Class Teaching Notes INLS 700 Scholarly Communications

#1: History, Introduction

Introduce yourself, and let class introduce themselves. Ask about their experience and interests, and get their input to help plan material you'll cover in class. **(15 mins)**

Course logisitics
Go over webpages. **10 mins**
Go over A0, and be sure they have done everything, and have them practice adding to class work wiki and readings page. **10 mins**

Cover HISTORY slideset. Have discussion with them. **15 mins**
Talk about how technology and the digital representation of information has changed everything. Ask them to give examples. Share some of your research work. (ETDs, OERs, scholarly papers, searching for scholarly information). Brainstorm with them about how things have changed (openness of information, easy access for many (but not all), ability to talk directly with experts, anyone can publish, collective vs individual authoring) **15 mins**

Cover A1, and expectations. **5 mins**
Discuss possibilities for final project: Scholarly Communications Officer job interview, or presentation on issue you study in depth.

#2: Scholarly Publishing

What is scholarship and scholarly communications? Let's understand in more detail the creation through publication and sharing process.   Walk through the processing of creation and sharing. Draw on board and fill in all the parts.

- Idea
- Literature Review
- Sharing idea informally, bouncing ideas off colleagues
- Formulation of Problem
- Study Design
- Do pilot program
- Get research grant
- Hire students to help
- Conduct study/experiment
- Do analysis of results
- Write up results
- Informal communication
- Present at conference get feedback.
- Formal communication: journal publication
    - figure out where to submit work(s): conference and journal
    - Submit to journal
    - Get reviewed
    - Make revisions
    - Get published
- Responses from others to your informal or formal communications (they request material, perhaps engage you in discussions), get comments on your article (online?)
- Get ideas for future work, conduct new work
- Use your results to conduct further work, get grants, work with colleagues, advance your career (tenure and promotion).

Publication Process in Detail
- Choice of journal (reviewers)
- Submit
- Editor decides topical or not; good enough or not

- Manuscript assigned to 2-3 reviewers.
- Decision on accept or not; what revisions are required
- Final manuscript submitted
- Copyproofing, typesetting by publisher
- Goes online, then print version
- (marketing)
- Metadata exposed by publisher so searchable
- Archived ("permanently") by publisher
- Access is then fee-based or free (open access).

REVIEW READINGS and RESPONSES

Fjallbrant:
Aspects of academic writing
• ownership of an idea
• societal recognition for the author
• claiming priority for a discovery (patents)
• establishing an accredited (sometimes professional) community of authors and readers this is important--interesting to look at how the artefacts (authors, journals, articles, conferences) play a role in this.

I would label as
Personal Image: prestige, self importance of your discovery
Self/Group advancement:
   Ownership (if they have commercial value, helps you, or university/company)
   Academic reputation (based on academic importance)
Personal satisfaction of public good (spreading scientific knowledge)

Roles Played by Groups:
Primary producers (authors)
Facilitators of Authors: universities, private companies that support authors
Facilitators of Production (*secondary producers*): Publishers
Readers
Facilitators of Reading/Discovery (*consumers*): libraries, commercial organizations

Early on it was difficult to produce forms (printed material), so only a few of the best were printed. Nowadays it is essentially zero cost to publish already produced content, so very little in terms of filtering, particularly in the wild west of unsupervised journals (later discussion).

Policy is generally driven by economics (business interests)

During the sixteenth century, publishing in England had been the monopoly of a cartel - the Congers. This group possessed the right of granting publishing licenses and this could be withheld from a freelance publisher. They insisted on fixed copyright fees and insisted on their right of perpetual copyright. Prior to 1709 an author had no copyright to his own work......Authors were required of publishers to surrender their right to perpetual copyright in exchange for being published! This was later changed in a famous case - Donaldson v. Beckett (1774), which was instrumental in changing the perception of copyright to an author's property rather than that of the publisher. In this way a scientific author had some legal guarantee of intellectual ownership for his published material. The scientific journal in the seventeenth century was simply used as a method for improving communication between the research workers of that time. However the 1709 copyright act changed the concept of the journal article. This became a means to register "ownership" of a given theory, method or process. The journal article became a means of registering ownership and establishing scientific priority.

Barjak2006

Useful for two things

- Example of experimental study
- And nice background on Informal vs formal communication

Formal communication is impersonal and takes place in scientific journals, books, and to some extent, at conferences.
The journal article is expected to be a robust and reliable piece of information

Informal communication takes place through discussions with close co-workers, talks and reports to small colloquia, working papers, and presentations at conferences. At each stage of this process, the audience increases. Depending on the phase of research, it helps to identify suitable topics, focus the research approach, refine the findings, and put them into the context of other current research. Two different groups of researchers that communicate informally have been distinguished (Crane, 1972; Hagstrom, 1965; Price&Beaver, 1965).
The first is the team of researchers and collaborators that jointly work on a project; the second is the invisible college, i.e., the "power group of everybody who is really somebody in a field" (Price & Beaver, 1965, p. 1011). It serves as a channel for the dissemination of research ideas and research results, which it has evaluated positively. It also represents a regulator that matches the volume of information with the absorptive capacities of the researchers (Cronin, 1982).

What is interesting about electronic tools is that they empower both, but perhaps informal more? Formal (article) is more easily and quickly available. But all the informal modes happen more easily and quickly, and allow you to reach out directly to authors and their thoughts (blogs, twitter).

What did class think of their experimental results?

Review A1s.

When appropriate: Visual History of Scholarly Communications
http://cdn.knightlab.com/libs/timeline/latest/embed/index.html?source=0AkcDG15L9ttxdHJIaFNzbzNZ
NGlUR09zT1hNTGhXVEE&font=Bevan-PotanoSans&maptype=toner&lang=en&height=650

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#3 Serials Crisis

Impact: My story of using my article for my class.

Collision of these two major factors in time (serials crisis and technology change) have made for interesting times. Let's examine these in more detail

Serials Crisis introduction.   Diagram of pricing. Diagram/review roles of participants (faculty creating, universities, funding agencies supporting, faculty running journal, faculty doing peer review, copyediting, marketing, supporting searching of content, archiving, preservation). Status of library budgets (covering budget through one time funds, or dropping coverage). Is it just a library problem or a scholarly communications problem?

Panitch Reading for background on Serials Crisis.
Great discussion on serials crisis, from perspective of libraries.
Review charts on pricing changes.
Alternatives to standard commercial publishing for academic materials:

- open access publishing
- institutional or consortium publishing (SPARC, High Wire, OJS, Wordpress),
- refusing to purchase large commercial packages

Left out is discussion of how digital representation of content plays into this.

Talk about convocation in 2005 in that lead to this report.   And what has happened since.

Urs Reading:
Good coverage of background of scholarly communications, effect of digital representation, and copyright and why standard commercial treatment of copyright protections aren't appropriate for academic publishing.

Section 2: on background of copyright
Section 4: on why copyright is (in)appropriate for academic works vs entertainment
Section 6: is it appropriate for libraries to be licensing for short term, when their mandate is for making accessible and maintaining for long term (future generations)?

Copyright:
We violate it all the time (John Tehranian) .
Georgia State copyright case (university trying to share material with students in course notes)

Some questions for our discussion

- Should there be different copyright/licensing for entertainment vs scholarly works? What about scholars who write poetry, fiction, create movies, etc? What about scientists who profit from research discoveries?
- Are there other licensing options (walkthrough of licensing rights, Copyright, creative commons, public good).
- Should licensing be at archival point? (*see quote below*)
- Can we entrust publishers with preservation (long term access to content by our library users?)
- Why did professional societies sign off on getting bundled into "evil empires"? (Crack addiction of professional societies).
- Have the publishers changed behaviors since the recognition of the serials crisis or the advent of alternatives like open access?   In the long run, will publishers migrate towards a more supportive approach or will we have to have a rebellion in publishing to completely change the paradigm?
- What's happening in the serials crisis?
  - http://lj.libraryjournal.com/2014/06/opinion/peer-to-peer-review/is-there-a-serials-crisis-yet-between-chicken-little-and-the-grasshopper-peer-to-peer-review/
  - http://scholarlyoa.com/2013/05/07/the-serials-crisis-is-over/
  - https://www.ebscohost.com/promoMaterials/Serials_Price_Projections_for_2015.pdf

*It is archiving that "fixes" the
content and costs more than distribution,
particularly for maintenance of the archive.
It perhaps makes good sense to evolve an altogether different model for the conceptual
system of copyright – one based on the
archive model and not the distribution-based
business model. Although it appears to be very
revolutionary, given the restrictive abilities
that the Digital Rights Management (DRM)
software can impose, it is worthwhile to
consider and revisit copyright laws from a
fresh perspective of "archiving" rights rather
than "copying" rights*

I don't agree that copyright should be applied to archive and not the distribution-based business models. Too hard to distinguish in all digital environment, and not really clear break. The real solution in my opinion is for academics to publish with different license (creative commons) so that it is publicly available. This will ultimately force publishers who work with academic works to adhere to a business model that is not profit driven, but promotes dissemination and discovery of academic knowledge.

