What is Open Access Journal

Budapest Open Access Initiative (BOAI) has suggested two ways of achieving Open Access, BOAI-I and BOAI-II.

- BOAI-I : Open Access by self-archive (Green Road)
- BOAI-II : Open Access by Open Access Journal (Gold Road)

Open Access journals are not published on a subscription basis but distributed only in the electronic form on the Internet so that libraries do not need to pay for or catalogue them on behalf of the library patrons on campus. They have shown significant growth both in quality and quantity. For example, PLoS Biology has the topmost Impact Factor (IF) in the Thomson's biology category and the boom of the so called Open Access Megajournals, invited by PLoS ONE, its sister “journal,” has emerged foreshadowing an innovative publishing paradigm.

The cost recovery model of the scholarly journal publishing may shift from the library subscription to the author pay model, with a consequent change on a large scale of the scholarly communication to which the library community has been committed as one of the major players. Given those situations, the university library has to give serious considerations on how to cope with open access journals in near future.

<History and the Present>
Infant Open Access journals, such as "Psychology", "Electronic Journal of Communication", were begun around 1990. Following them, Open Access publishers have grown, such as BioMed Central and Public Library of Science. Nowadays, existing society publishers and commercial publishers are tiptoeing into open access publishing business. Recently, Springer has developed "Springer Open" series (currently 75 titles) in 2010.

<Business Model>
Typically, Open Access journals are operated by "author pay model"(*), where article authors pay the Article Processing Charge (APC) to publishers when his/her manuscript is accepted. As a result, publishers can make them Open Access. The TABLE shows the range of the APCs.

*There is also "hybrid journals" -- a mixture of subscription model and author-pay model. While fundamentally being subscription-based journals, they offer authors an option to particularly make their papers Open Access by paying APC. However, some would say it would not be a persistent model.

<Quality>
Open Access journals are for free, but it doesn’t mean that they are cheap, low-quality journals. For example, PLoS Biology's Impact Factor (12.472 (2010)) is ranked first among the 86 journals indexed in the field of biology.

<Open Access Megajournals>
In 2006, Public Library of Science launched a new open access journal "PLoS ONE", adding to the existing 6 journals. PLoS ONE has the feature of rapid and large publication by its unique light peer-review and editorial process, so in 2011, they published approximately 14,000 articles per year. Now similar journals like PLoS ONE are being launched by other publishers. They are called as "Open Access Megajournals". In detail, refer to the following page: "The 5th SPARC Japan Seminar 2011 "Burgeoning Open Access Megajournals" (February 29, 2012) ", featuring Peter Binfield, publisher of PLoS ONE.
The 5th SPARC Japan Seminar 2011 "Burgeoning of OA Megajournals" was held at NII from 13:00 to 17:00 on Wednesday, 29 February, 2012, Rihoko reports.

DRF was responsible for planning and local organization, with Kiwa Kondo, Nara Institute of Science and Technology Library, serving as moderator, and Shigeki Sugita, Otaru University of Commerce Library, giving the opening speech, both representing the Federation.

1. About Open Access Journal
Yui Nishizono (DRF, Kagoshima University Library)

Introducing existing circumstances and characteristics

Article Processing Charge (APC), which would be the most characteristic of Open Access Journals, was introduced. There were interesting contents such as the method for calculating the amounts of APCs and their comparison between publishers. Also 'cascading peer-review' system was referred to, which was adopted by most Open Access MegaJournals and led to publishers' cost reduction by passing the reviewers' reports to another journal. For example, if a paper is rejected from journal A, it can be transferred to another journal B within the same publisher with its reviewers' reports. Finally, after being pointed out that Impact Factor has likely relevance to the amount of APC, and that subscription model is persistently trusted, the following issues concerning Open Access publishing in the future were raised: What are researchers interested in? What should we do about how to ensure a quality of academic information and how to treat evaluation indicators of journals, articles and research achievements? And who will pay the cost?

