■ The 2nd SPARC Japan Seminar 2014

"Institutional Open Access Policy: Toward the Development of Japanese Models"

Friday, September 26, 2014: National Institute of Informatics
12th floor conference room (Attendees: 82)

The number of governments, funding agencies, and institutions adopting open access (OA) policies is continuing to grow, with over 350 OA policies registered in ROARMAP as of July 2014. Although the policies and their scope vary widely, they play an important role in promoting open access to research results. In Japan, there is also growing debate about OA at the government policy level, along with gradual progress in the drawing up of OA policies by the government and funding agencies on such issues as guidelines for the promotion of OA by the Japan Science and Technology Agency (JST) and mandating that doctoral dissertations be made available on the Internet. Universities, meanwhile, face a variety of issues although institutional repositories themselves are on the increase. For example, growth in scholarly articles other than bulletins remains slow and understanding of OA has failed to improve among researchers. The question for Japanese universities overall is how they should deal with such issues.

At the 2nd SPARC Japan Seminar of 2014, participants sought clues from earlier examples of policy creation and the current situation of OA in and outside Japan, discussed the significance and effects of OA policy setting at universities for promoting OA in Japan in the future, and shared ideas about future directions.

A summary of the seminar is given below. See the SPARC Japan website (http://www.nii.ac.jp/sparc/en/event/2014/20140926en.html) for handouts and other details.

Presentations

Open Access Policies: An Up-to-Date Summary

Shinji Mine (Mie University)

Until recently, the distribution of scholarly information was done within a closed group consisting of researchers, universities and libraries, academic societies, and publishers; but open access has added governments, research funding agencies, as well as ordinary citizens and taxpayers to that mix. OA policy has to be devised with these stakeholders in mind. In the West, the number of funding agencies adopting OA policies is growing, and more than 70 percent of publishing companies also allow self-archiving. Among universities, some pioneering institutions have had OA policies for more than a decade. While there are two main approaches, the Liege model linked to assessment processes and the Harvard model of open access by default, there are many different variations based on the university culture and institutional arrangements.

The data shows that the percentage of papers deposited in repositories varies widely between institutions that mandate OA policies to those that do not. Some institutions have achieved an average rate of 60 percent with mandatory OA. It must be recognized that even when OA is mandatory, this does not mean all papers will be archived, and that "encouragement" policies have only limited success.

In Japan, OA policies have been set by the Ministry of Education, Culture, Sports, Science and Technology (mandating open access to doctoral dissertations), JST among funding agencies, and among universities, Okayama University, Hokkaido University, JAIST, and Nagoya Institute of Technology. What is needed next is to resolve the difficulties in policy implementation by sharing experiences, and to build up the knowledge necessary for assessing and designing policies. There are also many things to be done after drawing up policies on OA. Setting OA policies is no more than opening up the potential of OA, but that potential is great indeed.

How Scholarly Communication Goals Affect the Design of Open Access Policies

Stuart M. Shieber (Harvard University)

The aim of researchers is to return research output to society, and for this reason the communication of scholarly information plays an important role in scientific research. After first of all examining the goals of scholarly communication from the

standpoint of theory and principles, I would like to discuss the kinds of prescriptions necessary for designing OA policies in line with these goals.

The most important goal of a scholarly communication system is sustainability, based in financial soundness. Next is openness, making information available as widely as possible. The third goal is freedom, enabling authors to make use of research output in a variety of ways. And fourth is efficiency, to keep down the costs of satisfying the first three conditions.

Among scholarly journals, the foundation of scholarly communication, there are currently toll-access journals (those limiting access to readers who subscribe to them) and open-access journals (those available on line for free, with authors paying the APC [article processing charge]). How do these two types compare from the standpoint of the above four goals?

To be sustainable, the cost of peer review, manuscript editing, publishing, and infrastructure must be recovered. A journal cannot be considered sustainable if it does not show a profit in the short and long term. Comparing toll-access journals and OA journals, both are able to recover costs in the short term and realize profits. Toll-access journals, however, over the past decades have been in a state of hyper-inflation, calling into question their long-term sustainability.

As for openness, among toll-access journals there are even cases where reuse for research purposes is restricted. Similarly, from the standpoint of author freedom, the rights of authors themselves to distribute their papers are limited. Regarding efficiency as well, a comparison of statistical data shows that with commercial publishers central to toll-access journals, the price per page and price per citation are very high. Average profits per paper are also higher for toll-access journals than for OA journals. The comparisons make it clear that OA journals are preferable from all four standpoints, so that in designing OA policies, a policy of promoting the switch to OA journals should be adopted.

