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A Report and Commentary on the Faxon Institute:
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The development of electronic means of publishing has forever changed the face of authorship, publishing and library services. Contracts are on the rise, fair use is waning, and this shift in emphasis has profound implications. For effective and economical dissemination of scholarly information to survive, there must be communication at every level of the dissemination chain. More than ever dialogue is required among librarians, publishers, vendors, and authors to find common ground and seek solutions to a growing crisis of the economics of scholarly publishing.

In recognition of this sweeping change, the Faxon Institute brought together a significant representation of players in the scholarly communication chain. Stanley Chodorow of the University of Pennsylvania opened the first evening of the Institute with the keynote address. As a historian, he set the stage by reciting a history of academe and the relationship of faculty to the university. One might think that there is no need to know this history, but Chodorow's remarks resonated in the following sessions.

Chodorow was on the mark in his first sentence when he said, "This evening, I am going to talk about a crisis." Over the course of the evening, Chodorow charted the course of the nature and purpose of universities, the relative place of faculty as employees, the development and role of university libraries, the rise of disciplines, and the resulting evolution of publishing.

Before beginning his historical account, Chodorow observed that once the scientific article was invented, the system worked well until approximately 20 years ago. At that time many journals moved from the university presses and societies to the commercial publishers. After this transfer, prices began a tremendous rise and new journals were introduced at a great rate. Obviously the end result was that library acquisitions could not keep pace with these increases. Chodorow pointed out that the



commonly proposed solution to this crisis has been to change the management of intellectual property rights, however he feels this approach has not produced results. Chodorow believed this emphasis on rights is misplaced, and he turned to the history of universities to argue his point.

As he told it, early on the university began providing the resources for scholars and students. Indeed, the faculty were in the business of “the making and selling of knowledge,” which consisted primarily of texts for the masters and students. Even so, the university functioned as a support service to the faculty, enabling them to be independent scholars while serving as faculty. One of the support services was to contract for the production of the textbooks and ensuring consistency among texts. Right from the beginning there was a separation of authority: the university business structure and the independent masters.

The provision of resources beyond production of texts, i.e. the housing of collections of texts in the form of libraries, began in the fourteenth century. At that time, though, collections were not centrally managed and grew without a plan. In the nineteenth century, the university experienced a major change, that was reflected in the growth and development of libraries as we know them today.

The idea of the university changed from one that educated the elite to one that was “an instrument of social progress,” which led to the founding of land grant institutions in the United States. This new function of the university emphasized the university itself and downplayed the role of support service to the faculty. This function also obliged the university to provide the needed information resources for faculty and students. Furthermore, universities became the instruments for storing the fruits of human knowledge and culture. The expectation grew that the library would have everything that the faculty needed for their research and teaching. Concomitantly, the expectation developed that each university would cover all disciplines. In the long run, libraries were counted upon to have both the materials that supported the immediate needs of the faculty and students, along with the important works of the culture.

As universities developed, they also were expected to be “the principal repositories of human knowledge and civilization” and “every university was expected to have all of the culturally important information.” As the universities succeeded in this mission, they also supported the specialization of disciplines and spawned new fields of study and interdisciplinary approaches. Changes in information technology fostered the rise of disciplines such as bioinformatics. New and changing disciplines have strained



existing means of organizing information. Investment in information has gone far beyond the library, and has extended to the computer center, laboratories, and departments. Independent “libraries” of information have again been created without organization and coordinated management.

With these changes affecting the academy, Chodorow felt that the emphasis on intellectual property is misplaced. He saw the “inflationary spiral in the cost of information as a function of a divided market, which is also responsible for the helter-skelter production, acquisition, and management of information.” He identified the cause of this dysfunction as a consequence of the nineteenth century changes that separated “the production of knowledge from the authority to carry on the work.” The consumers of scholarly information have been working in two different markets: one is the purchase of the information in a “market economy,” the other is the use it within a “gift-exchange economy.” In other words, while information is used freely within the university, there are constraints on the ability of the university to acquire the information in the first place. Publishers developed as middlemen in the production and dissemination of scholarly information.

After this discussion, Chodorow turned to the subjects of tenure and academic freedom. Faculty, in their desire to protect academic freedom, resist the challenge of the university to their intellectual property rights and freedom of inquiry. He identified these conflicts as an entanglement and recognized that the university is trying to affect change to deal with this tangle. Librarians and administrators have developed three strategies: using consortia to purchase information, trying to create a new pricing system, and attempting to change the information market.