2. The PLoS ONE articles written by Japanese Authors
Sho Sato (The Graduate School of Library, Information and Media Studies, University of Tsukuba)

Articles by Japanese scholars in PLoS ONE are mainly from researchers on abundantly funded projects

On the Web of Science, and according to its analysis function in particular, Japan is currently ranked #7 in PLoS ONE by the number of articles by the country. Though the absolute number is still growing, Japan's share have stayed constant around 5% in the past few years. In comparing articles from Japan published in PLoS ONE in 2011 and those in other journals in the same research area, there is virtually no difference in terms of the share of internationally co-authored articles and the names of the topmost contributing institutions for each title. What makes PLoS ONE different from the other journals is the funding condition. While articles from Japan in Biology journals prove to be funded by 1.5 funding agencies on the average, the ones in PLoS ONE are discernibly funded by the average of 2.4 agencies. This means authors in PLoS ONE have amply funded. He concluded that, although it is still disputable whether they submit to PLoS ONE because they have money, or they have to publish their outcomes because they are granted the money, who should pay for APC would matter if the burden of paying for it had anything to do with the submission rate.

4. Panel discussion
[A moderator] Syun Tutiya (National Institution for Academic Degrees and University Evaluation)
Koji Yamashita (Springer Japan)

Prof. Tutiya:
I believe participants felt that there would be various possibilities and a new stream would begin in the future of scholarly communication.

Mr. Bocquet:
'Nature Communications' launched in 2010 is a hybrid journal, rigorously peer-reviewed and aims high quality. It also adopts cascading peer-review system, called 'PSing' in the NPG office (reviewers introduce other journals into the authors by postscript). NPG joined OA Megajournal business in July 2011 with 'Scientific Reports'. The journal is dealing with wider field (not only natural sciences) so its title doesn't have letters 'Nature'. We believe 'Scientific Reports' is easily differentiated from the other OA Megajournals because it is published from 'nature.com,' which is an outstanding scientist community where authors can choose any types of journals to submit.

Mr. Yamashita:
2000 titles of Springer journals are all hybrid journals. In addition, Springer has 280 OA journals including BioMed Central. In these OA journals, there are 70 society journals. I don't believe that OA Megajournals will completely take the place of these society journals. New disciplines will hatch new societies with new society journals. To PLoS's forecast of scholarly communication, all BioMed Central staff will agree and Springer staff will say that it'll be impossible. Both future is OK for us. Our newborn OA Megajournal 'Springer Plus' won't adopt cascading system but will be brought up as a new journal.
It turned out, according to a questionnaire survey for authors, that more than 40% of authors chose PLoS ONE as their first choice. 73% chose PLoS ONE as their first or second choice. The survey also showed that most of the authors were highly satisfied. PLoS ONE published 1,200 articles in the 99.7% of all scholarly fields. Three years later, it published 6,700 articles and became the largest journal. It publishes 14,000 articles in 2011, which account for 1.5% of the PubMed registered articles for the year. The number of articles published has begun to grow steeply since its impact factor was calculated for the first time in 1910.

Recently, more publishers are emulating us, whose journals we call PLoS ONE ‘clones’. Among them the following 4 journals are interesting. The reasons are shown in parentheses:

1. **Scientific Reports** (It is a NPG’s publication.)
2. **SpringerPlus** (Springer is so large as to publish around 2,000 journals. SpringerPlus’s APC is $1,000 US, which is $350 US less expensive than PLoS ONE.)
3. **The Scientific World Journal** (Publishing model has shifted from subscription model to Open Access model in acquisition by Hindawi. It has originally received IF.)
4. **SAGE Open** (Open Access publication in the social sciences. Its APC is as reasonable as $695 US.)

PLoS ONE welcome these clones, because development through friendly competition can bring dramatic changes to the publishing world. Although there are about 25,000 journals now, I wonder if it is approximately 100 among them which are really necessary and will remain after 5 years. Soon Open Access model will replace subscription model.

