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The Rutgers Open Access Policy goes into effect: Faculty reaction and implementation lessons learned

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Abstract:

From laying the groundwork for the successful passage of a university-wide Open Access policy, through the development and planning that goes into a successful implementation, to “Day One” when the official university policy goes into effect, there is a long list of factors that affect faculty interest, participation and compliance. The authors, Mullen and Otto, having detailed earlier aspects of the Rutgers University Open Access Policy passage and implementation planning, analyze and share the specifics that followed the rollout of the Policy and that continue to affect participation. This case study presents some strategies and systems used to enhance author self-archiving in the newly minted SOAR (Scholarly Open Access at Rutgers) portal of the Rutgers institutional repository, including involvement of departmental liaison librarians, effective presentation of metrics, and a focus on targeted communication with faculty. Roadblocks encountered as faculty began to deposit their scholarship and lessons learned are a focus. Early reaction from faculty and graduate students (doctoral students and postdocs) to various aspects of the Policy as well as the use of SOAR for depositing their work are included.

Keywords:

Open Access policies, Open Access, library liaisons, university faculty, scholarly communication, Rutgers University, policy implementation

1. Background and Context Surrounding the Rutgers Open Access Policy and its Implementation

Passing and implementing a university-wide Open Access policy is indeed a complex process, requiring sustained attention to communication with stakeholders, ongoing development and enhancement of repository systems, provision of incentives for faculty and student compliance and participation, and the continuing dedication of at least a small cadre of repository developers, open access (OA) specialists, eager participants and advocates. At Rutgers University in the United States, the authors have presented and published two previous case studies. The first was a report of librarians as “change agents,” working to successfully pass an open access policy university-wide via a Rutgers Senate action and vote in 2012. (Mullen and Otto, 2014) The second was a detailed plan for all aspects of the implementation of the Rutgers Open

Access Policy via SOAR (Scholarly Open Access at Rutgers), a new portal and set of services associated with RUcore, the Rutgers University Community Repository, a Fedora installation. (Mullen and Otto, 2015). At the present time, in mid-2017, the Rutgers Open Access Policy and SOAR are moving forward, even as certain challenges and opportunities continue to present themselves. The research services environment that exists around university open access initiatives has also evolved from the early days of outreach and education that existed in 2011 prior to the passing of the Rutgers Open Access Policy. A few years out from their initial efforts, the authors are now in a position to offer perspective on the wider institutional open access landscape and to discuss some lessons learned. While committed to the success of SOAR and the Policy rollout, the authors did not accomplish all of the things that were laid out as part of the well-crafted implementation plan, but did need to remain flexible in the face of the often inevitable changes to institutional and library priorities and availability of resources. Before the Rutgers Senate-mandated three-year assessment (due fall, 2018), it is beneficial to take stock and re-evaluate the progress that SOAR and the Policy have made. There have always been questions about compliance in any discussion of open access policies, and even the most robust implementations do not approach the goal of having all university faculty deposit each scholarly article in the institutional repository (IR). While following established best practices for open access policy passage and implementation, each university is in this alone in some sense, due to differences in local institutional and organizational culture, and the inevitable transitions that may take place in any multi-year initiative.

Throughout the early years of the Rutgers OA Policy implementation, more universities passed institutional or departmental policies or initiated discussions intended to lead to the development of a policy. The corpus of open access articles available from repositories (and the number of repositories) also has grown. The authors, from the beginning, have not been in this work alone, and the main consulting group of peers continues to be the Coalition of Open Access Policy Institutions (COAPI) (<https://sparcopen.org/coapi/>), an organization of North American universities passing and/or implementing open access policies. Even as Rutgers and others have focused on self-archiving of faculty scholarship, commercial solutions have also come to the forefront that facilitate more automated “harvesting” of faculty scholarship in compliance with OA policies. Digital Science’s *Symplectic Elements* (<http://symplectic.co.uk/products/elements/>) is one partner in this effort of some universities to populate IRs with the legally available scholarship of the institution’s faculty. Various APIs (Application Programming Interfaces) from commercial and non-profit sources, such as Elsevier’s *Scopus* (<https://www.elsevier.com/solutions/scopus>), for example, can complement green self-archiving by supplementing open access IR content with citations for retrospective scholarship to create a fuller record of faculty’s scholarly output. There are some copyright challenges and transitions over time with which OA policy implementers have to grapple, and authors and librarians alike struggle

