From the *Future Ready 365 Are You Ready Today?* Blog

Future Ready: The Pace of Change for Technology and Culture

Posted on 16 September 2011. Tags: academic, citation, culture, future trends, prediction, publishing, technology

by Joseph Kraus, Rocky Mountain Chapter, Physics-Astronomy-Mathematics, and Science-Technology Divisions

For librarians and information professionals to be truly future ready, we should be able to predict the future, but of course that is impossible. One of the ways I think about the future is to think about how accurate predictions of the present were in the past. For the sake of picking a date, I am going to predict what things are going to be like for libraries and information centers in the year 2031 using 1991-2011 as the lens. Since I am an academic librarian, this article will have an academic bent to it, and I hope you can extrapolate the logic to fit your situation.

When it comes to technology, Jason Griffey from the University of Tennessee says that the future is already here. But if the future is already here, then what is going to happen in the real future? I would guess that tablets are here to stay, and that ebook readers will also continue to grow in popularity. Tablet and laptop computers will continue to get lighter, cheaper, faster, hold more information, and have more memory. They will continue to follow Moore's Law. Cloud computing will continue to grow, especially as more and more data becomes available, and it needs a place to live. Software will continue to fracture with more OS choices and more bloatware as the space becomes available. More and more people will communicate with each other using smartphones (or some other device) in the US and throughout the World. Digital images and videos will continue to get easier to make, edit, store and publish online.

Even though technology changes rapidly, social constructs and culture change more slowly. In 1991, people:

- read books, magazines and journals in print
- watched television on cable, go to the movies or rent VHS movies from Blockbuster
- called each other on a landline telephone
- snail-mailed pictures to friends
- listened to music on the radio or on tape/CD
- met each other at bars or coffee houses
- drove gasoline-powered cars to go to those places

Today, in 2011, people:

- read books, magazines and journals (many with an e-reader or on the web)
- watch television (either on cable or dish), go to see movies, or get movies on DVD/Netflix
- call each other on cell phones, text each other or call someone on Skype
- see what friends are posting on Facebook or Twitter
- listen to music on an iPod or some other device
- meet each other at bars or coffee houses
- drive gasoline-powered cars (or a hybrid car) to those places

People still want to converse with each other either in person or using technology. That will not change in 2031. People will want to read, view, or make information products. People will want to meet with each other, either in person or virtually. Speaking of that, virtual meeting software is getting cheaper and easier to setup and use, so that will be used much more often in the future.

In my view, the publishing and media industry is a cultural and social construction. In 1991, the major publishers had a good strong hold on the publishing industry, and they have a similar hold on publishing today. In the last 20 years, major publishers have consolidated , and I don't see the big publishing houses withering up and dying. There has been a lot of activity in the Open Access front, and they offer some great alternatives to publishing, but they have not made a huge dent into the profit margins of for-profit publishing outfits. In the academic and STM publishing world, there is resistance to change in traditional publishing outlets. See Michael Clark and Josh Sternberg and Leonard Cassuto. However, there are many people who say radical transformation of scholarly publishing is ahead. Cameron Neylon and Michael Nielsen and Ingmar Mewburn and Nigel Thrift.

One aspect of change in the publishing industry has been the contraction of A&I sources. Since more and more content is found on the web, people are searching Google and Google Scholar to find scholarly content. They are finding good enough information. If Google Scholar (or some other search engine that might be developed in the next 20 years) really wanted to, they could put a big dent into the revenue stream of traditional citation searching database businesses.

When it comes to social change for scholarly authors, they get rewarded through the tenure and promotion (T&P) process. Many universities and colleges have been employing less and less tenured faculty, and there is debate over the long term viability of tenure on campus. Many people think that higher education is ripe for disruption.

Be that as it may, the faculty who do research in universities and colleges are under pressure to publish this research in high quality sources. In 1991, the perception of high quality journals

was limited to certain journals and publishers, and over the last 20 years, it was very difficult for new sources to be added to those lists. Over the next 20 years, these lists of journals and publishers will probably stay roughly the same because the administrations of academic institutions are very slow to change their T&P policies.

Some authors are starting to see the citation advantage of making their work available through Open Access sources, but this has been slow on the uptake. Over the next 20 years, more faculty will see these advantages and change their behavior, but it will not be a quick change.

By 2031, the technology will have changed quite a bit. Maybe we are typing in the air while we view our email in virtual reality glasses. We might be able to talk to our documents, and the language is automagically translated into Russian for our colleague in Moscow. We might be able to digitally video record our waking hours, so that we can easily remember dates, names, people, places and the things we thought about and said. Whatever technological changes are ahead, the behavior and the culture of the people who use that technology will not change near as rapidly.

Joseph Kraus is currently the Science & Engineering Librarian at the University of Denver (DU) Penrose Library. DU is a medium sized private university in Denver, Colorado. He is active in the Physics-Astronomy-Mathematics and the Sci-Tech Divisions of the Special Libraries Association (SLA). He is also a member of ALA/ACRL and the American Society for Engineering Education. He has written numerous articles and has presented on topics from Library2.0 resources, unconferences and collection development.