

The California Geographer and the OA Movement: Using the Green OA Institutional Repository as a Publishing Platform

Michael Biondo & Andrew Weiss
California State University, Northridge

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Publishing in open access has been largely dominated by Gold OA journals. Publication in these journals, which in some cases have developed as the leading scholarly journals in their respective disciplines, provides immediate dissemination of information, a greater likelihood of citations for authors, and costs less than traditional publishing venues (Wagner, 2010). Lesk (2012) estimates that publisher Elsevier spends about \$10,000 per article published, while the Public Library of Science (PLoS), a prominent Gold OA journal, spends only about \$1,500 per article. PLoS' fee-based approach is a vital part of the open access movement even as it erects economic obstacles for researchers who lack sufficient funding to



pay publishing fees. Total costs are clearly cheaper than their traditional counterparts, but those costs are essentially shifted from readers onto authors.

On the other side of the OA movement, Green open access repositories have traditionally been used for gathering previously published scholarly materials—usually pre-prints, post-prints, and the occasional final version from compliant publishers. Yet one recent strategy of institutional repositories has been to move away from being passive gatherers of self-archived content to becoming active promoters of new scholarship, especially in the creation of Web-based journals. This is occurring at significantly reduced costs as well. Cornell University's *Arxiv*, for example spends approximately \$7 per article to gather work in physics, mathematics, computer science, quantitative biology, quantitative finance, and statistics (Lesk, 2012). Peer review and other services still remain the responsibility of the journals.

The California State University, Northridge (CSUN) has joined this growing movement by providing space in its open access institutional repository, *ScholarWorks*, for *The California Geographer*, a journal currently edited by CSUN faculty. From May 2012 to April 2013, CSUN *ScholarWorks*, based on the open source IR software DSpace, has grown from roughly 200 items to nearly 2,200 (California, 2013). Growth has been evenly distributed between ETDs, which were mandated in May 2012, faculty publications, and several campus-based open access journals, including the English Department's student journal, a journal of Chicana/o studies, newsletters and pamphlets in the Biology Department, and *The California Geographer*.

Publishing *The California Geographer* to a Shrinking Audience

The California Geographer serves as the flagship publication of the California Geographic Society. Through 52 volumes and nearly 400 articles, the journal had been published entirely in print form. However, in 2012 society members decided to move to an electronic-only version. The main reason to move to purely digital was to alleviate the growing costs of paper-based publication. According to the current editor and treasurer, Steven Graves, professor of geography at CSUN, yearly printing costs for the journal reached about \$2,500, with approximately \$1,400 going toward the copyeditor and \$1,100 going toward the printing and mailing of the journal. Continuing to provide print journals was increasingly seen as an unsustainable practice. E-versions would be cheaper to produce and distribute, cutting out both printing and postage costs. Second, the society believed that e-versions of their work would be much more environmentally friendly, one of their core values as a geographic society (Graves, 2013).

The most pressing issue for the society, however, has been ensuring the journal's accessibility to a wider audience. For the past decade *The California Geographer* had been available as a print journal with digital versions added to the online content aggregator EBSCOhost databases. The problem was that the journal was bundled with the company's highest-priced access package, *Academic Search Premier*. As a result, the online articles were available neither to the CSUN campus itself nor about half of the other 22 campuses in the California State University system. Much of the journal's readership, including CSUN faculty and students, was unable to access the journal except in print form. Ironically, this limited access occurred despite the fact that

the society had never transferred copyright to EBSCO. Their agreement merely allowed the company to distribute it online through a limited license agreement.

Moving The California Geographer to Open Access

Moving to open access turned out to be a relatively simple process. Once the editors had learned of CSUN *ScholarWorks*, its overall access and preservation philosophy, and its online search capabilities, the society's board of directors voted to move the journal to open access. As owners of the copyright, they were not fettered with drawn-out negotiations to return transferred rights. Additionally, the board decided to keep the current agreement with EBSCO in order to continue receiving revenues, however diminished they might be.