with publishers' overly complex and arcane rules around self-archiving, and many have offered suggestions to publishers. (Mullen and Ross, 2016) In negotiating with publishers that make self-archiving difficult, institutional subscribers may use the LIBLICENSE Model License Agreement to communicate a reasonable expectation that high subscription prices will be balanced by reasonable self-archiving conditions. (<http://liblicense.crl.edu/licensing-information/model-license/>) Many of the difficulties caused by problematic publisher self-archiving policies can be overcome by a Harvard-style OA policy and license that asserts author rights to self-archive scholarship in the IR. (<https://osc.hul.harvard.edu/modelpolicy/>) This license is the one most adopted by policy institutions, the one best understood by implementers, and the one that most easily facilitates author self-archiving in compliance with institutional OA policies. Some universities fully leverage the power of the Harvard-style license while others have had to make some slight modifications to the model language. At Rutgers and other institutions, a waiver from the policy is made available for the small handful of publishers that require author waivers from all institutional Open Access policies. This waiver requirement as a condition of publication is an example of a publisher policy that creates added workload for implementers and confusion for authors. The waiver must be available to the faculty author at the point of need in order for the publication process to continue.

Since 2011 when the authors began their work on OA policy, the IR landscape has evolved and matured. Institutions have joined user communities based on IR platform and these groups meet at major in-person conferences, and also sponsor and create webinars and other informational initiatives. Many institutions now are members of DSpace from DuraSpace, bepress from Digital Commons, or Fedora (also from DuraSpace), described as a “robust, modular, open source repository system for the management and dissemination of digital content.” (<http://fedorarepository.org/about>) Fedora underlies RUcore and the SOAR portal, allowing for a flexible and robust implementation of the Rutgers Open Access Policy that focuses on the ingest and preservation of the complete content of scholarly works; it accommodates supplementary data, and can assert relationships between digital objects.

Where once considered siloed, IRs have seen some strides made into consortial collaborations. The critical mass of available open access scholarship has greatly increased over recent years, and aggregators have made repository content even more discoverable. For example, SHARE, the higher education initiative founded in 2013 by the Association of Research Libraries (ARL), the Association of American Universities (AAU) and the Association of Public and Land-grant Universities (APLU), is now partnered with the Center for Open Science (COS) and continues to increase its critical mass. SHARE continues its major focus on “building a free, open, data set about research and scholarly

activities across their life cycle” and now offers a searchable database that includes repository content from its “SHARE Notify Providers,” allowing more visibility for all IR scholarly content. (<http://www.share-research.org/>) With open access policy implementation, participation in SHARE allows further reach of author works and support of an important initiative to make visible OA works in IRs.

Recently, a group of stakeholders developed an “international accord” that seeks to align repository networks across the globe. (COAR, 2017) A goal is the worldwide network of interoperable IRs, filled with a huge and critical mass of scholarship, crawled by search engines, and made available to all of the world’s readers. Still, the work of promoting the behaviour change of author self-archiving as part of regularized scholarly workflows continues by those working on open access initiatives such as the Rutgers Open Access Policy and SOAR. Regardless of implementation planning around OA policies, much of the ultimate success of any implementation relies upon the individual efforts of faculty members (and in some cases, graduate students, research staff, postdocs and others) who offer their work to the world’s readers without expectation of payment. No matter how simple and easy it is to upload an article at the time of acceptance for publication, it remains the case that self-archiving all articles (and other research products) in the IR is not on the top of every scholar’s priority list. Some combination of self-archiving and automated solutions may be necessary for successful implementations. Since the authors began their implementation work, a few institutions, (such as University of Liege, Belgium) have demonstrated that it is indeed possible to reach close to 100 percent compliance with an open access policy. However, few have reached this pinnacle, especially without using strategies tied to reporting and assessment or other “top down” approaches. The authors have continued to place the major focus for now on author self-archiving and the services that make this approach “simple and easy.” They continue to work toward a basic behavior change of individual scholars and a concomitant expectation of the disciplines and the universities that all research publications authored by Rutgers scholars will be made available online for impact and visibility.