In the print paradigm,
publishers were not bothered about preservation
while libraries took great pains to preserve, and in
many academic institutions issues of journals may
be bound into volumes and remain accessible for
users, via the library archive, long after the journal
has ceased publication. In the digital paradigm this
function is slowly shifting to the publishers. The
issues that compound the fact are the problem of
lack of infrastructure and the wherewithal in
libraries to undertake preservation and the
software required for searching and accessing the
archive that is developed at considerable cost by
the publishers

Who should preserve these scholarly materials?   Dr. H. suggests that Government fund and provide this service for the public good (or perhaps international federation of governments). Otherwise publishers or private companies like Google will choose to house them to gain value from them (but not necessarily for public good in long term). I suggest the best solution is that the federal government, either the Library of Congress or the National Library of Medicine (in expanded role) should house all US published materials (and offer to do so for whole world as way to better the world through improved scholarly communication). Unlike print materials, they can then be accessible to anyone for free. And it's a small cost to archive them. They would provide archive, preservation, registration. Then we'd layer on to of this archive the other parts of academic publishing process (copy proofing, certification, i.e. the previously proposed concept of "overlay journals"). .

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#4 Solutions to Serials Crisis

The Big Picture: Workflow and Participants and Cost

a) Big picture discussion of about scholarly communications, with emphasis on journal articles as medium. (draw flowchart, or use your slides). Discuss what are current shortcomings (i.e. slides from surveys of academics; note we don't have from other participants, but can guess from profit motives of publishers etc).
http://ils.unc.edu/bmh/pubs/Scholarly%20Communications--2003-with%20updates.ppt (update to remove extraneous material).

b) understand the differences between the OLD (print) and the NEW (digital). Draw on board old process (paper) vs new process (digital). Walk through of how technology has changed things. What else could we change to make this better?

Readings

Branin: Changes in Collection Development and Management

Not good license management software available today (Nina).
Consortia examples: (local examples) NC+SC licensing, TRLN, NCLIVE (legislation funded, some independent from private universities).

Explosion in growth of volume of scientific publications (number of articles, number of journals).
> In 1870, 840 papers were published in mathematics; by the
> middle of the 1990s, 50,000 new mathematics articles were being published annually (Odlyzko
> 1995). The second half of the twentieth century has been a time of spectacular growth in all
> fields of knowledge, especially in scientific disciplines. According to Cummings et al. (1992,
> 61), book production in the United States began an "extraordinary expansion" in 1945 that was
> "particularly rapid during the first half of the 1960s." The creation of new science journals, as
> reported by Science Citation Index source publications, dramatically increased in the four
> decades from 1950 to 1990, with the 1970s being the decade of the most dramatic scientific
> journal growth (Cummings et al. 1992).

Question: what has it been the last 30 years? I.e. even more explosive growth due to ease of digitally publishing. (includes "low quality" and "predatory" journals).

Change from collection development to collection management
Change from collection management through acquisitions to collection management through licensing (Dr H's view)
Attempt to collect cooperatively; or more specifically *("libraries are becoming museums"-Dr H)*
> a) Everyone has copies of common materials (or you can access them from large institutions)

b) Individual institutions curate special collections of what you're expert in, make digitally available (for example DocSouth)
c) put digital copies (CLOCKSS) other places for safekeeping.

Changing Priorities for collections:
the emerging dominance of the sciences in the university's hierarchy of disciplines, the demands of government funding agencies for "relevant" research, and the decline in foreign language competencies made the older humanities-based model of collection development in research libraries less effective. Osburn concluded that a more service-oriented model of collection development, one that emphasized currency, responsiveness, and focused attention to user needs, was needed.

Cooperative collecting: good idea, hard to implement, at least for physical materials. So are digital materials a game changer for this (Hathi Trust, Open Library, ibiblio)?
The Center for Research Libraries, however, emerged as a viable model for depositing and sharing highly specialized research material. Some carefully focused regional efforts, such as the one involving the academic libraries in North Carolina's Research Triangle, did provide some longstanding cooperative collection development opportunities for the libraries involved (Dominguez and Swindler 1993). By and large, however, most cooperative collection development experiments from the 1950s through the mid-1980s were not successful. The strong political pull of local library autonomy, combined with the technical difficulty of moving print material quickly and economically over geographic distances, tended to make cooperative collection development difficult and impractical (Branin 1991).

Are libraries the central heart of academic institutions?
Howe (1993) described the emerging situation as the "decentering of the library" within institutions of higher education. According to Howe, a history professor and interim director of libraries at the University of Minnesota, the library might still have been the symbolic heart of the university, but for several reasons it was losing its central place as a funding priority on many campuses. First, new information technology was creating alternative paths for access to scholarly information, and investments in technical infrastructure and computing centers diverted funding from the traditional library. Second, the decline in arts mid sciences and the rise of science and technology programs in universities eroded the power of disciplines that most directly supported the traditional library. Third, the profession of librarianship itself seemed to be in disarray, fraught with uncertainty and anxiety over its future in the computer age. Fourth, libraries were not competitive enough in the new, aggressive environment of higher education

Discipline Differences in Scholarly Publishing
The divergence among disciplines—and even within disciplines in the sciences (Kling and McKim 1998)—is noteworthy. Scholars in the sciences

publish their research results in journals, rather than in monographs, in part to be able to report as

rapidly as possible. They are, for the most part, comfortable with digital access to journal articles and, in many cases, communicate widely and share initial results of their research electronically, e.g., through the use of electronic preprints. In some disciplines, such as mathematics, scholars regularly use back issues of journals in their fields; in others, such as computer science, they do not. In some areas of the humanities, however, such as history, monographs, not journal articles, are required for tenure and promotion. Rapid dissemination of results is less important in the humanities than in the sciences (hence the different editing practices), and older publications are consulted more frequently than in many scientific disciplines. There are some areas of the humanities, such as philosophy, however, where monographs play a much smaller role than do journal articles.

Yet another field of study, law, is radically different from both the humanities and the sciences. Articles are generally not peer-reviewed but are reviewed by the law school students who usually edit these journals. The journals are inexpensive and largely subsidized by the universities that publish them. Commercial journals are not the most prestigious; rather the prestige of a law journal generally comes from the ranking of the law school that publishes it

Print vs Digital content:

It is unlikely that more than 10% to 15% of a research library's collection budget is used today to purchase or provide access to digital information.

What percentage of library's research collection budget today is for digital vs print?

Taking advantage of commonalities in infrastructure (once we move into the electronic age). Branin says we don't; but are we beginning to? What areas can you think that we do (or should in the future)?

Common platforms don't breed common approaches. Rather, publishing practices and expectations within a given research community are shaped by prevailing norms and conventions. Nothing new in that. Traditionally, a refereed conference paper has counted for something in computer science, but is likely to be given short shrift by a promotion and tenure committee in a business school. A monograph (preferably one published by a reputable university press) will be expected of a junior scholar in English, but not of an aspiring mathematician. This being so, our ex cathedra pronouncements about publishing really should be grounded in the multiple realities of tribal life in academe."

Transformations enabled by technological change:

Fundamental changes in scholarly communications are certainly in store. The traditional book and journal as organizing frames for scholarship will likely change as will basic production, distribution, and archiving. Ginsparg, a physicist at the Los Alamos National Laboratory, Odlyzko, a mathematician at AT&T Bell Laboratories, and Atkinson, a research

*librarian at Cornell University, all have written provocatively about the demise of the traditional scholarly communication system and what its replacement might be. Taking full advantage of desktop publishing capabilities, networking, and powerful computer servers, **Ginsparg** (1996) envisions the development of an electronic "global raw research archive" managed by a consortium of professional societies and research libraries. **Odlyzko** (1995) believes the new digital information system will allow scholars to become their own publishers and archivists. According to Odlyzko (49), "Publishers and librarians have been the middlemen between the scholars as producers of information and the scholars as consumers, and are likely to be largely squeezed out of this business." **Atkinson** (1998) predicts the design of new, networked-based, hypertext, document structures that may "represent fundamental revi-sions in the every modality of communications" and that "may affect and alter some of our basic assumptions about the nature of information itself." (precursors to **DrH's** "ArchiveOne" plan ☺).*

This is article talks about PubMedCentral before it was implemented. It is now a hugely successfully, widely utilized resource.