Chodorow predicted three possible scenarios arising from these strategies. For one, he thought that consortial buying will diminish the market and put pressure on publishers that will lead to more price increases. Publishers have already responded with package deals. Second, pricing systems now exist that deliver information on demand through a contracting process rather than through reliance on copyright. Although universities are resisting this system, he argued that contracts might benefit universities, if they use them to their advantage in supplying information within their gift-exchange economy. But he saw a danger in trying to use the contract system, since this system is being driven by the entertainment business. He said that the market has “grown into a new form, that we in the universities regard as monstrous.” Third, Chodorow proposed that we separate the scholarly from the “edutainment” market, by eliminating the commercial publishers from the distribution of academic intellectual property. He suggested a solution based on the learned societies taking



back the publishing of scholarly articles. A change in the ownership of the property rights would result from this market competition, not cause it. As Chodorow said,

“The success of the strategy will rest on harnessing the enormous amount of free service now provided to the system of scholarly communication by faculty members, on taking advantage of the electronic environment, and on finding a way to finance the most expensive part of the publication process, the reviewing and editing of submitted work. The question is: will the electronic environment provide universities and faculties with a way to accomplish these goals?”

He went further to say that the key to this shift is to separate the review and editing from the publication of journals. He asserted that this separation will allow low cost publishing to occur on the Web.

Chodorow concluded with suggesting that government take a role in repairing the broken economy and fostering change. He observed that the dominance of the edutainment business has subverted the idea of information existing as a public good, while government officials still see the universities as agencies that produce information for the public good. He proposed that policy makers step in to help create a separate market for scholarly information.

The roundtable discussions began the next morning. Robert Siegel, of National Public Radio’s *All Things Considered*, served as moderator for roundtable discussions, which focused on the electronic scholarly communication, intellectual property models, licensing, and funding issues. The format of the roundtables was interactive, with Siegel formulating questions and directing them to members of the roundtable.

Panel one addressed the impact of electronic publishing on the scholarly communication process. As Siegel introduced this session, he remarked that he reads newspapers online “because they are there.” He has noticed more going online and that these resources are becoming more useful and are continuing to change. With that as an introduction, he posed a number of probing questions to the panel.

He first asked, what is different about the scholarly article as an electronic publication?

Richard Ziemacki of Cambridge University Press indicated that authors submit articles to journals, not publishers. Publishers add value through the process of publication and financing. Electronic publication presents other options to authors,



although it may not have the editing, review, or validation of a publisher. Dawn Lawson, also at Oxford University, has found that editing is critical, providing consistency. She thought that specialist authors do not always know what the reader brings to a work, and that editors are needed to assist, provide an overview, furnish cross references, and generally make a work more accessible to readers.

Ziemacki responded to the question, who are the editors, with the comment that scientists and scholars form the editorial boards. He identified his competition as other presses, both university and commercial. When Siegel asked, can the author publish faster, Ziemacki answered that with peer review format, you work as fast as you can.

To the question, has the electronic journal improved, Ziemacki said that he thought it had increased the speed of delivery. To the questions, why is the journal in the library and has this been changed by the electronic journal, Charles Townley, New Mexico State University, responded that the library first and foremost provides access. It provides an archive and can give feedback on usage to authors. When asked who convinces you to buy, Townley elaborated that decisions are based on political and scholarly factors, use, and faculty say. They retain titles rather than acquiring new ones. Scholarly value, he found, was hard to rank and assign, as different opinions were expressed. He said that electronic publications increase selectivity, provide additional sources, but cost is at a premium.

Siegel continued with a question about whether the purchase and retention of a journal is a price sensitive decision. Kenneth Marks, University of Nevada, Las Vegas, asserted there are political influences and pressures from expanding programs that force librarians to buy journals regardless of price. He has found that not one publisher has cut prices to get librarians to buy their journals, so librarians are continually faced with hard decisions. Augmenting these remarks, Townley commented on the influences of consortia buying, the impact of negotiating prices, and how electronic publications are more flexible in pricing than print publications.

Marks observed that even though there are new products, they do not represent radical change—the same questions face the library with or without electronic publications. Their use depends on the extent to which the campus has become networked, whether there are tools to have access, whether the infrastructure is in place, and whether there are rights to access the products. A librarian at the University of Mexico, Johann van Reenen stated that it depends on how we involve the users, as we have sheltered them from publisher practices.



Siegel asked for an explanation of cost per use. If there are one million web hits, does this mean that one million people read an article? There was a response of no, it meant that one million files were opened, but what is used is unknown. Van Reenen said, to determine what is used, his library had placed a bar code on they shelf and when journals are reshelfed they are wanded. They rely on patrons not to reshelve journals, although some do.

Does anyone know which articles are used, asked Siegel? No – Paul Vasallo, National Institute of Standards and Technology, asserted but added that use is only one factor. Document delivery supplies articles to users at their desks on demand. Scientists should do science, not library work. Statistics on use should be kept. Journal purchases are a long-term commitment. Further, Siegel wanted to know, how does the electronic journal influence long-term decisions; does it change the character of the decisions? Vasallo mentioned the archivability question and the need for assurance of availability -- these are not answered. As for the question of who will provide an archive -- the library or the publisher—Vasallo noted that the library will likely retain both print and electronic versions until there are answers. Margit Dementi, JSTOR, commented that JSTOR recognizes the need for archiving back issues. Current issues may be online, but researchers may not find back issues if they are not on the shelf or are in microform. Librarians are becoming increasingly responsible for archiving technology.