In making such a switch, it is necessary (1) to mitigate the phenomenon of ending up with less than the desirable volume of access and (2) to support the transition from subscription-based to open access; moreover, (1) must not be allowed to interfere with (2).

Harvard's OA policy is a good example of how to mitigate the phenomenon.

Harvard University's policy consists of three elements:

1. Authors grant the university a nonexclusive, transferable license to distribute scholarly articles.
2. Rights can be transfered back to authors, and authors can obtain a waiver of the license at their own discretion.
3. The university can make available the articles to which it has a license.

In this way, the default position has been reversed. Up to now, the default position has been that authors did not retain their rights unless they opted in to retain them, but with this policy the default position is that authors retain their rights unless they opt out. Harvard University introduced this policy in the Faculty of Arts and Sciences in 2008. Today some 19,000 articles are archived, nearly all of them as open access. This number continues to grow steadily, and demand is also high with around four million downloads to date.

Next is the policy for encouraging a switch from toll-access journals to OA journals. Two important factors in designing such a policy are for publishers to provide an environment enabling the transition from subscription to OA journals, and for institutions to take the responsibility for providing funds for making available research output. In science, engineering, and medical fields, governments and private funding agencies provide the funds, while in the humanities and social sciences it is the universities that fund such activities.

So what kinds of policies should funding agencies and universities have? Thinking in terms of the above four goals, it is important in the short term to provide funds that will encourage the transition to OA, and in the long term to provide funds that will help create a more desirable OA market. It is necessary, that is, to provide funding that allows for sustainable and reasonable publication fees to support the kind of publication that guarantees research output will be made available as OA and to promote the transition to OA journals. Given the role of universities as major research funders in the humanities and social sciences as noted above, it is necessary for universities themselves to have this kind of policy. Harvard manages a fund based on COPE (Compact for Open-Access Publishing Equity) for paying publication fees to OA journals. A number of other universities have also signed COPE, and each of them have set up similar funds. Funding organizations also need to adopt such policies, but designing the optimal policy is difficult. I hope Japan will achieve the right kind of policy design.

To summarize, the main points I would like to emphasize are designing a policy that will encourage

Green self-archiving, paying for the costs of promoting OA journals, and not providing financial support to subscription journals or hybrid journals, which only delays the transition to OA journals.

Learning from the University of Liège's OA Policy

Kazuhiro Hayashi (Nagoya Institute of Technology Library/DRF)

Since 2012, the Nagoya Institute of Technology has been implementing a policy by which research papers are in principle archived in a repository. In studying and implementing the system, we learned much from the system of the University of Liège. I would like to report on our studies, while comparing the University of Liège's policy with the situation at our school.

The OA policy of the University of Liège has come to be called the Liege model, and is known as an ideal form of Green OA. The most characteristic feature of the University of Liège's OA policy is that only research output deposited in the repository is eligible for assessment in the university, advertising, and grant application. In implementing the system, in principle the researchers themselves archive their works, as well as perform the rights checking for publishers. The reason for this approach is to encourage understanding of OA among researchers themselves and get them to take an active role in promoting it.

While this imposes an administrative burden on researchers, the workflow for archiving articles has been designed for usability, and a wealth of tools are available so that the archived information can be used effectively. The policy is also backed by active advocacy, including calls for OA in the blog of the university president.

Comparing this situation to the system at Nagoya Institute of Technology, our system can be seen as having the following issues. Whereas the University of Liège makes the repository itself the object of assessment, at our school, the articles archived in the repository are in principle those for which article information has been entered in the researcher database, which is closely tied to assessment. Since this workflow consists of waiting for article information to be entered by

researchers, after which the library performs registration in the repository, it tends to result in a time lag between the release of papers and their being

made public in the repository and in a weakening of researcher awareness of OA. Some way of dealing with these issues is needed.

A Case Study from the JAIST Repository

Miki Terada (Japan Advanced Institute of Science and Technology Library)

JAIST does not make archiving mandatory but has boosted its article offerings in its repository by revising the collection process. The repository, which was made public in the 2007 academic year, currently makes available 8,229 items. Today I would like to talk about the scientific journal articles that comprise around 20 percent of the holdings.