Inherent advantage of digital content (implemented in Dr. H's NeoRef system). Additional (existing) advantages are search and immediate access. This is essentially the same advantages of the web over print, and of Google over old library catalogs.

Digital technology can also foster the integration of the various components and sources of scholarly publication. In the future, researchers will no doubt use hyperlinks to move quickly online from index or bibliographic citations to abstracts to full multimedia documents with the click of a mouse. Such integration is already happening on the Web and through the efforts of library and scientific information services. The ability to use hyperlinks to integrate scholarship and to make possible interdisciplinary research online is an extraordinary feature, one with which a print format cannot compete

New approaching to licensing digital content:

A strategy that counters the bundling of publications that most publishers use has emerged. California State University's (CSU) librarians and a high-level university committee from the twenty-one campuses of CSU sent out a request for proposal for a customized database that would offer full-text access to 1,279 journals selected by Cal State. This imaginative proposal moved the responsibility for selecting titles back into the hands of the institutions and their libraries and was welcomed by many as an alternative to the growing model of "all or none"
site licensing of an entire publisher's journal output. A vendor, EBSCO Information Services, was selected, but the signed contract includes only about 500 of the 1,279 journals on the librarians' list. Some publishers who declined to participate were unwilling to accept the university's stipulations, which included a requirement that the university community have continued access to the articles even if a subscription was cancelled (there are no Elsevier Science journals in this contract) (Guernsey 1999; Biemiller 1999; Dalton 1999).

Transformation to knowledge management:

> *With such changes taking place on their campuses, collection managers, subject specialists, and bibliographers must move from a primarily local, print collection perspective to a broader vision of "knowledge, management"—just as they had once been asked to move from "collection development" to "collection management." Scholars and librarians must recognize that the library and higher education are inextricably bound together. As Battin and Hawkins (1998, 5) have observed, "The transforming impact of information technology cannot be confined to the library but imply a fundamental reorganization of the host institution. The digital library, as the epistemological center of the university, is certainly positioned to serve as the catalyst for transforming the university to meet the needs of the 21st century society dominated by electronic technology."*

What if Dr.H's ArchiveOne happens and the Library of Congress archives and makes freely available all journals articles, all monographs, etc.?   Or if on a less grand scale most major research institutions adopt open access and most articles are freely available. How would this change the role of the library at universities?   What if you don't have to choose what to pay for since it's free?   You don't make curation or collection decisions on acquiring. But you might in terms of curating finding aids, or building aggregations to support specific research areas (like what Branin hints at).

Suber Open Access

The whole thing!!! Start with the linked brief introduction, then walk through hitting highlights.

> *There are two primary vehicles for delivering OA to research articles,* OA journals *("gold OA")* and OA repositories *("green OA").*
>
> *Some emerging models of peer review presuppose OA, for example models of "open review" in which submitted manuscripts are made OA (before or after some in-house review) and then reviewed by the research community. Open review requires OA but OA does not require open review.*
>
> *The first is to assume that there is only one business model for OA journals, when there are* many. *The second is to assume that charging an upfront fee is an "author pays" model. In fact,* most *OA journals (70%) charge no author-side fees at all. Moreover,* most *conventional or non-OA journals (75%)* do *charge author-side fees. When OA journals do charge fees, the fees are* usually *(88%) paid by author-sponsors (employers or funders) or waived, not paid by authors out of pocket.*

This overstates somewhat I think. Vast majority of prime OA journals are author pays. Many non-OA journal fees are for color prints, excessive number of pages, etc.

Open Access provides many benefits to all the participants (see long list) in the scholarly publishing environment. It does not benefit commercial interests who profit from controlling the content and access to it.

This summarizes very well what I think is the most important takeaway. Step back, look at the big picture and you realize

> *The volume of published knowledge is growing exponentially and will always grow faster than library budgets. In that sense,* OA scales with the growth of knowledge *and toll access does not. We've already (long since) reached the point at which* even affluent research institutions *cannot afford access to the full range of research literature. Priced access to journal articles would not scale with the continuing, explosive growth of knowledge even if prices were low today and guaranteed to remain low forever.*

Review Open Access Guidelines (in preparation for their A2s).
Cover Kelty (UC OA policy).   Let them read the others as they work A2.   Review UNC's Policy when we review A2s.

Standardization of format.   (previous reading Fjallbrant lists Cliff Lynch's suggestions). I think this is dated.
1. to deal with the basic "Raw" text by tagging such as with SGML - Standard
Generalised Markup Language, which can deal with content - chapters, parts, etc, but requires extra handling for images, thereby producing compound
documents.
2. use of a page markup language such as PostScript, which includes text plus
typesetting directives and allows a user with appropriate hardware and
software to reproduce the page as it appears in print.
3. Use of bit-mapped images to produce a picture of a page

My take is "separate content from presentation". XML type representation underneath.   Need to be able to recognize parts of document for automatic processing (text mining) and well as rendering (displaying on many devices).   Talk about my research work on displays, annotations. This is where most publishers are slowly going. Best work is by NLM who has XML representation used for PUBMED Central and this is how most publishers are submitting (federally required) manuscripts.

How do we pay for publication? (after open access discussion) <mark>(not covered in detail; yet)</mark>

Discussed Open Access in detail

#5 Open Access cont'd
Open Access cont'd

Finish discussions of readings from last time. Suber's article? Make sure they have good understanding of OA and how it works, answer any questions.

Review A2:

If OA doesn't exist on campus what steps should we take?
- Survey, interviews to understand current climate and differences between disciplines
- Education, engagement
- Adoption of policy
- Establishment or support from Institutional Repository

If OA exists, or once it exists on campus, look at
Evaluation component: (how can we evaluate?)
- Do the faculty understand the OA policy?
- Are faculty submitting to OA journals?
- Are faculty depositing in OA repositories?
- Are their OA products being disseminated (how to measure?)
- Are their OA products being used? (citation, use, altmetrics etc)?

Discussed Wild West issue with Open Access publishers (predatory publishing, image problems, etc).

#6 University Presses under fire and adapting to new world

What challenges are facing University Presses?

What presses have closed, or significantly scaled back?

If you reject 85% of current manuscripts submitted to UNC Press how do you decide (quality, topic, market demand, ?)

What routes are presses taking to adapt to this new digital environment?

If you provide open review, mark-up, re-use, does this mean the online version is richer? And thus dismisses the demand for the print version?

What presses have large collections of open access materials available?

Who is publishing mid length "books" (20,000-50,000 words)?

What publishers are University Presses using?   (Amazon, Google Books, B&N, ?).   Which ones are they using for open access (free publications)?

Few universities seem to have followed the open access as primary model of publishing. Main one Rice (connexions) lost university support, and it is now remade as OpenStax for OER publishing (Free textbooks, learning modules). UPDATE: more as seen in 2015 AAUP report.

Concerns about if we make it "author" pay for publishing long monographs.   Funding sources would be university fund (like Emory described), the chair of the department, startup packages for faculty, but also faculty grants or personal funds. These may contribute bias to who can publish!

Who will host OA monographs?

How will we make them findable?   Can we just search for them via Google like we increasing do with journal articles?

Values: do journals favor speed of discovery over long term reflection of monographs? Is there a specific value to monographs that we should preserve, or should we just let them die off since they are not economically viable?

AAUP reading

Old ecosystem naturally favored producing high quality content….

> *one of the drivers that ensures quality publishing—and part of what enables publishers to maintain their expertise—is having a financial interest in the success of a publication. Perhaps paradoxically, these financial constraints help ensure quality by raising the stakes for publication*

What happens if we do more "author pay" like current experiments by UNC Press, where author pays part of the price. Could this lead to less emphasis on quality of publication, and more on attracting authors (like the "Wild West of author pay model in journals in 2010s?).   If Universities' help subsidize costs of ebooks, who will determine which are more meritorious?   Or RAND's mission driving approach of publishing everything?

Multiple formats: how do they effect what you can charge (HTML, PDF, Print)?

> *However, while this model may be effective in reducing the costs of publication, it seems unlikely, based on experience so far, that POD sales will be sufficient to sustain the full costs of publication. Initial experiments in publishing books online free while selling print editions—whether new titles or backlist—indicate that online editions receive substantial usage, but print sales remain limited. In addition, among publishers engaged in these projects, there is significant concern that print sales will erode even further, as readers become more comfortable with reading online*

and libraries feel less compelled to buy print editions for archival purposes. The online free/print for sale model thus seems likely to be a transitional strategy.