The success of PLoS ONE has proved subjective measurement of impact and the objective technical assessment can be separated in a successful publication. From now on post-publication mechanisms will attract much attention of people like, for example, offering a useful service to contents existing in cloud which are ensured their fundamental quality and produced in large amounts from a limited number of OA Megajournals and OA Journals. Although future like that seems to be frightening, it must promote the advancement of scholarly communication.

(4. Panel discussion)

**Mr. Binfield**: I assume that 50% of all scholarly articles would be published by OA Megajournals by 2017, and then 90% by 2020. The reasons why researchers choose PLoS ONE are its high impact factors, its short publishing process, and its high reputation. OA does not attract them. Efficient response is the best service for scholars.

**Ms. Ohsawa**: Now this session makes me nervous that I involved with institutional repositories in such situation. Recently researchers seem to be interested in individual articles, not journals. Publishers are getting to have values more than journal titles do.

**Prof. Adachi**: While it is said that publicly funded research should be required to be Open Access, I have realized Open Access has become a profitable business model in the form of Open Access Journal publishing. I also have a feeling that simple situation concerning scholarly communication, where the researchers do research from the pure motivation and the greedy publishers publish journals to earn a profit, have moved to much more subtle one which is difficult to understand.

Selection of the journal by the researcher to publish the article depends on the academic environment of each discipline. I guess some disciplines are no familiar with the publishing method by OA Megajournal. OA Megajournal have technological features to contain and display large amount of scientific data as part of the article, however I am wondering if it could contribute to the development of the knowledge and wisdom beyond such technological advantage.
The panelists answered with YES/NO cards to each question from the floor, followed by further explanations.

**Q. Will peer-review system still remain?**

A. All ‘YES’

(Mr. Yamashita from Springer said ‘No’ because he thought that, while APC would go down to rock bottom once from competition, it would then naturally turn back upward in tune to general inflation.)

**Q. Can APC be cut?**

A. Only PLoS ‘Yes’!

Other questions were:

Q: By the statement that OA articles will increase, did you mean that the relative share of OA articles, rather than the absolute number of the articles published by OA journals, will increase as the subscription model is dwarfed?

Q: "Does the rise of OA Megajournals improve the quality of scholarly research?"

To both questions PLoS answered ‘YES’, NPG and Springer ‘NO’.

**Message from Peter Binfield to readers of “jasmine” and “DRF monthly”**

Open Access Megajournals (which, by definition, can become extremely large) are a recent development which look set to dramatically change the journal publication landscape. The most successful example of an OA Megajournal is PLoS ONE (just 5 years old, but already publishing approximately 1.5% of the Scientific literature) and that success has not gone unnoticed by many of the more established publishers who are rapidly launching similar journals. If we assume that even more of these Megajournals will launch in the next few years, and if we assume that at least some of them will be as successful as PLoS ONE has been, then it is clear that we could soon reach a point where a significant portion of the literature is being published in a small number of extremely large Open Access titles. If this happens, then it is possible that OA Megajournals actually represent the most powerful and rapid way to transition the journal literature into a fully Open Access model.

The Digital Repository Federation (DRF) is a federation for the universities and research institutions that have set up institutional repositories in Japan. "Gekkan DRF" is its monthly newsletter. This special issue is published both in Japanese and in English and responsibility for mutual translations lies entirely with the publisher. We would be grateful if this issue would meet librarians everywhere in the world.

We welcome your comments and suggestions. gekkandrf@gmail.com

http://drf.lib.hokudai.ac.jp/gekkandrf/
**Appendix. Comments from the attendee of the seminar**

**Syun Tutiya (Professor, National Institution for Academic Degrees and University Evaluation)**
With the start, propagation and prevalence of online journals, university libraries did not have to wait until PLoS ONE to start to know the eventual and imminent termination of their functionality as facilities for research. They will be only left with the works for managing institutional repositories, save their roles in learning and teaching, I had assumed. OA megajournals are a threat to the libraries, now having proved to replace the institutional repositories as repositories for journal articles and depriving the libraries of all the roles which they could have played.