Siegel wondered, how will people deal with electronic journals in 50 years? Kathryn Mikoski, from the Canada Institute for Scientific and Technical Information, commented sadly that government information on the Internet easily disappears, as new information replaces the older version. Julia Gelfand, University of California, Irvine, observed that there is now less traffic in library, along with more interest in obtaining electronic access outside the library. The teaching function in libraries is about finding information, relevancy of information, and citations. Librarians are taking an informatics approach. They are exploring cost per use and consulting the user more.

Jonathan Barker of MCB has found that usage surveys reveal that more than 50% of users physically visit a library less than once a month, as they have no time. Electronic access can help, as it is a significant difference to have the article delivered to the desk. Print will remain for browsing and archiving.



Siegel, following up on the popular notion of the paperless information society, asked at what point will we see the economics change and chop down fewer trees? Barker noted the need to make people aware of journals through abstracts and key words. He asked to what extent does the web represent publication, and further commented that he hoped people can find publications on the web, as there can be no awareness or control. It is tempting to imagine publications going from terminal to terminal, and available for free. Barker pointed out that people have to have a mechanism to find out what is available. He said further that societies started with sending papers out for comment and reading, which led to journals. Publication is a form of democratization, a means of taking the knowledge from the hands of a small group of scholars. Ziemacki stated that colleagues communicate long before publication -- they share and get comments. Peer review is also fallible -- the Internet may be as good for science, which has critical and analytical readers. He also asserted that many articles are never read, but are produced for promotion and tenure.

In response to the question of whether the scholar needs the intermediary to help assign value and usefulness, Gelfand asserted that librarians have options, and that they can provide access without having a shelving cost. Resources for shelving can be used in a different way. Liz Pope, Community of Science, countered that not all electronic publications are created equal, even though there is increased access. The means to manage electronic publications is not yet developed. Vassallo commented that there is a cultural factor, not just an economic one that involves the choice of journal, the process of receiving tenure, and the desire for peer recognition. Electronic publications are not yet accepted for tenure. Physics may accept the preprint, but chemistry does not accept for publication. Townley concurred that the role of the scholar varies, just as institutions differ, with some valuing teaching over research, and vice versa.

As for who will decide which way electronic journals will develop, Barry Fitzgerald of Eastman Kodak stated that scientists will prefer hard copy, but also want instant access. They won't want to search the web, but will want the librarians for find information for them. He further stated that we have to have recognition for electronic journals. Mikoski thought that access tools are not there yet. However, she said we have blinders on, and the next generation will prefer the electronic to the print. We need to analyze the use of the article, not just the journal. Ziemacki chimed in that no journal is published with the knowledge that the articles will not be read. Usage information will be used for editorial policy. Unfortunately, he noted, now we just have information on hits, not usage.



The obvious question of whether tenure is driving this issue came next. It's easy to say let's reduce the number of articles, said Siegel. Would scientific communications be diminished if this were done? Will maverick views be heard? Jacqueline Hanson, University of California, San Diego, reminded the group that these views might not meet the standards of refereed journals. Gelfand pointed out that electronic publishing is quick, and is offered in combination with traditional services. Now there are too many choices and not enough resources.

Siegel countered, should there be fewer choices and should the decisions be controlled at the other end (by the end user)? Librarians, Gelfand said, are trying to find the right packaging mix, which varies by user. Barker asked, how do you decide what not to publish? Do you know what year it might be used? Some publishing queues are two years long for premier journals where people want to publish. Will only gurus and prestigious institutions get published? Electronic journals may allow new authors to find an audience.

Van Reenen made remarks on the emphasis of quantity over quality, on obtaining tangible results, and on how things will be read more if they are electronic. Print journals, such as *Science*, *Nature*, *Scientific American* accept ads. The Internet should be for articles of interest to a small number of individuals, where there is not enough of an audience to read in print. When asked, does this require a publisher, Van Reenen responded that publishing on the web requires technical skills – it is expensive to make works web-ready. It is now getting much easier and a small publisher or group can do their own publications.

An audience member asked how important was the journal brand, and what is the value of electronic publishing with full text searching? Townley remarked that librarians are teaching information literacy courses, where students learn to evaluate information, and not necessarily rely just on the journal name. Barker rejoined that the brand is a filter, and its value depends on how many articles you find.

Siegel asked about the impact of mergers. Gelfand expressed a desire for one search engine, one place to look, as there is an expectation of similarity of results. Users go to what's familiar. However, she does not want monopoly or one large family that would have a lot of infighting.