- Why can you offer HTML for free and still charge for others and make money?
- PDF availability is now being shown to erode print sales.
- When/If will HTML availability erode PDF/Print sales?

Multiple formats, how to choose what to support?

For example, PDFs are currently not accepted by the iPad (only EPUB files), and that situation is unlikely to change. Google Editions avoids the issue of PDFs by ingesting into its own proprietary reader, but the Kindle wants its MOBI format just so. Older titles must be upgraded to the best flavor of the next format. Search engines may want blurb copy in easy-to-process HTML, while distributors want their data in ONIX. TEI XML may be best for some purposes and future audiences, while NLM XML may be best for others. Perhaps the most complex problem is setting the level of quality assurance and proofreading that is necessary for every format, since a PDF is a different representation than a reflowable EPUB in an iBookstore, or the same book on the Kindle. How do we build quality assurance, in multiple formats, in a way that will be able to evolve along with the reader, browser, and library systems in the future?

Brad's take is we should use markup language based system to separate content form presentation. Currently I think best bet is NLM XML for journal articles, or TEI XML for books; rendered to HTML 5 which is displayable on all devices.

Independence of University Press:

University presses, while deeply associated with their parent institutions, are able to operate without direct pressures based on academic fads, expectations of colleagues or obligations imposed by university executives. That independence also means that the publisher can focus on helping develop a limited number of fields, with authors from any university, rather than being a generalized publisher for only one university. When questions of free speech and academic freedom arise, having an independent publisher not operating at the behest and budget of the Provost is very useful. The ecosystem of scholarship is fostered and nurtured by those independent centers of expertise as well. How do we ensure that editorial independence and objectivity continues to support scholarship?

That's the good. The bad is that why even be associated with university then? Advantage is connection to researchers and faculty. If you are there to serve them, then must have connection to University (perhaps even get $$), but also be somewhat beholden to them. Other choice might be consolidation down to a few "University" Presses that are reputation based, but not really associated with universities.

What is John's take on:

Thoughts on National Academies Press and RAND and OAPEN (OpenAccesEuropeanNetworks)
NAP's long experiment in openness has made a few lessons clear, according to NAP Director
Barbara Kline Pope: "We're in perpetual transition. As reading habits and expectations change
among our customers and our leadership, we've had to adapt our online reading experience, our
staffing, essentially all of our approaches to fulfilling the main missions of self-sustainability and
dissemination." Prior to 2004, NAP could make the case that open access increased sales, because
it enabled reader discovery far more than it supplanted purchases. "Since then, it's become
increasingly clear that free content can compete with book sales," Pope continues. "For us, that
4 On the National Academies Press experiments, see Barbara Kline Pope and P. K. Kannan, An Evaluation
Study of the National Academies Press's E-publishing Initiatives: Final Report, January 31, 2003,
http://aaupnet.org/resources/mellon/nap/index.html.16
hasn't meant 'quit being open,' but rather 'find ways to improve efficiencies and increase the
universe of people who find us, to remain open while also being sustainable.'"

RAND has seen a decline in demand for printed products over the past two years as the number
of downloads continues to escalate. Ryan says, "There has been an increased demand for e-books
through our distribution partners, and that is where we are currently focusing our marketing
efforts." Readability on e-readers and smart phones is an important issue, especially given the
complex nature of RAND publications, which often include complex tables, figures, and math.

The plan to support OAPEN through a mix of revenue sources is one of its key features, as is
the effort to introduce publication fees as one of those sources. Publication fees—often called
"author fees," although they are typically paid not by authors themselves but by research grants
or other institutional funds—are emerging as an important model for funding open access STM
journals; but the model has yet to be tried for books, or, indeed for any type of publication in the
humanities. Obstacles to instituting publication fees in HSS publications have been both cultural
and financial. Since there is no tradition of fee-based publication, scholars tend to equate the
model with vanity publishing. They do not enjoy the level of grant funding typical in the sciences,
where research grants often cover publication fees. The cost of publishing humanistic scholarship
is a further barrier. A recent report commissioned by the National Humanities Alliance, which
analyzed the costs of publishing flagship journals for eight scholarly societies in the humanities
and social sciences, found that the per-article cost for these journals is significantly higher than
for the typical STM journal, partly because articles are typically longer but also because of the
high submission rates and overhead involved in processing them.9

Preservation Issues: this is true for all formats, but certainly easier for PDF/A than for multimedia
collections using a multitude of formats that more quickly expire.
The potential vulnerability of digital projects, combined with the evolving nature of technology, means
that the publishers of digital scholarship (in this case, the University of Virginia Press), must consider not

only production, distribution, marketing, and all of the traditional services associated with print publication, but also a particularly intensive kind of stewardship. Unlike print publications, which after production are a relatively stable material reality, digital publications will require continuous updating, maintenance, and migration to new systems."

Collaborations:
- Presses with Libraries (publishing) and IT unit (storage, web access) on campus.
- Presses with Publishers
- Consortiums of Presses (not so much on editing/review, but what about technical publishing infrastructure for ebooks?).

#7 Open Educations Resources (OERs)

OERs

OER video and Mossely reading. Walk through background/history on OERs (learning objects). How this connects to many "open" things (open source software, open access publishing, open science, open data). These all come out of the idea of "Public Commons" for the good of the whole (like common park areas).   This is what was used to codify legal aspects of Creative Commons.   What was the driver for all this sharing?   Technological change: digital allows essentially free sharing (i.e. no cost to reproduce). This has changed the value proposition for many markets.

Note how similar this is to what libraries attempt to do (make information available to people).

Pedagogical considerations: is the OER by itself standalone and reusable? Or must it be in context? If the latter, how do we facilitate this?   Brad's experience's in re-using materials for courses. What are other's experiences?

Positives of OERs (Brad's OER doc)

Concerns about OERs (Brad's OER Concerns doc)

How to assess OERs

How to know quality of OERs?   (is it similar to peer review for articles, software, etc?)

MOOCs

Talk about MOOCs and how related.   Experiences with MOOCs. (UNC's Jeff Pomerantz).

Outcomes: (from Coursea folks) https://hbr.org/2015/09/whos-benefiting-from-moocs-and-why

Thinking about possible impacts of MOOCs: https://newrepublic.com/article/112731/moocs-will-online-education-ruin-university-experience

Main benefit is free access to modularized quality educational content. If only 1% of 10,000 taking a MOOC complete the course, it still reaches 1000 students instead of 100. It allows students from anyplace, at anytime to learn.

Online Competency Based Education: mastery of specific knowledge is more helpful in recruitment process for employers to know your specific skills. Does this apply to all jobs/fields of knowledge? What is value of liberal arts education.

Concerns:

- Works well for some types of content, and some types of instruction (but not all).
- Rise of cyber instructor superstars (Michael Sandel of Harvard) and 2nd class instructors that just oversee MOOCs of superstars.

Discuss A3; why emphasis on education and marketing.
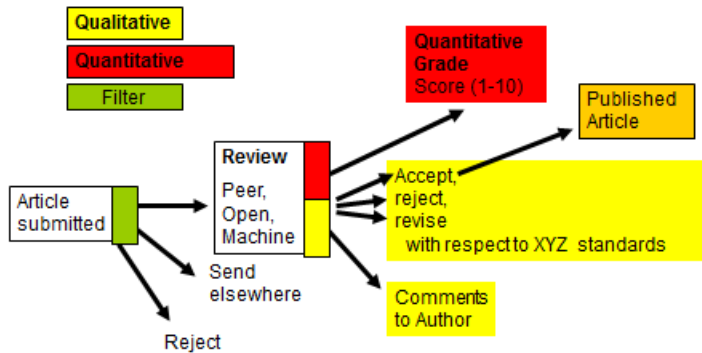
#8 Peer Review

Review A3 assignments on OERs.   Identify what they think are the biggest barriers. Then discuss their solutions for how to address them.   Brainstorm on what common guidelines there might be.

Discuss in more detail with them what's happening at UNC.