ScholarWorks staff next took over the task of digitizing the print journals and cataloging them at the article level within the repository. It was considered easier to digitize the journals in-house as well as to secure any digital files from the journal editors than to deal with acquiring digital files from EBSCO directly.

Procedure

ScholarWorks staff obtained a print issue of each volume and began digitization with an Epson 10000 XL flatbed scanner. The resulting high-quality TIFF files were batch-processed in Photoshop, and merged and converted into multi-page PDFs. The digitization of the journal took approximately six weeks. This resulted in the scanning of over 5,500 pages and the creation of 400 individual PDF items. One-time costs are estimated at \$50 for each item submitted to *ScholarWorks* during the period of time April 2012–March 2013 (this includes all items as well as *The California Geographer*). This is significantly cheaper than traditional or Gold OA publishing, though still about seven times higher than the Green OA repository *Arxiv* (see Figure 1).

Benefits and Impact

According to *Library Journal's Periodicals Price Survey 2012*, the average price per title in geography was \$1,348 (Bosch and Henderson, 2012). By choosing to forgo the traditional publishing model, which results in higher costs in both financial and environmental terms, the journal has become significantly more accessible and therefore more sustainable. Although the journal will continue to be edited by the members of the editorial staff, time and cost no longer need to be sunk in printing costs. The benefit of the savings offsets the eventual loss of royalties from EBSCO, which totaled roughly \$850 in 2012. Including all costs associated with the print version of the *California Geographer*, which were about \$2,500, the society was losing nearly \$1,700 to publish and distribute the journal.

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By placing the journal in CSUN *ScholarWorks*, the society benefits from a robust digital preservation infrastructure supported by the California State University's Chancellor's Office Digital Library Services. DSpace's handle system provides each journal article with a permanent uniform resource indicator (URI), which functions like a digital object identifier (DOI). By adding the journal to the IR, the society also receives permanence and stability for its publication without incurring the high cost of purchasing its own server, storage, and backup.

The move from print to digital has a direct impact on the library itself. The Oviatt Library is currently transitioning away from the traditional model of stacks and individual study carrels toward a "Learning Commons" model of collaboration, multi-purpose use, and group-centered learning. As a result, interior space is a valuable commodity. The movement of journals, serials, and reference works from print to digital open access allows the library to free up space that can be used for student-centric activities. Librarians at Oviatt recently completed a thorough weeding of traditional reference materials, and the stacks and shelving that once housed print publications such as *The California Geographer* are scheduled to be removed to make room for its new Learning Commons. Print journals will be moved to Oviatt Library's Automated Storage and Retrieval System (ASRS).

Drawbacks & Solutions

As mentioned earlier, one of the drawbacks from the move to *ScholarWorks* is the potential loss of royalty revenue that the publication receives from EBSCO for each download. Yet, as we demonstrated earlier, this amount is offset by the costs incurred by maintaining a traditional print model. Furthermore, it appears that only the years after 1990 are provided full-text in EBSCO. The first 30 years are therefore not available as full-text, which results in significantly fewer downloads and subsequent royalties.

A much larger concern expressed by members of the society was disappointment at the loss of a physical copy. The need for a physical copy appears to be drawn along generational lines. New members of the society, in fact, appear to be more comfortable accessing and reading an article on a tablet/iPad. Yet any PDF-based issue or article in *ScholarWorks* can be printed, usually in the exact form in which it was published. In contrast, though PDFs are available through EBSCO, the aggregator's version is primarily accessible only in text-based HTML, which tends

to eliminate the character, physical context, and feel of the original print publication. In cases of items with maps and detailed images, this is a drawback. Ultimately, though, for those members of the society who still wish to receive a print version of the journal, the *California Geographer* editorial board could instead use the services of short-run, on-demand-printing, at a fraction of the cost of a traditional full print run.