The whole conversation around the Rutgers OA Policy and its implementation has made the scholarly communication expertise of librarians more visible, more useful and more sought after, even by university administrators. Conversations have rolled out across our university, leading to interest in all other research services provided by librarians. Increased collaboration with university faculty and graduate students only naturally leads to a new kind of reference question that focuses on open access and scholarly communication. Faculty and students begin to see the library more as a place for consultation not just about search and discovery, but about scholarly publishing and the greater issues around maximizing research impact at the individual (and institutional) level. Librarians’ long expertise in these areas begins to have a new and sometimes urgent relevance and usefulness to the needs of the current

university's research enterprise. Due to the OA Policy work, for instance, the authors have found themselves invited to meetings of faculty governance groups, individual faculty offices, and for departmental presentations across many disciplines from the sciences to the arts and humanities. At Rutgers, this is not only a science conversation (as has been reported elsewhere). There is interest across the spectrum of disciplines, with all sectors now knowing the internet enables a new kind of sharing and many wanting to know how best to leverage the possibilities. Some of the most compelling conversations have been with humanities faculty, who may recognize that making their work more available to readers is key to gaining new readers and recruiting new students and faculty into university programs.

The Rutgers Open Access Policy may also be one of the first parts of a new research landscape built on openness and public access to the products of research. In the case of the authors, successful passage of the OA policy via the Rutgers Senate in some ways laid the groundwork for another vote and Senate-led initiative, a university-wide ORCID implementation. A plan to build yet another piece of this larger interconnected set of research services is appealing to faculty as well as administrators. The library is where the expertise naturally lies for topics like researcher IDs, OA policy implementation via the IR, faculty profiling system options, research data management planning, citation metrics, and other more advanced research services. Ultimately, pieces come together, situated in some part with the library and librarians, and the university begins to build that collaborative environment that is the gold standard in a research university, and now across disciplines on a global scale. Librarian expertise is likely essential in the building of this new scaled up research landscape.

Open access continues to evolve and many feel it has, in some senses, been co-opted by the commercial sector. There has been more fatigue in the past few years with the business practices of some commercial publishers, with organized boycotts and even a recent lawsuit against the largest of them, Elsevier. Elsevier has begun acquiring more of the well-known services such as Mendeley (<https://www.mendeley.com/>) and SSRN (Social Science Research Network) (<https://www.ssrn.com/en/>). With so much uncertainty in the space, the IR, if developed correctly, may have a new role as trusted space and service, with a primary purpose to gather university scholarship and make it available to a world-wide audience on the internet. It is run by faculty and created for faculty. It is not for sale, not for profit, and it is and will remain sustainable.

This uptake of products and services by various business interests demonstrates the promise and inevitability of open access through internet sharing. Things will continue to shake out, but one can say that sharing is the culture of academia, and efforts to rein in this desire for collaboration and innovation will