Bigger audience (critics); tradeoffs of sharing with world. Right now not competing with faculty at other institutions (at least until superstar MOOC instructors replace you).
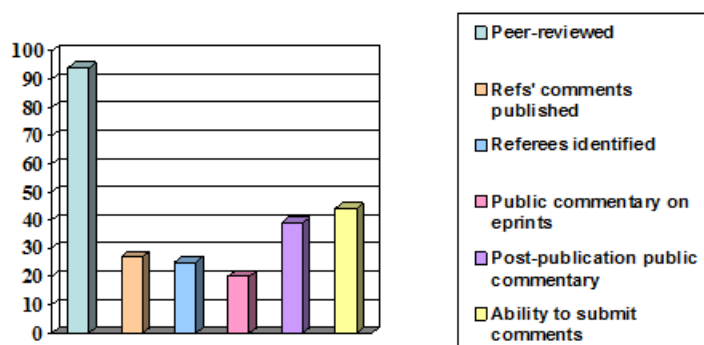
Overview of Peer Review

(talk about single repository, PLoS One)

Qualitative

Quantitative

Filter

Quantitative Grade Score (1-10)

Published Article

Article submitted

Review
Peer, Open, Machine

Accept, reject, revise
  with respect to XYZ standards

Send elsewhere

Reject

Comments to Author

Current Peer Review Options

	Quantitative	Qualitative
• Human Judgement		
– Expert peer review (status quo)	√	√ (relative)
– Certified expert peer review	√	√ (relative)
– Open Peer Review BMJ, BioMed	√	√ (absolute)
– Open comment review psycprints	√	√ (absolute)
• Computer Judgement		
– Computer peer review	√	√
• Human Usage		
– Citation-based (CiteSeer)		
– Usage counts (CiteSeer) Example	√	
– Quantity of discussion	√	
	√	
• Coarse Categorization		
– Two Tier (grey/gold)		√
– Moderator (current arXiv)		√
– No review (old arXiv)		√

Importance of the peer review process

| Peer-reviewed |
| Refs' comments published |
| Referees identified |
| Public commentary on eprints |
| Post-publication public commentary |
| Ability to submit comments |

Importance of publishers' roles

Factor	Responses as *authors*	Responses as *readers*
Peer review	81	80
Gathering articles together to enable browsing of content	64	49
Selection of relevant and quality-controlled content	71	54
Content editing and improvement of articles	60	39
Language or copy editing	50	34
Checking of citations/adding links	46	28
Marketing (maximising visibility of journal)	44	20

Peer Review: review readings.   Overview of main problems, and discussion of alternatives.

Ware Reading Takeaways:
- Look at Executive Report.
- Figures 2, 3, 6.
- Post Publication Review

- Open Peer Review

Smith Reading takeaways:

1. **Lack of consensus in review results** (reviewers don't agree, differences over time, between disciplines, etc).

2. **Bias** due to reputation of individual, institution, etc. Bias against innovation (Birth Order book story).

3. **Delay**

4. **Cost** is more than worth

The fourth of Roy's arguments against peer review is perhaps the most substantial-its enormous costs in time and money. Roy quotes (without giving the data) an estimate that between a quarter and a half of the total intellectual time and energy of America's best scientists is spent on writing, visiting, discussing, reviewing, and serving on panels-that is, in the yoke of the peer review system."3 The Nobel laureate Leo Szilard playfully suggested in 1961 that the day would arrive when 100% of the time of the scientific workforce would be spent in peer review. 16 Roy puts together the figures that an average grant from the National Science Foundation is $60 000 in some disciplines, that a full time academic costs $100000 a year, and that two to four weeks are spent on preparing and following through a proposal to calculate that the Szilard point will be reached when the success rate of grant applications is one in 10- which it almost is for some subjects. Indeed, it may be worse: some requests for applications produce 30 applications and only one grant, meaning that the money spent on designing and reviewing the applications far exceeds the time spent doing the research.

Alternatives:

- Post publication measures
- Bibliometrics

Nice current overview: Rand 2013.

Natures Peer Review debate has lots of good articles on this topic.

ArchiveOne

Future Possibilities: (Dr. H's ArchiveOne Proposal).   How PLoSOne and PeerJ are close.

In 2012 ____ offers almost this full stack for $150, 1/10ᵗʰ the price of typical open access author charge publishers like BioMedCentral, PLoS, etc.

Some highlights include
- all articles are published open access via Creative Commons 3.0 "By" (attribution)--No more serials crisis!
- affordable cost (base plan is single $99 fee for author for their lifetime)
- it throws out the idea of 'journals" and publishes "articles" on a daily basis
- supports free "pre-print" services with commenting/feedback
- single blind reviewing is default, but open reviewing and commenting is encouraged and easily supported
- no page limits, no color costs, free supplemental materials (datasets, etc) storage
- Altmetrics is supported (they utilize ImpactStory.com the product of our very own Jason Priem, with Heather Piowar).
- All articles are preserved through PubMed Central and CLOCKSS
- About the only thing I think they are missing is support for recent standards on public annotations on the articles, but we're opening discussions with them about that.

Universal Decoupled Journals

Recommendations	Free
Comments & Annotations	Free
Reviews	Free to Paid
Marketing	?
Certification/Stamp	?
Copy editing	$50
Preservation	
Permanent archive	$0.07
Registration	

Discuss possibility of automated methods in future for review of articles as well of reviews.   (I.e. one peer might be a "machine").

PrePrints: The next great thing!
Preprints have been around for a while, starting with arXiv, which was initially for high energy physics, then expanded to include much of physics, and has sprouted subdiscipline support for many disciplines. Most recently Mathematics, which eschewed this for a while.   It has found strong support in tighter well defined communities where the scholars know and respect each other, and have a tradition of sharing and critiquing work.

What is novel, is that this actually implements the idea of separating the publisher control from publication. i.e. Registration, Permanent Archive are supported, as well as potentially providing venue for reviews, comments. It also gets around the length time delay of peer review allowing you to get your ideas out sooner, to be feedback sooner, and allow others to benefit sooner. Perhaps this will be part of future ArchiveOne solution, where the certification comes after the fact from "journal".

http://www.sciencemag.org/news/2017/09/are-preprints-future-biology-survival-guide-scientists

Examples:

- PrePrints: https://www.preprints.org/
- ArXiv
- bioRxiv
- PeerJ
- F1000 Research
- PLOS

Automated Methods from Bill Arms

 http://quod.lib.umich.edu/j/jep/3336451.0008.103?view=text;rgn=main

The success of volunteer reviews shows that systematic aggregation of the opinions of unknown individuals can give valuable information about quality. This is the concept behind measures that are based on reference patterns. The pioneer is citation analysis (see, for example,[6]). More recently, similar concepts have been applied to the Web with great success in Google's PageRank algorithm.[7] These methods have the same underlying assumption. If an item is referenced by many others, then it is likely to be important in some way. Importance does not guarantee any form of quality, but, in practice, heavily cited journal articles tend to be good scholarship and Web pages that PageRank ranks highly are usually of good quality.

The basic concept of PageRank is to rank Web pages by the number and rank of pages that link to them. A page that is linked to by large numbers of highly ranked pages is given a high rank. Since this is a circular definition, an iterative algorithm is used to calculate PageRanks, and various modifications of the basic concept are needed to deal with the peculiarities of the actual Web.

Since the mathematical basis of citation analysis and PageRank are known, it is natural for people who wish to have their own work ranked highly to attempt to manipulate the data. For example, a group of authors could increase citation counts by repeatedly referencing each other's papers. It is undoubtedly possible to manipulate PageRank slightly, but the Web is so vast that it has proved hard to inflate the ranks excessively.

A promising area of current research is to combine automated ranking methods with language-based methods for estimating relevance. The research combines ideas from information retrieval, Web crawling and machine learning. Perhaps the most advanced work was done by the Pittsburgh company WhizBang![8] This company has unfortunately gone out of business, but it successfully demonstrated large-scale selection of relevant and high-quality materials with minimal human intervention*.*

#9 Institutional Repositories, Library Publishing, Grand Challenges

Katherine Skinner presentation

SPARC Reading:
Deconstructed Scholarly Publishing Model (first in 1997 Evans and Wurster) and then big thinkers Van de Sompel, Ginsparg, Arms. So 15 years before Priem and Hemminger "decoupled journals" ☺.

Review their table 2 in depth. Include Preservation along with archiving.

Resistance from commercial publishers, society publishers (Brad's "crack addicts" ☺).

"Libraries are best-suited to provide much of the document preparation expertise (document format control, archival standards, etc.)… Similarly, libraries can most effectively provide much of the expertise in terms of metadata tagging, authority controls, and the other content management requirements that increase access to, and the usability of, the data itself."   Perhaps.   Think back to John Sherer's presentation. I would argue that it should be a combination of Academic Presses (who have more publishing and preparation expertise) and Libraries doing this.

They include discussion of how government might help (subsidies for author pay, or open access requirements).