Deanna Astle of Clemson gave her opinion from the audience that we should ask what the electronic version can do that print cannot. The electronic should not just



mimic the print, as there should be links to data, and the information should be manipulable and tested. Readers, for example, may want to rotate scientific images.

William Gosling, University of Michigan, protested that the issues discussed were focused on STM and not humanities and social sciences, and wondered if this was because economics were driving the discussions? Dementi said, yes, but also because scientists were online earlier than humanities with preprints.

The second panel turned to an exploration of the emerging intellectual property models. Siegel started with the observation that the relationship between the university and scholarship is changing – is change needed in intellectual property? Stanley Chodorow opened by saying that context has changed. Centuries ago scholars made knowledge and sold it to each other. There is now a new web of relationships with others. Institutions who value knowledge and want a piece of ownership in information are thinking of it as a commodity. In the 1960's there was the question whether the university should participate in secret research, which was opposed to the idea of open information. Government desired and protected this information, as have corporations. There are many ownership questions, and publishers are only one part.

Siegel followed this with the question of why are brand names less important. Electronic publishing, said Chodorow, created a medium of connection. Faculty can sell to the public, for which their university pays them. There are students beyond the classroom. No one worried about this issue when time and space didn't matter. Siegel asked if there was interest beyond science, whereby Chodorow answered that the market values is less for humanities, where faculty make money through teaching and produce scholarship at a slower rate, and where the research can wait for publication.

Gosling reminded the group that there is a rapidly growing body of literature in humanities and arts. He thought that students use the Internet too much for their research, when the best stuff is still in print and as yet there is no generic equivalent. He also noted that there are differences in scholars' and disciplines' learning styles.

Siegel asked why should we let professors sell beyond the university, and why should the university claim ownership? Chodorow again responded. The economy of the university depends on the revenue that makes the running of the university possible. He asked how much of faculty time do you own. This is not an intellectual property question, but it is related. He then asked how to evaluate the time spent talking with others who are not university clients. This goes to the question of whether faculty are employees or members of the university. In the academy, information should be free,



as it is the raw material. Restriction on the flow of information is problematic – there is an inherent conflict. “Free” information is perceived as having no or less value.

As for whether the university should get some benefits from faculty publications, Chodorow said yes. Joseph Boykin, Clemson University, chimed in that many universities have policies on patents, but not on intellectual property. Historically, in the university the role of the professor may be one of employee or individual contractor. Boards want accountability for time, workload, and class load. There are implications for publishing. Karen Hunter of Elsevier noted that authors are not paid, editors are. The university also is not paid. If publishers had to pay authors there would be a great financial and administrative cost, which would translate into higher subscriptions or less profit.

If ASCAP can do it, why can not publishers, asked Siegel? Hunter said that she hoped that the Digital Object Identifier might help, but at present there is not much to track. We also have to solve the privacy issue of tracking use. Gary Byrd, from the State University of New York at Buffalo, argued that monographs produce royalties even if articles do not. Chodorow averred that the university should get a benefit from publications. Authors do not get a pay back, they get fame.

John Cox, Carfax Publishing, commenting on Siegel’s next question of whether universities add value beyond what publishers do, said yes, but he wouldn’t have put it in these terms. He observed that faculty have more loyalty to professional societies rather than the university, as they move from institution to institution. Societies own many of the journals, and publishers pay royalties back to them. Copyright could go back to the author’s university, but he needs rights to publish in all media. Ownership is a red herring.

Fred Spilhaus of the American Geophysical Union expressed concern about the word value. He thought it simplistic to think that value equals what someone will pay for information, and that there are different models of payment. He wants the rights to disseminate and produce the record of science and knowledge. Fred Friend, University College London, said that this is a price problem - is intellectual property a solution? He thought that the publishers who want to retain intellectual property rights feel threatened.

Siegel followed with the comment that the readers are also the writers, the university assisted their work, but the university can not buy back the research -- who can break this circle? William Crowe of the University of Kansas commented that there is more



courseware and teaching on the web. Joyce Ogburn from Old Dominion University has found that distance education courses are changing the view of the ownership of course material at her university. Eva Jonas, Harvard University, stated that her institution has an historical perspective and collection. The "Bulletin" of the Museum of Comparative Zoology is still published internally, so there is not the question of a commercial publisher charging what the market will bear.

Bonnie MacEwan, Penn State University, commented from her experience that there are two economies: 1) money that flows between publishers and libraries, and 2) reputation, the real economics of authors. She has not received much money from her published book, and this is the case for many authors. Dissertations may establish reputation and cover the critical years until tenure.

Mary Case of ARL argued that we have to break the cycle with models that work before faculty can move forward. Librarians need to talk to and educate faculty about intellectual property. Chodorow admitted that we were not talking about the administrative structure, but rather peer review and the culture of faculty. Case followed with the comment, if we do not want to change, we should shut up and pay the bills.