not succeed. Copyright is an issue worldwide but authors are showing more and more willingness to upload papers for all to read, regardless of the contracts they've signed or the threats of risk. Readers seeking to find the research information they need will continue to seek ways to access scholarly information, and may leave aside some traditional boundaries like library access or copyright status. A new entrant into the article access space, and a competitor for the eyeballs on repository versions would be, for instance, the pirate site Sci-Hub (and the papers in its LibGen repository). This is one of several quick, "one stop shops" where readers and researchers can locate publisher versions of articles without hitting a paywall. (Bohannon, 2016) Readers are willing to go to pirate sites to access the articles they need, regardless of how the articles were made available there. Commercial publishers have found much of their proprietary content available online in Sci-Hub, for instance, and lawsuits have not, as of yet, provided a solution for those whose toll-based content is available free from these sites. Even commonly-recognized scholarly collaboration networks such as ResearchGate include proprietary content (Jamali, H. 2017), and so the situation is quite complex. Using Google Scholar, searchers across the world (where it is available), expect to find articles freely available to read, and publishers know that more traffic to their site can come from the links that IRs provide to publisher branded versions of articles. In terms of the discovery landscape, Google Scholar is a heavily used gateway, and Rutgers SOAR is optimized for search there. However, despite a heavy dependence on Google Scholar for search and discovery, the service is not at all transparent, and Google has not been forthcoming with assurances of sustainability or even future plans for Scholar. Even the future of Google itself cannot be assured, and so libraries, IRs, OA policy implementation and much more should not be left to the business plans of Google. More and more, search and discovery is coalescing around one service, Google Scholar, and libraries need to be a bit wary of that trend.

With the IR itself not a target of search for many seekers of information, managers must ensure IRs are crawled by Google and other search engines to optimize discoverability by the majority of web searchers to maximize discoverable content. There are many forces at play outside the institution; for instance, the ever-growing and compelling pull of the major disciplinary repositories and scholarly collaboration services. Looking at ResearchGate as a single example, we see exponential growth, with more papers uploaded and searchable via Google Scholar all the time. This is the kind of phenomenon with which IRs have to contend while always maintaining relevance and competitive edge for busy faculty. The University, the OA policy, and the IR have a different mission, and it is critical that this mission be explained to time-stressed university faculty; the ones that have reiterated over and over (to the authors and many others working in the same arena) that they care, but time is short.

Funders mandating OA for both publications and data have raised faculty

awareness; authors now know that a lack of compliance has implications for future funding. Publishers are encountering the disruptive force of funders (such as Wellcome and Gates) who do not allow their funded research to be embargoed by the journal, or stuck behind a paywall. Journals and publishers have had to bend and evolve in ways that may not have been possible just a few years ago. Publishers and IRs have had to respond to recent trends, such as the online dissemination of preprints in a number of new disciplinary areas. The use of preprints has taken off, and the IR is poised to take all faculty “author originals,” either redundantly with the established preprint servers like arXiv, or simply providing a place for authors to deposit these early versions in cases where there is not currently a culture of archiving preprints. It will be advantageous to study how the IR is used over time for pushing out early scholarly work. Importantly, early works will each receive a DOI, integrating these papers more thoroughly within scholarly communication norms of many disciplines. Mechanisms for version control, such as those employed by SOAR, are paramount, with superseding versions enticing faculty to share early work more readily. Faculty do not really grasp (or may not really care) that the IR can be the first place of deposit for versions of articles, and that it also offers an important preservation mission, migrating deposited articles to new formats as time goes on. The authors have found that “preservation” is one feature that does not resonate with faculty audiences. Authors seem to feel that preservation is the responsibility of publishers.

With a certain critical mass now realized, new tools are emerging to facilitate discovery of OA content in IRs and help readers reach this gold mine of scholarship. The *Open Access Button* (<https://openaccessbutton.org/>) is a service that searches all large aggregated repositories in the world on behalf of a searcher looking for free content. It searches large repository aggregator services such as SHARE, CORE (COnnecting REpositories), BASE (Bielefeld Academic Search Engine), Europe PMC, and others, representing hundreds of millions of articles, data and other products of research freely available in the world’s repositories. If a free article is not found, the OA Button requests that authors self-archive a copy. *Unpaywall* (launched April 2017) is described as “a free web-browser extension that hunts for papers in more than 5,300 repositories worldwide, including preprint servers and institutional databases.” *Unpaywall* uses data from oaDOI which is “powered by our database of millions of author-uploaded PDFs.” (<http://unpaywall.org/>) *Unpaywall* allows a searcher looking at an article to see if there is a free legal version of a paywalled article available right at the point of need, using a simple indicator to show if any OA versions exist. Articles in repositories are uncovered and made visible to the reader otherwise blocked by a publisher’s paywall. (Chawla, 2017)