Library Publishing Reading
Chinese University journals offer a working example of University publishing. They typically publish masters papers, and student publications up through "minor" journal publishing, to provide outlet so rising academics can "get published" to help them in their career advancement.

Japanese kiyo practice where senior scholars supervise several levels of graduate students and junior faculty to publish a range of types (researchstudies to lab records or field notes).

"After a period of unproductive experiments, the majority of librarians have not yet made a convincing argument that an institutional repository can be an effective and efficient way to advance scholarly communication. Mandatory self-archiving policies have recently surfaced as an apparently good solution, but wide implementation appears to be a challenge. Some have also criticized this idea, stating that such a policy puts an extra burden on scholars."

Big questions
- Are Universities really motivated to operate IRs? What do they get out of it?
- Disciplinary or Institutional IRs and Publishing: Are University the right place to capture scholarship (IRs and publishing)? Most have not been successful in attracting content deposit

(or use). We know from experience that engaged communities are required for these to be successful. Is the institution the "right" community? Versus scholarly communities, professional societies?

- Decouple Journals and Certification: will publishers really go along with this? Does it make sense for them to just certify the articles are part of Nature, when they are hosted and accessed from an IR (whether university or government or Google IR)?

Takeaways:

- How can university library publishing and IRs work together?
- Share expertise on publishing and repositories (UNC example projects)
- Utilize the same technologies (preparation, publication and storage) to reduce costs/overhead.
- If procedures and tools are standardized, then can share across universities to further reduce costs.

#10 Evaluation (Scientometrics/Bibliometrics)

In Class exercise
Start by asking them to take 5 minutes to write a paragraph in class work page on what the value of a scholarly content item is, e.g. Journal article or monograph.

Lead into discussion of what it is, why it is important, and how we can measure it.

Distinguish between value and impact.   And between measurements of value for Journal, Article, Author, and Institution/Group (grouping of authors or articles).

Pendlebury Reading
Nice introduction to bibliometric measures.

Impact factor history.
Impact factor intended only for measure of impact of journal (not author or article).

Definition of Impact Factor: *Citation counts in Year 3 to a journal's contents in Years 1 and 2, divided by the number of so-called citable items in that journal in Years 1 and 2, where citable items are defined as original research reports and reviews. The denominator excludes editorials, letters to the editor, news items, tributes and obituaries, correction notices, and meeting abstracts.*
Differences between disciplines (neuroscience top journal 26, top match 3). Biggest factors a typical numbers of references for article in field, and the velocity (how quickly things are cited and used).

Thomson Reuters JCR also offers different length impact factors (5 year etc).

Great summarization of pros/cons of impact factor (table pages 3-4)
Mentioned later but not in this table is problem that most all of the measures have to deal with: Fractional counts (how to deal with multiple authors on paper) is still a challenge. It is discipline specific (math vs biomedical).   Talk about which shortcomings of impact factor are inherent to it (2 yr, 20 char field for journal title—is this still true??, Thomson reuters coverage) and which are true for most all metrics (all the rest).

Biggest factor is costs: what is fair cost for evaluation?   ISI's seems too high, which is why many newer folks are going open source route. Problem is scope and accuracy of databases.   Solutions are automatic scanning (Google Scholar), and ORCID for uniquely identifier author/institution, etc.   Impact story just added fee (Altmetrics.com already was fee based). But less expensive (aimed individual researcher, $60 year).

Generally, citations represent the notions of use, reception, utility,
influence, significance, and the somewhat nebulous
word "impact." Citations do not, however, represent
measures of quality. Quality assessments require human
judgment.   Quality is the standard policymakers and funders
would like to use in making their decisions. Those decisions
are difficult. There is an obvious need, and it is keenly
felt today, to be selective, to highlight significant or
promising areas of research, and to manage better investments
in science.

Beyond Journal Measures Section is very good—how impact factor is sometimes utilized as measure of quality instead of, or complementing peer review (*this is the tension*). How should funding (government, university, dept, research center) make financial investments based on quality of research? What measures should they use?

Roemer Reading:

SJR (also has h-index), JCR (Thomson) also shows eigenfactor, eigenfactor.org: journal rankings
compare psychology
Scopus, Google Scholar: scientist citation rankings
altmetrics, Impact Story: scientist social media rankings

Scholarly Peer Networks: academica.edu and mendeley
Blogs and Media

In class let's look across these tools:
https://apps.webofknowledge.com (WoS)
http://www.scopus.com/ (Scopus
http://scholar.google.com/ (Google Scholar, look at citations)
http://eigenfactor.org/

https://impactstory.org/
summary of impact story metrics: https://impactstory.org/metrics
http://www.altmetric.com/

compare rankings of psychology field using SJR, ISI's JCR, Eigenfactor

Look at individual Researcher: use myself
http://www.scopus.com/
http://scholar.google.com/ (citations)
https://impactstory.org/

Proposed A4:
- Investigate and contrast the "impact" of two academics of your choice in detail using three tools: Scopus, Web of Science, Google Scholar
- Investigate and contrast the "impact" of two articles of your choice in detail using two tools: Scopus and Altmetrics.

#11 Evaluation cont'd and citizen science

Review A4's: Look at it from perspective of chairman of department, who must do evaluation of faculty member.
Which of these sources of information should they use?
Based on your experience in A4, what can you say about using these tools?
Do they provide good measures?
Are they consistent in what they measure?
What are issues with using them?
What would you recommend to a naïve researcher wishing to use these "research metrics"?

Review Lokman Meho's findings when he compared Web of Science, Scopus, Google Scholar:
http://onlinelibrary.wiley.com/doi/10.1002/asi.20677/full

Citation Analysis is based on unit of "**content item**" (journal article, monograph). Evaluation is however usually done for

- **Journal**: (author to decide to publish in, library to decide to purchase, journal to estimate their importance)
- **Academic**: for tenure, promotion evaluations
- **Dept/University**: for funding, resource allocation

How well does our measure of this these citation counts really match what we want to evaluate?

If they are not perfect, or not even close to perfect, what else can we do? Altmetrics?
Are altmetrics really useful? For what purposes? Is short term popularity important? Related to long term impact?   For example Shenmeng's evaluation of the fraudulent 2014 Nature article (from 2014 class,
https://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbnxpbmxzNzAwZmFsbDIw MTRjbGFzc3dvcmt8Z3g6MzgzNDE1ZmYxMzFlOTg2Yw)

Ask them to propose what they would use as "overall metric" (sketch on board).

Share with them SILS metric evaluation metric.

Citizen Science: what is it?
http://en.wikipedia.org/wiki/Citizen_science
http://www.citizensciencealliance.org/

Has the class participated in any citizen science projects?

Examples:
- Galaxy Zoo: http://www.galaxyzoo.org/
- E-bird: ebird.org
- http://en.wikipedia.org/wiki/List_of_citizen_science_projects
- SciStarter: getting people involved
- Participatory Medicine (Medicine 2.0)**:** Examples like PatientsLikeMe, where the forum participants with ALS decided to conduct study on themselves based on positive results of lithium in small Italian study. They conducted larger scale study than any medical/academic researcher has (or could).

Citizen Science: Compare and contrast the **Eleven Services for Academic Publishing** (below) with those for citizen science. How does it differ from scholars?   For when they're doing the same things should

we utilize the same frameworks, institutions?   In what ways are they different? What does that imply for their implementations?

Eleven Important Services in Publication of Academic Content

Preparation: taking idea or research results and turning into content
Registration: establishing the identity of deposited content
Pre-Publication review: academic review by peers, paid professionals, open comments from community
Copyediting, proofing: non academic review of manuscript review (readability, grammar, etc)
Formatting, Design, Layout: preparing content to look good when displayed on different devices and in different environments.
Certification: the certifying by a community that this content meets some standards
Publishing: putting up so that others can see; exporting metadata descriptions to allow for indexing and finding of article through common search interfaces.
Marketing: to make the content more widely known and attractive to audiences.
Post-Publication review: reviews, comments, annotations, added after publication.
Archiving: save a copy of the bits, ideally through LOCKSS or similar.
Preservation: migrate the format to be readable/presenting in similar fashion in the future

What about other "scholarly" type activities like documenting local history, capturing works of writers/authors? Do they do the same types activities as well?   Can we use the same systems and technology to help support them? Who should support them? (libraries, museums, universities, Elsevier)?

#12 New Media Scholarship (beyond the article)

Review expectations for A5. Have them choose which reference managers they will review, and make sure we have good distribution covering all reference managers.

Review expectations for Final Project.   Writeup is reference report, main focus is content supporting presentation. Don't overly worry formatting.   Do do a good job on format/presentation of your presentation!