**Kiwa Kondo (Librarian, Nara Institute of Science and Technology)**
Gold OA is a model in which authors give publishers APCs and drafts, and the publishers make them available to the world. I can't imagine what libraries could do in the model. Will libraries become a platform on which to collect and control APCs on campus? I don't think they will. But I'd like to get involved in scholarly communication in some way as a stakeholder even if Gold OA age comes. Such a thought became deeper in me in this seminar.

**Yui Nishizono (Librarian, Kagoshima University)**
At this seminar, publishers argued that researchers had more choices than ever before about where and how to make their research achievements publicly available, and repeatedly insisted that "it is researchers who will choose." As a librarian, I want to play a role of providing researchers with reliable criteria for their choices. I would trying to create better environments rather than just forecast the OA situation five years from now.

**Shigeki Sugita (Librarian, Otaru University of Commerce)**
I support Binfield in predicting that OA megajournals would usurp 90% of the existing toll-based journals. What kind of world are we going to live in? University libraries must think out and prepare ourselves for the coming future just the way science fiction writers exercise their imagination in creating unprecedented worlds.

**Masako Suzuki (Librarian, Asahikawa Medical University)**
It took it that PLoS, as a non-profit organization, seriously intends that OA popular. PLoS clearly distinguished itself from Nature by manifestly stating that APCs will decrease while the latter said "APCs will not decrease," and "journals adopting subscription model will stay." Isn't it the case that commercial publishers which are launching author-pay OA megajournals that never fail to collect money to cover the publishing cost are just taking advantage of the bandwagon of OA to make more money from higher education institutions? I was irrevocably infuriated at the seminar. Choose PLoS ONE!

**Hiroshi Itsumura (Professor, University of Tsukuba)**
I asked three questions to the panelists: What's the future of the peer review system and the evaluation of research? What's the role and activity of academic libraries on the situation of universities? I had to think what to do.

**Fumiyo Moriya (Secretariat, Japan Alliance of University Library Consortia for E-Resources)**
Mr. Binfield said that APCs will be goes down through the "healthy competition" among OA journals, but will the day come when such a situation consistent with economic rationality will come true in which a plural number of megajournals as well as PLoS ONE mutually compete on the speed of acceptance decision and the amount of APC? Even when all articles are published by OA journals, I think that the APC issue will end up bringing about the submission divide as long as the Impact Factor and other branding continue to exist. From the standpoint of the readers, it would be absolutely better if all papers were published open to access, so it might be better for libraries behave the same way for the time being, without worrying about future.

**Kazuo Yamamoto (Librarian, Hokkaido University)**
Interested by the seminar wondering that PLoS is going to be a such existence that they call themselves: Public Library of Science, while I thought about is that University Libraries would show some progress as we call ourselves.

**Hideki Uchijima (Librarian, Kanazawa University)**
After the seminar, I started to wonder if we could recognize Open Access Megajournals like PLoS One as a beneficial publishing platform both to the researchers who has two sides as a reader and researcher, and the university as an employer, because it might reduce the cost of the scholarly communication and realize Open Access without any efforts by the researchers like self-archiving.
I am not sure if the APC model would change or take over the existing subscription model. However judging from the opinions of other two publishers, I felt that the appropriate cost of the APC in the free scholarly market seems to be unsustainable, and consequently the negotiation with the publishers by the university library should be continued. In this context, the seminar gave me the strong opportunity to reconsider the role of the university library in this new trend.

**Rulisa Ohsawa (Librarian, University of Tsukuba)**
Researchers will be happier paying APC for OA rather than the subscription fees for the journals they don't read. The Golden Road to OA is nice. I can now imagine that institutional repositories will be collaborating with researchers who are in the fields which can't be happy with the Golden Road.
Appendix. Comments from the attendee of the seminar

Izumi Mori (Librarian, National Institute of Informatics)
How much OA Megajournals overwhelm the world next 5 or 10 years? I recognized the library's future was get involved with this very deeply. I really want to plunge myself into the war happening in academic publishing communities -- only if I could be back to the library afterwards.