MacEwan said that economy and reputation are beginning to come together. Educators are concerned when librarians aren't subscribing to journals in subjects where the university has a significant program. Cox noted that his subscribers include libraries, society members and authors; his firm needs to do a good job to keep them all happy. The learned society may have rights to approve the journal price and may be concerned more about individual subscription rates than institutional ones. Friend countered that readers are affected by intellectual property changes such as the loss of fair use. Byrd observed that there is a move from copyright to license, where the owner dictates the terms of use, and these terms are subject to change annually.

Siegel asked, is teaching now a commodity, not just an event? Will state legislatures regulate this or will there be self-regulation first? Is there any hopeful sign of resolution? Hunter asked whether publishers should unbundle journals down to individual articles. A license is needed for pay per view articles -- faculty may be unbundling journals for themselves. Chodorow argued that if universities should start exercising rights to ownership there will be great upheaval and a decline in universities. Byrd mentioned the electronic dissertation program at Virginia Tech, and Friend seconded that they are trying to do this in the U.K. Friend suggested that at least this form of electronic publishing gives us a model. Hunter raised the thorny



issue of whether this constitutes prior publishing and then asked why are we publishing twice? A dissertation is a publishing event and a contribution to knowledge. We should allow anyone to look at it.

Naturally falling as the next panel, the evolution of licensing models for electronic information generated a discussion of the impact of licenses on libraries and publishing, and the growing possibility of standards. Taissa Kusma from Academic Press gave a quick review of licensing that began in the 1960's with abstract and indexing databases that provided an increase in functionality. The extra cost to the library was passed on to users. DIALOG evolved in the 1970's, ushering in the pay per view/per minute pricing model. This approach was more affordable and functional, but still did not encourage high use. CD-ROMS in the 1980's created a search without per hour cost, were less expensive than tapes, and the user could search without the need for a librarian. CD-ROMs encouraged use, but not by many users at a time. Then there was a return to tapes and local mounting of information. Now there are new products, with new pricing schemes. Electronic resources cost more than print, but there may be a discount to buy both. Journals add on to print cost or vice versa. Academic Press has a bundled product and in a bundled market they desire to minimize contractual relationships while expanding readership.

Royalynn O'Connor, who works for Oxford University Press, mentioned that the Oxford English Dictionary has just started developing an online product. The OED serves a public interest, not just researchers, and Oxford University Press anticipates different levels of use and support. They are currently looking for right pricing and licensing model and they do not desire to restrict the market.

Chiang Win-Shin of RLG remarked that her organization serves the research community as a non-profit organization. They offer two types of databases: RLIN on a per search basis and third party databases for titles previously published only in print, with annual subscriptions for a number of simultaneous users. Mark Capaldini from Congressional Information Services talked about various charging models that exist, including: flat rates, number of fte students at the institution, consortial, and individual licenses. Consortia get a discount because they reduce overhead and management problems. Ronald McMillen of American Psychiatric Press noted that some publishers are small, with not much to bundle. In this case he would advocate a simplified and standard license.

Siegel inquired what was the risk of signing a wrong license form? McMillen stated that a large part of his market is society members. He is not as worried about trying to



prevent things that are not going to happen. Vee Kwon from the Novartis Pharmaceuticals Corporation observed that a standard format will take a while to develop and that corporate fees are often very high for users. When Siegel noted that there is chaos right now and each negotiation is completely different, Elizabeth Eaton of Tufts responded that licenses are set up for the publisher's benefit, and that individualized contracts are overriding copyright law. Universities do not have banks of lawyers either to assist. Kusma indicated that the library must revisit contracts every year. She also said that there are several forms of agreements: consortia tryouts, loose, tight, in-between, and that one license does not fit all. The development of contracts has input from librarians, and contracts are continuing to evolve.

Marietta Plank at the University of Maryland said she has marked out unacceptable language in licenses. She commended companies who provide short clear licenses and advocated not involving lawyers, as this approach is too expensive for everyone.

Howard Dillon, Columbia University, wondered what would happen if the mediating party were left out. He stated that his library receives 2-4% of university budgets for shared use materials, with the understanding that the library will also preserve and archive the materials. He also said that managing contracts is a change that needs to be mandated as a part of jobs. He noted that sharing resources is an ideal, lamenting that the scholarly part of the equation is not being emphasized, but instead we are focusing on finances. Publishers who are pirates may kill the goose with the golden egg with high prices. Many dollars are going to just a few publishers - those who publish 60 - 80% of the journals. Lastly, he noted that the royalties of faculty are divided between production and dissemination.

Plank remarked that the state institute can be an equalizer. Dillon mused whether there was a place for one countrywide consortia. Jill Fatzer from the University of New Orleans said that we have already taken quantum leaps in licenses and pricing and asked about concepts of use. Michael Kelly, University of Texas at San Antonio, concurred that in 3 or 4 years there has been lots of evolution and pricing is changing all the time.