Citizen Science Discussion:
Have them talk briefly about the projects they investigated, and how the citizen science participation worked, how this form of scholarship was similar/different to the academy.

Positives: ask them to think how the projects they investigated did these
- More general community engagement about science
- Science education for participants. Especially effective for young (interest them in science) and older (retired folks have way to contribute).
- Allows large scale projects requiring lots of simple non expert manpower to be accomplished by crowdsourcing to interesting public.

Challenges: ask them to think how the projects they investigated did these
- Coordination of efforts, volunteers
- Infrastructure to support project (maintenance for long term)
- Keeping public continually engaged

How is this **scholarship practice different** from "scholar's only".   Brad's main differences from the Eleven Services for Academics:
- Citizen Scientists primarily roles are in data gathering, or data identification/classification.
- Submission is to community (not individual/small group)
- Some communities allow anonymous submissions, others require participant citizen scientists to be registered/certified.
- The community may publish, archive, preserves the data. (or scholars or both).
- Many groups support more social communication between participants (i.e. not just on science, but social connections).

Burgess 2011 Reading:

*Thus the work of new media researchers in the humanities tends to get lumped into a single category rather than, as Cheryl Ball distinguishes, into the very distinct categories of **scholarship rendered in new media and scholarship about new media** [Ball 2004, 404].*

*The messy contention over how to define scholarly multimedia is symptomatic of the very old argument, played out continually in the academy, over a perceived split between form and content. Content is the essence of analysis, while form is merely the "matter" out of which it is made. But **materiality matters** — has always mattered — in the meaning-constitution of analysis. Digital machines, in all their undeniable physicality, confront us as a transformational tool in the same way that the printing press does. In this way, we see, from the earliest writings about the role of computers in humanities scholarship, an awareness of materiality. In the fields commonly known as "history of the book" or "print culture," critics have devoted considerable attention to the materiality and visual spatiality of the scholarly artifact – the illuminated manuscript, the Concrete poem, the hypertext novel, etc*

Dr. H: So, is the real issue that it takes significant experience to critique a scholarship "content" area, and also to critique it in a certain medium (story, play, speech, multimedia, etc), and that we have experience with content, and with certain forms of medium, but not all these new ones? And digital technologies are exploding the number of possible new mediums—so much so that it will be difficult for us to have experts who can evaluate context area X and medium area Y? (at least for tenure and promotion).

If multimedia is regarded as no different from other scholarly forms, the complex labor practices and new knowledges required to produce scholarly works of multimedia, such as interface design, coding, video production, hardware support, institutional interactions and so on, may be devalued to the extent that they are seen more as service (akin to maintaining a department's computer lab or website) or not seen as meaningful scholarly activity at all. This leads to the reduction of scholarly multimedia to the status of "unacademic," suggesting that it is somehow less intellectually significant than "equivalent" works produced in print because the differences between media are "superficial."

Arts, languages, literature, philosophy, and religion have not naturally embraced digital scholarship in the ways exhibited by scientists and social scientists. There are a variety of very good reasons for this resistance. Foremost among these reasons is the type of material humanists study. Diaries, plays, music scores, novels, paintings, religious works, and philosophical treatises, to name a few, do not lend themselves to quantification. [Anderson 2004] [Brad: I disagree. I think it's more that the skills and tools used for quantitative analysis are often already a part of STEM academics skill set, so it's easier to apply. We have many examples now where quantitative analysis have been applied to novels, to paintings, to artwork, etc, revolutionizing those practices just like DNA analysis has to biology].

It is important to note that one of the chief characteristics of the above titles is that they are "published" in tangible form — CD-ROM, DVD-ROM or laserdisc — and thus at least benefit from the fetishization so readily apparent in the academy of the print document as a physical form. More recent works in multimedia (mostly web-based works) confound even this basic understanding of what constitutes a "text." [Brad: There are still some "collecting" impulses—for instance many scholars hoard their PDFs. But in general, we have moved from physical representation to totally digital. And not even stored on your "computer" any more, but in the "cloud". So there is little physical manifestion of the object. (physical media will play so play almost no role; however, formats of digital file, and the presentation of digital content will). So, the instantiation of content still utilizes a specific technological framework in the same way that printed books, etc have. I.e. Flash, HTML5, and the "display" devices they use to render the content all bring certain constraints and influences on the experience.]

Discuss Dr. H's separation of CONTENT from PRESENTATION. Does that hold here?

Producing new kinds of scholarship artifacts:
- Born digital Original creations designed for digital media environments. Flash poems, html comic strips, non-linear story telling--hypertext linked multimedia, etc.

- Digital capture of traditional mediums
  - Digitized books (printed words)
  - Performances (non printed words), activities that can now be fully captured digitally (video, etc) , for instance theater, musical, dance performances, video game playback, sports event recording, etc.
  - Digitized Spaces, experiences (virtual reality presentations of recorded 3D spaces: museum exhibits like my Virseum project, archeological dig).

Producing new forms of analysis:
- Quantitative computational practices supplanting/displacing qualitative practices. Linguistic analysis of all Jane Austen's written works.

Using New Media to convey our scholarly work to other academics and to the public.
Putting my papers on website.
Tweeting about my research
Blogging about my research ideas and reactions to others.
Annotating others work
Openly published reviews
Put my multimedia presentation online

How can Librarians help? Is this a job? Digital Scholarship Librarian job at UCLA in 2015:
https://ils.unc.edu/courses/2016_fall/inls700_001/Readings/Recruitment%20Details%20-%20UCLA%20Academic%20RECRUIT.pdf

beyond journal articles and books…let's make a list of examples.
Online resource
Presentation
Class (OER materials)
Performance (song, music, acting, …)
datasets
statistical methods
computer programs

how are faculty supported in producing these, making available, marketing, and preserving?

Cultural heritage: archiving (preservation of artifacts, 8mm, etc).

How to facilitate community participation.
When publishing books, a tension exists between what goes into book (so they can sell copies) and what can go on site. (solution=open publishing model).

Can we completely separate the medium & context from the scholarship?
Context matters!!

- Preservation
- Philosophy
- Knowledge (ontological capture)

Engaged scholarship requires communication, communication requires medium. Expertise in medium matters (understanding operas).

How to make findable.

Tenure and Promotion:
How are new media scholarship activities counted? At UNC? At other institutions? Has this been evolving.

Many SILS faculty adopt new forms of expression in all aspects of their work ranging
from teaching via novel online and hybrid forms to collecting data and sharing results
of research via websites, social media, and face-to-face or virtual performance. SILS
thus recognizes that such forms of expression may not be peer-reviewed in traditional ways and that
mastering new tools and methods requires significant time and effort.
SILS will welcome inclusion of new forms of scholarly work and communication as
part of the faculty record. Faculty must decide which work to include for promotion
and tenure decisions and explain why it is included and how it impacts the field and
intended audiences. Factors that may be explained include: target community(ies),
frequency and reach if the activity is ongoing, tangible impact(s), derivatives in other
forms, any collaborations, and any software, data sets, websites that persist.

#13 Reference Managers

Review Reference Managers (and ways to store, reuse, share) scholarly content. Ask them to think bigger picture about how you manage this. Why newer managers support more of the "Scholarly process" , i.e. sharing, communication.
Start with having them watch video on NeoNote (2008) to have perspective on desired functionality.
https://www.youtube.com/watch?v=hm4UNtR0WfI

Discussion Questions for A5 Review:

- what did you think about usability of tool? Ease of use?
- Would you use this yourself? Why/Why Not?
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- who's the best for importing? Can you 1-click import from web browser?

- how well does it extract metadata from PDFs (depend on format of article?), from html? From other formats, sources?
- Do any of them use citation metadata to try to find match in their own library in order to get accurate and complete metadata?
- How easy to batch uploads of PDFs already on your computer (i.e. one step not hundreds).
- if the document is not a PDF do all the functions work as well (metadata extraction, viewing, searching, etc).
- limits (caps) on data usage stored in cloud?
- can you annotate the digital object or just it's metadata. Which is better? What would you want to annotate and search on?
- what's the best way to organize, file your documents (folders, tags, collections)?
- can you search on full-text of content? On metadata? on your annotation notes?
- how easily is it to cite? How many citation styles supported.
- who's the best for sharing content as part of research lab work group?
- who's the best for collaborative scholarship, without predefined groups?

Older style (citation managers, Endnote, RefWorks) better at
- adding citations to word processors
- smoother integration with library catalog (to add resources)

Newer Style managers (Zotero, Mendeley)
- Focus on document as well as citation
- Better capabilities for scraping arbitrary articles and web resources and adding to database
- Allow online and standalone work
- Allow sharing of documents
- Support social interactions by research interests, sharing collections, communication, etc. Mendeley just added "recommended readings".