It must be noted that EBSCO's image scans in the supplied PDFs are also significantly poorer in terms of image quality. *ScholarWorks*, however, allows the journal to add high-quality supplemental files to items within the collection in any file format, including TIFF and JPEG2000. A good example of this added value appears in Volume 39 (1999) with the supplemental "Absurdist Cartographer Map" (see Figure 2).

Originally, this map was mailed out to all print subscribers subsequent to the journal's publication. As it appears in the EBSCO database, however, the map is illegible and therefore unreadable. The text in the image is too small to read yet does not have sufficient resolution for zooming in. By scanning the supplemental map that appeared with the journal in a high-resolution TIFF file, viewers are able to get the full experience of "Dadaist geography" as intended by the author (Kaplan and Nemeth, 1999).

Another drawback stems from relying solely on the DSpace package to "publish" *The California Geographer*. While *ScholarWorks* staff members believe very strongly in creating open access journals, there are still some limitations to using DSpace as the primary publication platform. First, unlike bepress or Open Journal Systems(OJS), which could be implemented and integrated with DSpace, the stand-alone DSpace system does not handle the workflow of a peer-reviewed journal. It is not a full-service publishing platform. Additionally, while some systems can provide a unique "look and feel" for individual journals, we have not yet distinguished the journal from the framework of the IR. Because the journal is in reality a sub-community within the DSpace repository structure, it remains submerged within its hierarchy of community/sub-community/collection. One strategy taken to approximate the functionality of a dynamic table of contents for each volume, then, is to embed permanent links of the individual articles within the collection page.

Future Plans

Long-term planning will be implemented over the course of the 2013–2014 academic year. To accomplish this, a new Digital Publication Implementation Group was established by Oviatt Library Dean Mark Stover in May 2013. The members of this group will oversee digital journal publication as well as provide needs analyses for future projects. Although membership is currently limited to library faculty and staff, the group will reach out to form partnerships with campus departments and colleges interested in establishing or moving to online digital journals.

The first priority for the group will be to pilot OJS at the library. As it is an open source software system compatible with DSpace, it matches our philosophical goals while also

supplementing our long-term development model. By pairing an open access publishing system like OJS with DSpace, we can provide dynamic front-end accessibility with stable back-end archiving and storage. This is accomplished by the SWORD protocol, which, in layperson's terms, basically pushes content into the DSpace system from source locations. CSUN already uses SWORD for its online electronic theses and dissertations (ETDs) submission forms. There are also plans to set up SWORD in various colleges and departments across CSUN in order to begin collecting materials for the university's archives. The more drivers available for content submission, the more likely faculty and administrators will participate in adding content to an open access IR (see Figure 3).

Since mentioning the possibility of providing a publishing platform, various organizations and departments on campus have become very interested in partnerships.

Oviatt Library will consider plans to restart the currently shuttered university press, *Santa Susannah Press*, as an open access imprint. Multiple projects are on the horizon, including the archiving and publishing of conference proceedings and presentations for the *28th Annual International Technology and Persons with Disabilities Conference*. Since mentioning the possibility of providing a publishing platform, various organizations and departments on campus have become very interested in partnerships.

Conclusions

The implementation and integration of open source, open access platforms such as DSpace and OJS will allow Oviatt Library to continue partnering with institutions such as *The California Geographical Society*, and promoting the dissemination of information openly, economically, and sustainably. Ultimately we see *The California Geographer* as the first jewel in an expanding crown of online electronic open access CSUN publications.

As we have seen with not only ETDs but with any formerly print collection moving to an online environment, the added value from digitization—increased access, cheaper printing costs, full-text searching, and so on—provides new life for the content. CSUN *ScholarWorks* statistics show multifold increases in ETD access. It is not unreasonable to expect similar increases in access to *The California Geographer*. Those who are vision impaired also benefit from the increased availability of the content in an ADA-compliant form, especially in PDFs that have been formatted with optical character recognition software.

