastructures and services will need to grow more flexible and nimble to meet these expectations.

Another potential game-changer for the IR is the proliferation of funding mandates. We have seen with **Harvard** that institutions may decide to use the institutional repository as a tool to execute broader policies and strategies. As yet the list of schools that has followed suit in mandating faculty deposits of their research has been small. **Stanford's School of Education** and **Macquarie University** are two of the notable mandators. Should other institutions begin requiring their faculty to archive copies of their funded research, the IR would no doubt increase in prominence.

Institutional repositories have had an interesting trajectory. They have not been the next course management system, a ubiquitous utility permanently enmeshed in the communication protocols of nearly every college and university. Nor have they been a white elephant along the lines of multimedia CD-ROMs, a product category heralded with great fanfare but ultimately adding little to the long-term fabric of scholarly communication. The jury is still out on the long-term impact of institutional repositories. I look forward to revisiting this fascinating issue in the years to come. 🌲

The **University** then made available online files for each of the digitized works. The bibliographic records were acquired and enhanced by librarians at the **Auraria Library** in Denver. After the records were loaded into Skyline, the Auraria Library online catalog, they were uploaded to Prospector, the union catalog of the **Colorado Alliance of Research Libraries**. Now library patrons from across Colorado have access to the online books via the **Prospector catalog**. Except for the **University of Michigan** where the books originated, the **Auraria Library** was the first library in the nation to make these books available to its users. For more information about Skyline and these records contact: **Jeffrey Beall** at **Auraria Library** <Jeffrey.Beall@ucdenver.edu> or for more information about **Prospector** contact **George Machovec** <george@coalliance.org> *www.coalliance.org*

Just back from a fabulous trip to Oxford, England where I attended a conference: "Exploring Acquisitions" from April 15-17. Wonderful. Ran into all kinds of great people from all over the world. More information coming on the *ATG* **NewsChannel** and in the June 2009 issue of *ATG*!

Guess we're out of space. More **Rumors** on the *ATG* **NewsChannel**! See you there! ***www.against-the-grain.com***. 🌲

I have an idea that **Francis Bacon** probably wanted his libraries deathly quiet but I fear that unless we loosen up our rules about the need for silence and stop shushing people, our libraries will be dead to the world. I probably also agree with **Plotnick** who in another part of his essay said:

When I am working in a library, I much prefer a general hub-bub to the sound of my own breathing or of catalog trays slapping closed or of somebody's acid indigestion. Oh, once in a while I might enjoy a brief period of near-perfect silence during a particularly meditative study. But I will gladly sacrifice that occasional pleasure for the privilege of, say, reading a good passage aloud to a companion across the table or breaking the tedium of study with a joke and with funky laughter, and so on.

If you have time and want more about the value of silence, click to **Youtube's** rendition of Silence Is Golden by the Tremeloes *http://www.youtube.com/watch?v=wP3YCZvuB6A*. 🌲

Endnotes
1. **Plotnick, Art**. The liberation of sweet library lips. In **Celest West**, **Elizabeth West**, et al (Eds.) *Revolting Libraries*. San Francisco: Bookleggers Press, 1972. Retrieved April 7, 2009 from *http://owen.massey.net/libraries/revolting/lips.html*.
2. **Sexton, David**. (April 7, 2009). The sound of silence is all we want in our libraries. *Evening Standard* (*standard.co.uk*). Retrieved April 7, 2009 from *http://www.thisislondon.co.uk/standard/article-23560632-details/The+sound+of+silence+is+all+we+want+in+our+libraries/article.do*.