Annotation based tools (Papers has natural interface, Mendeley supports)
- Support for annotating and writing on articles, and sharing with others
- Best would be if annotations were on the articles themselves and not siloed in tool.
- (show AnnotateOne tool: http://secure-dusk-1121.herokuapp.com/version8a/a1?user=andy&db=annotationplaypen#plus-toggle

Big Picture Thoughts
- Reference managers have traditionally been used for recording/capturing content of interest to you (bibliography) that you would use for research and teaching. Additional function was to make reuse (citing) easier when writing by facilitating inline citations (usually via plugins to Word) that would automatically follow the desired style (Chicago, etc).
- Paradigm Changes: searching and discovery is primarily web based.   Not all content is a formal journal article. We want ways to easily capture arbitrary content and save it. From multiple computers. And to be able to search/refind it, and then reuse it (including citations but not limited to this).   We want to be able to do this collectively as groups, and socially by sharing. We want to share our collections, but also our interests, and potentially our thoughts

(comments/reviews/etc on content). Thus, reference managers have migrated to the cloud (to not be limited to one computer, and to facilitate group interactions).   They build in collaboration possibilities.   They allow you organize your materials (folder hierarchies and tags).

- Main things we are still missing?
    - Easy import of variety of formats of content—problem is no clear identification of articles (most services try to automate ingest, but with only partial success). Solution to this would be DOIs for all content to easily capture content and metadata.
    - Automatically saved to cloud, but also local physical copy (in case you don't trust or have access to cloud). Transparent way to work offline as part of this.
    - Whether reference managers will try to capture you in walled garden by providing all these functions plus newer one (alerts, discovery, social connecting/sharing) i.e Mendeley now that's it's owned by Elsevier (or ResearchGate, Academia.edu), or will they stay with more open sharing model (Zotero).

RefWorks Discontinued!   UNC is discontinuing RefWorks, support ends August 2017 (not renewed then). Many universities are following a similar path. Quoting the UCSD announcement (2015)

> *"With the rise in quality of free citation management programs like Zotero or Mendeley, lowered cost of EndNote desktop and the free EndNote Online version, coupled with the low use of Refworks. the Library decided to stop subscribing to this tool."*

Many libraries seem to be headed in this direction of supporting the free online tools (Zotero and Mendeley) and offer inexpensive access to EndNote desktop/Online.

Important Functions of Reference Managers:

- import citations from databases, websites, and library catalogs
- upload your existing digital collection of PDFs from your computer to reference manager
- create bibliographies in most output styles
- format citations for papers
- manage, categorize, and organize citations
- attach PDF's, images, etc to citations in your collection
- add notes/annotations to any citation(s)
- share your article collection with others
- view others article collections
- interact socially with other researchers
- work offline
- use freely available materials on web
- work as part of group
- work from multiple computers

When time permits:

Anonymous comments cost faculty member tenure:

http://news.sciencemag.org/people-events/2014/09/anonymous-peer-review-comments-may-spark-legal-battle

Scholarly communications timeline:

http://cdn.knightlab.com/libs/timeline/latest/embed/index.html?source=0AkcDG15L9ttxdHJIaFNzbzNZNGlUR09zT1hNTGhXVEE&font=Bevan-PotanoSans&maptype=toner&lang=en&height=650

#14 Scholarly Communications Officers

Guest speakers SCC directors from UNC (Anne Gilliand) and Duke (Kevin Smith).

Questions on Reading Responses page.

Student Notes from 10/2/2014 class. (thanks to everyone for sharing. I've primarily utilized Nina's with a few minor chages). There are comparatively fewer scholarly communications officers (lawyers working in libraries) than there are people who do some sort of scholarly communications. Keith and Ann are both lawyers as well as SCOs, who went to law school at night while working in libraries. They suspect that most Research universities have someone with some role in it.

Many think that either open access is transitory and don't need a lawyer; others think only of copyright. Keith suggests that the issue of copyrights should probably be separated from the more general issues of scholarly communications such as advocating for open access and publishing and supporting the dissemination of scholarly works and metadata and digital preservation and so on. Every academic library and probably most librarians really needs to know about those bigger issues, while one good copyright person per campus (or library in large places) may be enough.

Ann spends about half of her time on issues in the library such as digitizations and access copyright issues and other agreement issues. Wilson is the main place she spends her time and work. Roughly the other half has to do with issues that are not specifically in higher library such as posting of digital materials in Sakai or helping with copyrighted incense disagreements and so on. Advocacy is also some portion of it at professional and other meetings. They couldn't do their jobs without law degrees because of the grounding in contract law and so on. (JD required for these positions!).

Keith spends about half of his time in legal issues directly, with maybe 60/40 between the libraries and faculty as a whole (and not all in copyright law but often just because they are bathe most convenient lawyer). He spends about 30% of his time in advocacy and other service things such as SPARC, Hathi a trust, and DRyad. And about 20% of the time in management and departmental issues for the general flow and professionalism of the scholarly communications unit as a whole. Gets involved in a zillion different projects just a little bit and rarely over a whole thing, which can lead to a sense of isolation. Ann also agrees that she was sort of brought in to come in and do her thing for each project going on rather than oversee big projects.

Sometimes there are turf issues between university council and the library scholarly council. The SCO cannot represent the university and there are very specific rules of the relationships. Ideally the SCO is preventing people from creating liabilities and therefore they are are good for council, but there are lots of reasons for issues to come up.

What are the big challenges that universities face?
- Keith says it's not a niche and increasingly it's at least being moves with the research and schol com AUL or the collections and schol com
  - Interesting to see which ones take it collections and which ones take it in a reference way
  - Suggestion that librarians are increasingly moving towards a consultation professional sort of situation wherein a client brings a specific problem and the librarian brings a body of expertise to consult on higher problem

Will digital status ever be clear? Sort of it is and sort of it never will be :)
- The Hathi trust issue is probably pretty much done and clear
- Still waiting for the appellate decision in the GA State case
- So we are getting clarity in little buts and pieces, but at the same time it's. Likely that we will. Ever get to full definition. Legal certainty is something we never have.

What are common pressing concerns of faculty about scholarly communications?
- Money is always a problem, so fee-based open access is always a problem and there is a lot to discuss around
- Time, especially the time to peer review and publish, is very lured some to scientists. The reason ArXiV took off so a fasts was that physicists want to get their results shared to other scientists asap.
- Next big thing: faculty concerned that the biggest journals are so much seeking the high impact factor that they pick only things that look impacts (just far ahead to make a headline, nothing incremental and nothing on recognizably ahead)
  - There is a subtle but large divide between the journal value

- "It's mine" is a big trend. Faculty don't care what they signed or what the law says, the researchers all believe that they personally own what they made and they are neither interested in licenses nor in sharing on anyone else's terms
- A kit if journals have obfuscated legalese at the license agreement stage and neither the author nor even the journal editor can figure out what the agreemment options are or mean
- Issues of charging for public domain materials and images (even libraries sometimes try to charge for archival material access sometimes).

As SCOs do they have views on altmetrics or other alternative measures of research and using those to measure and evaluate science?

- Ann doesn't think that at UNC many are using altmetrics actively yet
- Keith thinks that there is a general dissatisfaction with the Impact Factor
- More and more P&T are including alternative measures like newspaper articles as a reflection on uptake of the research, or prominence of popular works and impact by blogs, and other things relating to engagement and popular media
- The idea of impact on public policy and the world around this is
  - Duke using Elements from Symplectic to offer faculty visualizations of their individual profiles, faculty can add information and easy upload with information from SherpaRomeo to check the licenses. That will eventually be their CV and P&T and campus assessment systems too. The visualizations for the CVs bring in a lot of buy in. But it doesn't represent humanities well with monographs and recordings and master classes and so on. No way to present arts and report them well; they are using Elements and Vivo and trying to combine them into a system that works well for everyone
- Accountability is an issue and for some people the altmetrics issue is another way to try to show the value of the university. But sometimes those are weak relationships or hard to find.

Keith suggests that there should be a re dedication of money to support more open access and that would help reduce some of the serials crisis. But the relationship is complex and indirect.

How do we convince scholarly societies that night need the money to stick with open access? Maybe we can give money directly to the societies so that they can't be sucked up by Wiley or Springer? Dukes cultural anthropology society charges a submission fee for nonmembers too, but gets money from Duke to cover costs of copy editing and so on.