Rutgers authors depositing their work in SOAR, where it is crawled by Google

and other search engines, become part of this vast and accessible network of scholarship available to the world. Although they have much to gain, it seems that only a small proportion of researchers are considering the potential reach of their scholarship and actively participating in this sharing. Even though greater personal citation impact may result, the process of self-archiving still seems off the radar of most faculty members and even early career researchers. Over time, that will likely change as more and more institutions and funders mandate open access, as publishers and vendors continue to adjust to this new environment, and as graduate students and early career researchers are introduced, at the outset, to open access benefits.

The Rutgers Open Access Policy applies not only to faculty, but to doctoral students and postdoctoral fellows, and the official Policy also stipulates an education program for the University's entire graduate student population. This is an important area of future endeavour for the authors, working together with the graduate school. As other institutions, most notably MIT, begin including graduate students in their policy implementation, more conversations will grow and strategies based around this important group of early career researchers will develop. Some faculty authors have expressed reservations about graduate student deposits, and have recommended signoff by a faculty advisor or PI. Because SOAR deposits are mediated, it is nonetheless easy to monitor this and request further information if it seems warranted. Because Rutgers also has a well-developed Electronic Theses and Dissertations (ETD) program, doctoral students also become familiar with OA via that route. It is hoped that graduate students and early career researchers will find open access a benefit to their careers, due to visibility and impact. They have grown up with internet sharing, which suggests they would be amenable to open access to their scholarship. However, recent research shows that early career researchers tend to follow traditional scholarly communication patterns of their disciplines and departments, guided in part by the rules that senior scholars set in terms of traditional publishing in high impact journals, signing away copyright, and not often self-archiving legal versions of those publications. (Nicholas, 2017) There is tremendous value in new conversations that can lead to changing paradigms. As in every endeavour, communication and messaging targeted specifically to stakeholder groups is paramount, and the RU OA Policy implementation attempts to put a focus on this.

2. Communications

Once the Rutgers Open Access Policy was in effect, the nature of the outreach message changed. While earlier messages were meant to elicit discussion, questions, and concerns about a possible OA policy at Rutgers, the new message was intended to increase understanding of open access and the Policy now in effect, while encouraging compliance with the Rutgers Open Access Policy, to the extent possible. In fall, 2015, the authors drafted an email announcing the Open Access Policy, which was sent by Rutgers' Senior Vice President for Academic Affairs (SVPAA, equivalent to a provost) to every

person covered by the Policy: 9,000 faculty, along with 6,000 doctoral students and postdoctoral scholars. Several faculty and departmental liaisons urged us to also deliver a print announcement to every faculty mailbox. A piece of paper would be less ephemeral than email, and could help to keep the Policy in the forefront of conversation amongst faculty, graduate students, and postdocs by remaining more visible in offices or posted on laboratory doors.