Yuji Nonaka (Librarian, Muroran Institute of Technology)
Before hearing from Mr. Binfield, I had a vague notion that the way of library's research support role would change a lot if a high percentage of OA articles had been realized. Though his forecast that surely a high percentage of OA articles would be realized in the near future seems to be bold, we librarians may have to consider a new way of research support, including whether it is necessary or not, on the assumption that early such a world will be coming. I came back feeling pressed a little. Well...

Yutaro Fujie (Librarian, Osaka University)
Even though most articles are in OA in the near future as PLoS assumes, I think libraries and librarians will survive and still be needed. As a big stream from subscription model to APC model is coming up, another unexpected change might be happened to this scholarly communication world. I will keep my eyes open to see what is going on and point out what does not make sense. Even though all articles are in OA, it is difficult for users to get the right information for them due to too much information on the web. I think librarians are expected to be those who organize and navigate such information for their users. I intend to provide the right services users need with the direct message "we can do this for you!", not negative one like "we are just here."

Kenichi Misumi (Librarian, Hokkaido University)
I am wondering how many readers would support OA journals, since the quality is not guaranteed as much as subscribed journals. Researchers will keep going with the way they submit and read articles in both OA mega journals and qualified journals. I don't agree with Mr. Binfield's assertion that subscribed journals will have only 10% share in scholarly publishing market.

Eriko Minami (Librarian, Otaru University of Commerce)
I realized that OA Megajournals draw much attention in publishing through lots of questions to the speakers. OA Mega Journals are published not only in natural sciences but in social sciences (e.g. ‘SAGE Open’). I'd like to talk about OA Megajournals in social sciences such as SAGE Open, next time I visit a professor in our university.

Ikuko Tsuchide (Librarian, Osaka University)
To the question "Do OA Megajournals improve the quality of scholarly research?", I would like to answer "YES". No matter what abundance of metadata of journal articles are found on the Internet, they are no use unless you get to the full texts, which is why ILL/DD is still with us. It is the users themselves rather than the citation indexes that even now decide on the real value of the articles.

Midori Moriishi (Librarian, Osaka University)
Though OA Megajournals make researchers busier --because they cannot distinguish the articles to read by title--., they will attract those who need fast publishing and journal brand (Impact Factor). During the seminar, I was very excited and wanted to tell what I learned to our institution's researchers. But I don't know the knowledge about Megajournals will bring some change in their submitting habit. Will that make the university administrators rethink their assessment methods of researchers?

Hayahiko Oozono (Librarian, Okayama University)
If submission model becomes the mainstream instead of subscription model in future, what are things going to be like? Subscription model offers at least three options: institutional subscription, individual subscription and pay-per-view. In addition, there are flexible options left for readers such as InterLibrary Loan and institutional repositories. In submission model, researchers have no other option but to submit. Publishers betray that they will stay with the expensive peer review system and even suggest possible raising of APCs. Researchers seem to want the assurance ensuring of quality by peer review system. Will commercial publishers offer flexible subscription model the same way as with subscription model? Can libraries offer any functions which will replace InterLibrary Loan and institutional repositories?

Izumi Asano (Librarian, Asahikawa Medical University)
When I knew Open Access, I thought it was a wonderful idea for researchers who looked for scholarly information but now, encountering OA Megajournals, I am not sure if it is really good for them. Medical scientists always seem to want to read only important articles and find them without effort, thus getting weary of hunting for them in a mass journal articles. So, honestly, an explosive increase of articles should be unwelcome to them. OA Megajournals are troublesome in this respect, to be sure, but, on the other hand, they are welcome to authors. I would like to keep an eye on the coming changes in the way researchers will be dealing with them.