Initially, researchers had to request registration of their papers, but the number archived was small. So in the 2008 academic year a new policy on collection of research papers was adopted. Under the new policy, unless a faculty member otherwise specifies, the school may archive in the repository all papers registered in the research achievements database. As a result, registering of papers in the repository was carried out with university-wide consent. The reason for basing this policy on article information in the research achievements database is that practically all researchers enter such information, and around 80 percent of faculty members periodically update their article information. To make the registration process more efficient, the papers to be archived were classified based on publisher policy and the status of subscription to journals by the library. As a result, it became possible to register nearly four times as many articles as before. There were many other benefits besides the increase in the number of articles, such as the establishment of a collection policy and method, a schedule, and a university-wide promotion structure, as well as the storing of records on inquires to publishers and an increase in faculty members registering articles.

Collection of full text, on the other hand, which was handled by email, involved considerable effort and the collection rate was still low. To solve this issue, in 2010 mandatory repository-related items were added to entries in the research achievements database along with a full-text upload function, and publisher policies were automatically displayed upon entry of the publisher name, for greater efficiency.

The advantages of the collection policy are the effectiveness for collecting past articles and greater

ease of contacting faculty members. Since, however, the amount of work up to the time articles become available to the public remains the same, the process will need to be made more efficient and a means must be found to simplify full-text submission by faculty members. Nonetheless, JAIST has established procedures for making research papers available and the number of items registered is increasing steadily.

Response of Publishers to Institutional Open Access Policies
Open Access Development at Elsevier: An Update
Anders Karlsson (Elsevier Global Academic Relations)
Today I would like to talk about open access policies in Elsevier, given the overall advance of OA, and what we are doing in relation to repositories. Open access content in Elsevier has grown by around 20 percent from last year. Currently, we publish 117 OA journals, nearly all our journals are hybrid, and Green OA is supported by nearly all the journals.

We operate under the three principles of academic freedom (letting authors freely choose the method of publication), reducing the administrative burden, and not creating an infrastructure in which duplication will occur. Related to repositories, we are carrying out pilot projects in three areas, providing metadata, providing embedded full text, and automatically making papers public when the embargo period ends.

Green OA is not free. In reality it is covered by library subscription fees. There are also embargo periods. We are an OA publisher offering a variety of choices. We intend to continue working with the community to provide solutions that maximize the freedom of researcher choices and minimize their burden.

Macmillan Science and Education (MSE): An Open Research Publisher
Antoine E. Bocquet (NPG Nature Asia-Pacific)
First of all I would like to explain why the Nature Publishing Group (NPG) regards open access as important. The reason is that a greater variety of choices for open research enables us to provide higher quality publications. Publishing as OA makes the distribution of scholarly information transparent, easier to make use of, and more immediate. Joint research is accelerated as a result

and has a greater impact on society. We believe this is in line with the mission statement announced when Nature was launched, namely, contributing to the growth of the scientific community and conveying the significance of science to society.

Here I would like to announce that NPG has made *Nature Communications*, which was a hybrid journal, into a fully open access journal. Even before this, NPG had set out a number of OA policies, such as the decision in June 2005 to allow repository archiving following an embargo period of six months. In 2011, we launched *Scientific Reports* as an OA journal on the PLOS ONE model. Also this year we started the Nature Partner Journals program enabling various academic societies and universities to publish high-quality OA journals. Amid the accelerating expectations and needs for OA journals, the business model of hybrid journals faces many issues. To continue providing the highest level of editing and services, we intend to devote our efforts to the creation of sustainable OA publications.

Panel Discussion
Are Institutional Repositories Helped by Open Access Policies at Universities?
Moderator: Yui Nishizono (Kagoshima University Library/DRF)
Panel members: Shinji Mine (Mie University) / Stuart M. Shieber (Harvard University) / Kazuhiro Hayashi (Nagoya Institute of Technology Library/DRF) / Miki Terada (Japan Advanced Institute of Science and Technology Library) / Anders Karlsson (Elsevier Global Academic Relations) / Antoine E. Bocquet (NPG Nature Asia-Pacific)

Four years ago when we held a symposium on the theme of OA policy, we likewise invited Mr. Shieber to join us. The panel discussion this time accordingly started off by talking about the changes in the open access situation over the past four years since that earlier symposium. Mr. Shieber said the most welcome change during this time has been that publishers have started to see OA journals as an important business model and are switching over to them. On the other hand, noting that many journals have not yet made the switch to OA he asked the panel members from the publishing world when they would go to 100 percent OA journals.

The following responses were given by publisher members. With a high percentage of submitted

papers being rejected in peer review, maintaining quality is driving prices higher. In the case of OA, the cost of peer review for rejected papers ends up being covered by authors whose papers are adopted; but considering this situation, authors cannot be asked to pay high APC rates. If, however, there were subsidies for Gold OA, promoting the switch to OA would be possible.