Kusma observed that some consortia are easy to work with. Consortia organized by geography and geopolitical areas contrast with institutions that cut across states. Often the consortial aim is to give access to everybody for everything. Richard Williams of Yale University thought there might be an optimum size for consortium and asked, are we just here to lay the golden-egg? Further, he claimed that licenses should allow fair use, as licenses present a huge administrative burden if the terms are



not simple. He is considering digitizing and licensing his collections. Steven Marquardt from South Dakota State University noted the fact that his institution was part of two consortia and are also individual members of JSTOR and Project Muse.

Siegel next asked the important question of how the student is affected by the trend toward licensing. In response, Fatzer stated that the ease of delivery belies some of the problems and that students need more instruction. At Tufts, Elizabeth Eaton said, they train students to search databases and evaluate web sites. In the health sciences there are lots of images, and they are making curriculum databases by digitizing images from slides. If there was no concept of licenses before, it is needed now. She is getting tired of this tedious and complex process, observing that it is expensive to get permission for use and that students want everything online.

When Siegel asked who should lead in standardizing contracts, Plank replied that ARL should take the lead. O'Connor said we should start with a model and work collaboratively on making it. Kusma said we could add to contracts as times change, like accommodating electronic reserves. He continued that licenses should allow occasional transmission to colleagues outside of a consortia. Someone commented that licensing benefits publishers and gives them control beyond copyright. This prevents students from getting articles from ILL, for example. Kusma countered that he hoped ILL won't be needed because everyone will have access and then there will be no need for borrowing.

When the question was raised about the role of subscription agents and document delivery providers, Plank replied that vendors have become aggregators, and in doing so the vendors have added another layer to license with, another level of profit that is not the publisher's. They are using collection dollars for things not bought before. Fatzer noted that document delivery provides things not normally needed, and non-programmatic areas are being supported this way. Kwon remarked on the existence of the emailing of tables of contents, and predicted that document delivery will diminish, and the end user will get information and service directly. Williams asked, whose side are agents on, and Trevor Hing said both, as they are simply an interface. Plank expressed concern that this was a problem from the user point of view. With aggregators, journals come and go and this is creating great instability.

Responding to Dillon's claim that libraries get 2-4% of the institutional budget, Doug Jones countered that it is nowhere near that high at the University of Arizona. He also wondered about ILL, which is based on the first sale doctrine, and how to address this concern in licenses. Kusma stated that this is still being debated, and that the laws



need to be different. Capaldini talked about documents in the public domain – if someone wants to digitize them, there is no clear protection for content as it is not eligible for copyright. It still needs to be licensed.

The fourth panel on funding issues and scholarly information closed out the roundtable sessions. It was iterated that the current models cannot hold, that libraries simply cannot afford to pay for print and electronic resources at escalating prices. Siegel began with the question, what are the answers to whether institutional funding priorities are changing? Cathy Norton from the Marine Biological Laboratory pointed out provocatively that at Woods Hole in five years she saw journals go up between 10, 15, and 20%. Journals are their life, but she still cut 1,000 in five years. She maintains exchanges for 2,000 more journals. She noted that for 50 years the library needed \$52,000 to run. In every decade since 1960 the amount has doubled and the budget has grown to \$2 million in the last eight years. She now needs money for computers and infrastructure. She is hiring people to manage journals, but contended that this is the subscription agent's job, and that they should take care of licensing for them.

Siegel continued with the question, are libraries subscribing to more journals? Norton flatly stated no – she has canceled journals and now pays \$1 million for 1,000 fewer journals -- and there are more journals being published all the time. Siegel asked whether there will still be money to buy, and Thomas McIlrath of the American Physical Society remarked that the number of people who carry costs of their journals has dropped 3% each year since 1969 -- so they cost more per library. A large part of their subscription base is not major research institutions, but liberal arts colleges that never had duplicate subscriptions to cancel. He pleaded that information from physics needs to be disseminated, but how is hard to say.

Jones argued that there are many limiting factors and not enough money to do what they are obliged to do. He said that we need to find a new way at a different level -- things can not continue in a linear fashion. He also stated that 80% of the scholars that ever lived are alive today -- all seeking tenure! He further observed that the higher education price index is higher than the Consumer Price Index. Libraries could try cutting back to find out what the "squawk" line is. Librarians, he said, should be facilitators to access and ask how can we enhance information. He mentioned the AGNET project, where librarians are sharing in the development of its parts.

Siegel asked whether we should expect some great efficiency someday with everyone at a terminal with access to information. Why is this not evident yet? According to



Martin Dillon of OCLC, we are now living in a world where information is cheaper and perceived as a commodity. Dillon observed that most information providers do not make money on information on the Internet but through the Internet. We are seeing unbelievable cheapness.