A communications plan was developed, including a calendar of events where we would likely need to promote the Policy. These included multiple new faculty orientations, graduate student “boot camps,” postdoc career development symposiums, graduate program director meetings, Open Access Week opportunities, and so forth. All such venues called for informational materials, and consistency in branding and message were crucial. Our standard “outreach kit” includes our one-page fact sheet about the Policy (always on green paper, for “green open access”), a copy of the Policy itself, our boilerplate presentation, SOAR-branded pens, and glossy bookmarks showing the “five easy steps” to Policy compliance. The bookmark is a popular item; we are quick to point out that the first step is *Your article is formally accepted for publication (post-peer review)*. This clearly places Policy compliance within the researcher’s familiar workflow. On an as-needed basis we have developed other informational sheets, such as a quick “cheat sheet” for designating a research or administrative assistant as a proxy depositor, or graphics helping authors distinguish between the Accepted Manuscript (the version they are required to deposit) and the Version of Record (which publishers generally disallow). We put together a small budget for communication and promotional materials, covering printing costs as well as the promotional pens and a table cover, such as those used at trade shows, that we can use as needed. One of our more interesting experiments was setting up a table in the faculty dining hall during Open Access Week, where we were able to distribute information and speak to a variety of people in a casual setting. All the while, we continue to deliver presentations as requested to departments, schools, and other groups, including chairs councils, deans meetings, the Office of Research and Economic Development, PhD seminars, graduate programs, and the University Senate. We have worked with the Office of Institutional Research and the SVPAA’s office to update promotion/tenure materials to encourage deposit in SOAR, since SOAR DOIs enable paywall-free access to publications for both internal and external reviewers. In addition, we have done on-on-one consultations with a number of faculty members, and these are some of our most productive discussions. Here is where we learn about new ways faculty are exploring and using SOAR for greater visibility for their scholarship. One author might be conducting his own marketing study, correlating SOAR publicity to spikes in downloads, while another is brainstorming ways to leverage a graduate student labor force to expedite deposits, and a third is finding ways to link SOAR from his

departmental web pages. We find that our faculty are full of ideas and readily pass them along. As questions arise from faculty and graduate students in these and other venues, we continue to build and update our Frequently Asked Questions (<http://soar.libraries.rutgers.edu/faq>) and integrate other topics (notably ORCID iD) into our communications.

In summary, we continue to develop resources and a more detailed communication plan to form the foundation for an effective outreach program in support of the University's research, teaching, and public services missions, and its strategic plan. Centralized availability of informational resources, workshops for departmental liaisons, and some updating of the communication plan are needed to execute this outreach program properly. Although the Libraries have presented at several new faculty orientations, more could be done to incorporate this expertise on the other campuses, ensure printed materials are included in all new faculty packets, integrate information into the Graduate Student boot camps, facilitate annual faculty and graduate student reminders (possibly from the SVPAA's office), and provide occasional updates and usage statistics to depositors. A greater effort could also be made to enhance SOAR visibility in other University websites, processes, and tools.

3. System Features and Innovations

Most of SOAR's features were put in place prior to the date the Rutgers Open Access Policy went into effect; these include informational resources about open access and the Policy, lists of recent submissions and "Most Downloaded This Week," easy search and browse options, and prominent links to "Deposit Your Work." We also offer authors a variety of waivers, templates, and forms, including an optional co-author courtesy letter, an Author's Addendum (to change the terms of a standard publication agreement), plus publisher waivers and requests of various kinds. Since SOAR's formal launch, we have made additional improvements to benefit users, some of them occurring behind the scenes. For example, a key part of our outreach message is that the Rutgers Open Access Policy accommodates disciplinary differences. This means that we receive not only peer reviewed academic journal publications, but working papers, book chapters, non-refereed book reviews, reports, and presentations. Having conducted a usability study of our deposit form shortly before the Policy went into effect, we found that users depositing materials other than peer reviewed journal articles did not know how to convey all the information relevant to their work. As just one example, journal volume and issue are not pertinent to a book chapter, so if we know the deposit is for a book chapter, we should ask instead for book title, editor, and imprint. We have now added conditional logic to our deposit form, so that the type of material deposited drives the choice of metadata requested from the author. In addition, we have automated many previously manual backend processing activities, refined our search engine optimization, and improved safeguards against web spiders and bots.