The discussion then turned to Gold OA, with Mr. Shieber offering the following view. The costs of OA should be paid by funding agencies and universities, but what the Finch Report recommends cannot be considered sustainable. Rather it gives subscription journals an incentive to remain. Harvard provides financial support for the costs of submission to OA journals, but excludes hybrid journals and restricts the support to research funded by the school's budget. If this approach were to be adopted by all institutions without capping the budget, it could cover 40 percent of the papers published each year.

Mr. Karlsson responded by pointing out that in the current situation, subscription, hybrid, and pure OA journals exist side by side, but if hybrid journals were to disappear, authors would be limited in their choice of publication methods. Mr. Bocquet said that, as a publisher, so long as a good result is obtained, the cost of producing quality journals is worth the investment. He also noted that if the publishing of researchers' papers were to become commoditized, there is a possibility of publishers becoming solution providers, offering ways of discovering good papers.

The discussion then returned to the original topic, with panel members exchanging views on the role to be played by repositories given the existence of so many different kinds of journals today, and on the benefits of OA policies. The moderator, Ms. Nishizono, posed a question about the benefits of OA policy, noting that in Japan, while the percentage of journal articles among repository content is still small overall, it is larger in those universities that have set OA policies. Mr. Hayashi confirmed that the effect is indeed large. He said that researchers prefer OA, but are put off by the complex procedures, by the amount of work it takes before papers are made public, and by copyright concerns. When a system is drawn up that clarifies the procedures, the greater simplicity results in a major increase in registrations of

journal papers.

Finally, Mr. Mine asked Mr. Shieber whether he felt Green OA alone was insufficient. Mr. Shieber replied that with strong enough promotion Green OA alone could have an influence on the switch to OA journals, but that he was not confident relying on this alone would be enough, and suggested a system supporting the transition to Gold OA was necessary. Mr. Mine further asked the publishing members whether Green OA was putting pressure on publishers. They replied by pointing out the difficulty of institutional support of Green OA, noting that it was easier to do so jointly with funding agencies.

The panel discussion closed by confirming that in OA design at universities it was important to contribute to current OA promotion while monitoring the development of Gold OA and trends in funders' OA policies.

-------From attendees---------------------------------
(people affiliated with university libraries)
- I came to see the need for reconsidering Green OA and Gold OA and rethinking strategy, questioning the emphasis on promoting Green OA. It was quite valuable.
- As we are planning to start up an institutional repository, it was useful to see the importance of policy.
- It was good to hear from publishers about their stance toward OA although that was slightly off-topic. About OA policy, just as there are already examples of OA policy adoption as in the UK, it seems to me Japan should consider what road to take before listening to the situation of publishers.
- I would like to have heard more about Green OA. Learning about some of the early case studies was especially useful.
(university educator)
- Presumably there were time constraints, but it would have been nice to go a little deeper into the issues.
(other/people affiliated with libraries)
- This was a highly useful session as it provided an overview as well as presenting individual cases, and we heard also from the standpoint of publishers.
- As we are in the process of creating an institutional repository, it was helpful to learn about worldwide OA trends, benefits, and the experience of other repository projects.
(other/researcher)
- It was a good opportunity to think about the relationships among institutional repositories, research achievement databases, and open access policies.

---------Afterword--

☺ What I felt in planning this seminar was that when one starts thinking about OA policy and its implementation, it inevitably becomes necessary to think about the overall process of scholarly communication. What can universities and libraries do to steer this communication in a better direction? OA policy looks like it might be a key. While the seminar may have fallen short of your expectations, I would like to thank everyone who came to this event.

Kazuhiro Hayashi
(Nagoya Institute of Technology Library/DRF)

☺ There was much to be learned from the people who took part in this seminar, and I think we have a better view of what we as university research administrators need to do, centering around OA policies. We will now be going ahead with various initiatives. As MC, I seem to have put too much of my strength into giving the overview in the initial five-minute introduction. I regret not doing a better job of time management after that, so that the final discussion ended up being shorter than we had planned.

Eriko Amano
(Kyoto University Research Administration Office)

☺ There is no single answer to the question of how to promote OA effectively. While learning from the outstanding precedents and insights given, I believe we need to search for a form that is compatible with each culture. I hope this seminar has given us one starting point toward that end. I must apologize, though, for not being a better moderator of the panel discussion. As the introduction went on longer than anticipated, we did not have enough time to get into Green OA as much as we had planned.

Yui Nishizono
(Kagoshima University Library/DRF)