Deanna Astle said we should be asking why information is so expensive, how it is valued, and why people are willing to pay for it. There is a vested interest in selling data. Much of the free information on web is stuff people wouldn't buy or the money is made elsewhere or subsidized by ads. Martin Dillon contended that the crisis in journal prices is related to paper subscriptions and electronic journals are new, providing deals of a hundred times more information in electronic form. McIlrath maintained that we are talking to the wrong people -- the rich. We should be working to provide access to China and other countries, to give them access through digital pipelines. The Internet is making a dramatic difference and providing the opportunity for getting to people who have been left out.

Will this then stabilize prices, queried Siegel? McIlrath countered that stability is characteristic of a dead system.

Siegel then moved to the question of what the issues would be for the next few years. Marilou Goodyear pointed out that the public administration view of higher education is negative -- it is seen as esoteric and irrelevant. Rather than focus on getting money from the legislature, we need to find a place in creating and disseminating information. She averred that librarians are wearing rose-colored democracy glasses and believe in creation of knowledge. Librarians need to control their destiny through partnerships with other major public universities before the legislatures and regents demand change. Her provost focuses on change and finding other education partners. They find money through partnerships, not the legislature. They are now negotiating with corporate partners. To the question, what is a partner like, Goodyear answered that the college of pharmacy, for example, was working with private companies in developing drugs.

Jones asked, what should be free? Arizona works with pharmacies in research, and they need information as a team and not just in one place. Customers are broader than just student fee. Jones also asked whether libraries serve a variety of projects in other jurisdictions, and whether libraries are moving beyond the university. They put up data and programs and have others contribute in a "co-laboratory." This is not a journal article but scholarly communication nonetheless.



Michael Binder at Western Kentucky argued that we shouldn't just go out and ask for more money -- there is a new paradigm of funding. We need to be political to get funding, and this is a battle that can be won. They used one time money to get started with electronic databases and then no one wanted to give them up. He advocated using political language to get more funding.

Siegel asked if this was risky. Binder said they worked hard to make it successful, getting support from college library committees and the higher education governance structure (also noting that a librarian chairs the senate). Jeri VanGoethem has seen 10-15% increases in the collection budget each year and Duke spends a lot on electronic resources. Diane Smith agreed with Goodyear that there is no sentiment for higher education. She further noted that there is a new generation that is not print oriented and not interested in the library as a place.

Dana Rooks from the University of Houston contended that electronic resources bring more people to the library and supporting service isn't simple. Bibliographic instruction was simple. She had an optimistic view that librarians and staff are resourceful, talented, creative, entrepreneurial and politically effective. They are looking for funding wherever they can find it. Texshare is even funding private institutions. There isn't one answer – it is more of a patchwork quilt. We need to think in terms of return on investment. Electronic journal costs may be cheaper than processing. She wants space for services, not collections.

When Siegel asked if there are consortia among private corporations, he heard that they have not been proven to be successful. Some corporations have closed their libraries.

Since legislative funding measures have passed supporting consortium for many libraries, Terry Ann Rohe, Portland State University, presented a rosier view. Lobbying has become more effective and there are more people in her library than ever before. She was of the opinion that electronic journals won't solve funding problems if they are priced in the same way and with the same increases as print. Libraries still need paper and they can not afford both.

Deanna Astle noted that higher education is seen as a private good for the individual, not for society. State funding has dropped from 92% to 71% of needed funding. Clemson has raised tuition and has sought other funding sources. Use of one-time funds came back to bite them and she had to cut \$350,000 in journals. She feels challenged to show state higher education is relevant as a public good.



At Arizona Jones said that circulation, reference and foot traffic are dropping. He expects to have a 0% growth library in 8 to 10 years. There may be volumes coming in, but something will go out. With JSTOR as a model, they may track linear feet, to perhaps pull volumes. Norton focused on the opportunity universities have – they have the content from faculty, researchers, and scientists. Libraries are publishing machines on web.

Several questions and comments came from the audience for this panel. Gelfand asked from the audience how to manage internal and external service demands when there are more users. The library is an expensive study hall. Rooks advised taking a business approach. She wants the ILL office to avoid libraries that charge because of resulting check cutting and processing costs. She also is not charging for services since the high cost of charging is higher than the return.

Van Reenen also brought up distance education and the virtual community of scientists. He asked why some publishers are so expensive, when others do it so much more cheaply. McIlrath pleaded that librarians need to be tolerant of publisher experiments, and to allow for failure and chaos. Achieving lower cost may involve volunteer work and a different view of editing. He said push but be patient. Jones pointed out that the Optical Society of America has developed Optics Express, which is free of page charges. Support may come from grant funding.