Open access publication will surely continue to evolve and the Green open access IR may be poised to take over some of the duties of publishing that have been the primary domain of

the Gold OA movement. Lower overall costs for this type of model may signal perhaps that a hybrid Green-Gold OA movement will be our future.

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Appendix:

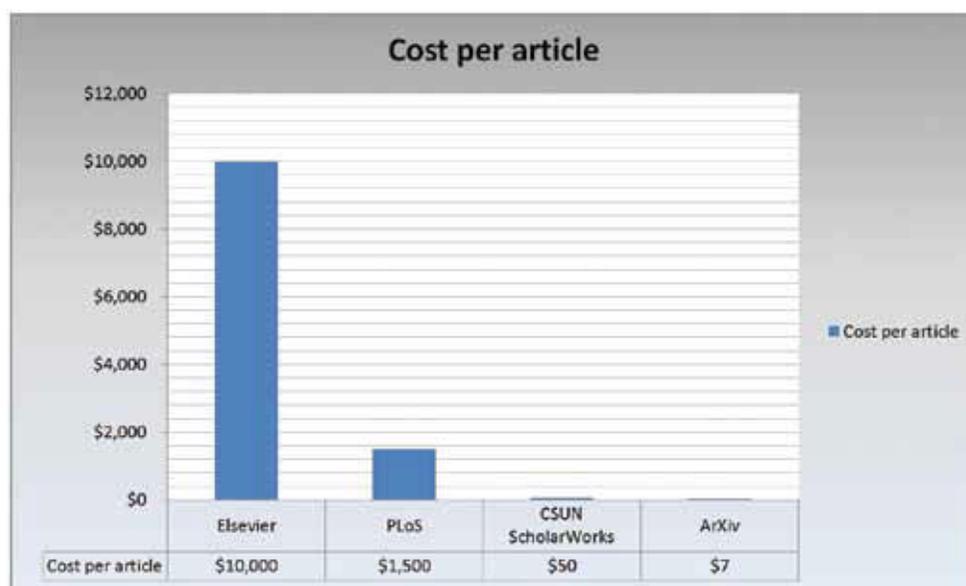


Figure 1: A comparison of publishing costs for Gold OA and Green OA publishers. PLoS costs close to \$1,500 per submission. ArXiv costs \$7 per submission. CSUN's costs are \$50 per submission. Elsevier, however, is estimated at nearly \$10,000 per submission. (Lesk 2012)



Figure 2: A comparison of the same sections of the Absurdist Map of the U.S. from the *California Geographer*, v.39, 1999. The image on the left is EBSCO's version. The image on the right is the supplementary material version in CSUN ScholarWorks.

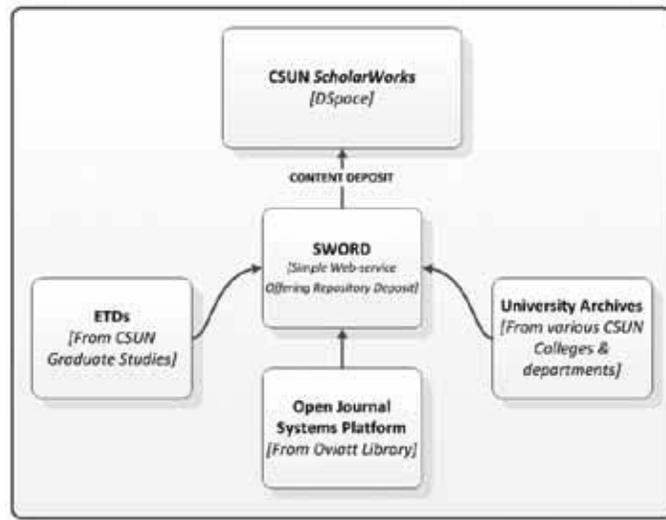


Figure 3: Diagram shows the central importance of the SWORD protocol for facilitating automated content submission into the DSpace repository. By integrating OJS with DSpace, another content driver functioning like CSUN's ETDs online submission process or the proposed University Archives submission form will ensure the IR's continued development.