Cox chose to distinguished for profit and not for profit publishers as one who pays tax and one who does not. He said that they should be the same otherwise. He advised against lumping all publishers together as bad guys and to instead look at whether librarians are getting value. Astle supported tolerating experiments, and said that something will shake out. She added that forums for exchange like this are good and should allow exploration of underlying principles. This is an educational process, and gets information to people in ways they need it

In the wrap up it was asked whether there could be an email list for additional comments and where we go from here. It was noted that there are no action plans yet or idea of what and how to achieve. Faxon will issue a post colloquium report (see http://www.faxon.com/html/fi_prog.html for more information about the Faxon Institute).

In all, the format and content were satisfying and enlightening. The format of topical roundtables provoked interesting discussions and allowed for many voices to be heard



and for no one voice to dominate. Robert Siegel proved to be a master of raising important issues through seemingly naïve or simple questions. However, the institute was a conversation and nothing of the crisis was solved. Although there was attentive listening by all parties, it is doubtful that many people left with any change in their perspective or agendas. There was some frustration that there was no reconciliation of opposing viewpoints. Evident was the tension between the desire to control and track use and the goal to make information easily available. Although many participants happened to be authors, this role was secondary to their professions of publishing, vending, or librarianship. Authors and other producers of intellectual property were missing from the pack. This fact did not go unrecognized at the time.

Several themes emerged that should give us all pause. First, there was recognition that contracts have become a significant means of providing access to scholarly materials. Some argued that this was a good thing, because of the control and precision contracts allowed. Others countered that copyright worked rather well and there was no need for stringent licenses. Second, many participants felt that the pressures of promotion and tenure were driving the increase of publications and the accompanying increase in prices.

The shift from a model based on the doctrine of first sale, fair use and copyright to one of licenses, contracts and restricted use has sent a shudder through the library community that has come to rely on an economic model that emphasized the sharing and promotion of new ideas. Scholars rely on being able to obtain information their library does not own. By the same token, the ability to copy and share copies of electronic information has frightened many publishers into a highly protective stance, to try to circumvent the fast and perhaps overly efficient sharing of scholarly information. Publishers worry equally about every article or scrap of information, regardless of how likely they are to be used (or abused) by a wide group of people. Somewhere there is a middle ground. Contracts may need to restrict access, but not prevent use, and most articles will not be copied and distributed without regard for copyright and fair use.

The purpose of the colloquium was not to set standards or resolve all the thorny issues. Standards did not emerge for license agreements or archival access. No one group was persuaded by the arguments of the other. What remains is for individuals to take action in their institutions, organizations, or companies to make a reality they can live with. Unfortunately, the realities are still out of synch. Change is happening so quickly that individual actions may not be enough.



The colloquium generated a series of thoughtful reports and commentaries published in the *Journal of Electronic Publishing March 1998*, Volume 3, Issue 3 (<http://www.press.umich.edu/jep/03-03/index>). Two articles particularly reflect the impact of the colloquium on the participants. Johann van Reenen reports his conversion to more activism and an agenda for action following his participation in the colloquium and Karen Hunter relates her thoughts on some of the questions after having time for reflection.

Many questions were asked directly, but others lurked in the background. These are questions such as the following. Are there too many publications? What will publishers do if use statistics show that very few individual articles are read or cited? What will university administrators do if they discover the same thing? What is the value then of these articles? How will librarians manage hundreds of licenses from different publishers? How will publishers manage hundreds of licenses from libraries? What if publishers only start selling to consortia? How long will librarians keep purchasing bundled journals i.e. all of a publisher's journals? If universities take back the intellectual property rights, how will they manage them? If they restrict usage to their consortia or other group, how will others get access? What model will develop to manage electronic collections once the publisher has stopped publishing the title or the subscription has been canceled? Will publishers make provisions for archiving online collections (for which libraries have paid dearly) and charge multiple times for access to the same information?

Selecting electronic resources and handling licensing is a costly process, as librarians can attest from experiencing the shift of responsibilities and amount of time devoted to these. The ARL Licensing workshop reveals the depth of knowledge of the many laws required, the intensity of negotiation, and the sheer complexity of wading through the language, nuances, and construction of licenses. No wonder the question was asked how vendors can assist in this process. Not enough librarians have the training or expertise or time to concentrate on licensing. Although expertise and awareness is increasing, the time to do this is not increasing. Therefore some are seeking standard language, formats, and approaches to solve the complexity and time issues. Even as this is being written, progress is being made in establishing model agreements. Meanwhile, legislation is flying around Congress that will profoundly impact copyright, fair use, ownership, and contracts.

My final thought is this. As licenses seem to be ascending, one could ask, are they desirable, necessary evils, or the death knell for scholarship as we know it?



Notes

1. Effort was made to faithfully reproduce the actual words of the participants, if not at least the spirit of the discussion, from the author's notes. When in doubt, the author struck it out. The author apologizes for any errors in presenting the participants ideas and statements and welcomes clarification.