Our early development plans also included a mechanism to report out deposits by specified schools and departments. In the past year or two, a perceived audit culture within the university has led to a widespread and vocal resistance among faculty to top-down reporting of productivity by unit. For this reason, we've taken a hands-off approach to statistical reporting. Nonetheless, we continue to promote the download statistics within SOAR, not for productivity reporting to University administration, but as a way to demonstrate the global reach provided by open access. Because our usage statistics show geographic distribution of downloads around the world, we also discuss how they can help authors and departments to create their own compelling narratives. What is the breadth of your scholarship? Where are your readers and how is that significant? Where are opportunities for interdisciplinary collaborations or grants? These narratives can be incorporated into promotion/tenure actions or into departmental marketing and publicity efforts. Faculty are definitely interested in SOAR download statistics, and we consider it imperative to ensure their legitimacy. We are continuously reviewing download activity and identifying any bots or spiders that download resources excessively. Such activity (usually observed as an unusual spike in download numbers) is identified and analyzed. If we deem the downloads as not genuine, we remove the activity from the usage statistics and add those spiders or bots to a whitelist. For those on the whitelist, access is permitted, but not counted in download statistics. The list is then used to prevent counting any future activity from the bot or spider. Since the advent of SOAR, we have become even more vigilant in our efforts, since the numbers are starting to appear in promotion/tenure packets. We have also added a line graph option to our statistics displays, so that users can observe cumulative growth in use over time, in addition to the geographic distribution shown in the SOAR statistical table and pie chart.

We have continued to accept supplementary data into SOAR (where it resides alongside the article, for download) or in our research data portal, where it can be linked to SOAR. More and more, we find faculty depositing supplementary materials in advance of the Accepted Manuscript, in order to have their DOIs included in the manuscript submitted to the publisher for consideration. This has presented some interesting issues, but nothing insurmountable. Our ability to accept media materials as supplementary data has also prompted requests to deposit media scholarship. Happily, this is possible in our repository, which is comprehensive in scope, in terms of both content and formats. SOAR also offers a convenient, personalized "My Bibliography" link that dynamically displays all of an author's works in SOAR; this can be added to an email signature line or posted on the author's own website. The dynamic nature of the display can render it more current than the departmental website, and we are seeing increased use of this link, both in signature lines and on websites, as well as requests to allow custom configurations. In one innovative project, an Engineering department submitted three dozen of their own patents to SOAR.

This gave the department a persistent URL for each patent, something provided neither by the U.S. Patent and Trademark Office, nor by Google Patents. For a discipline like engineering, patents form the heart of scholarship. One purpose of the Open Access Policy and SOAR is to gather Rutgers scholarship in one place; inclusion of these materials in SOAR allows a more complete picture of Rutgers scholarly output. Moreover, inclusion in SOAR also enables the Engineering faculty to list all of their scholarship, including patents, in their custom bibliographies.

4. Deposit Practices

Once the Policy start date was formally announced, SOAR deposits jumped dramatically. This placed a welcome pressure on our processing and policymaking staff, and also generated a continual flow of questions about the Policy, both to the Libraries and to the SVPAA. While technical services staff worked on processing the deposits, public services librarians handled the user queries. Most of these were variations on several themes: obligation (“Do I have to do this?”), permission and copyright (“Is this legal?” “Don’t I need publisher permission?”), version (“can I submit the publisher branded PDF?”), double deposit (“I’ve already deposited in PubMed Central; must I deposit again in SOAR?”), proxy deposit (“How do I deposit on behalf of my departmental faculty?”), scope of the Policy (“Does it include book chapters?”) Works published prior to the Policy? Papers published in open access journals?), availability of open access funds, and (interestingly) requests for new repository features. Although many authors asked about which version to deposit, the question often remained unasked, and to date the most significant roadblock to expeditious processing (other than a staffing shortage) is submission of the incorrect version. Despite our best and redoubled efforts to communicate what we mean by Accepted Manuscript, many new depositors submit a publisher branded version, either the Version of Record or a galley proof. This is particularly a problem when authors deposit a backlog of papers from their CVs; in very few cases will an author be able to locate the Accepted Manuscript for a paper submitted years in the past. On the upside, we discovered anecdotally that deposit was not onerous for depositors; on numerous occasions, a single author would deposit many articles in rapid succession: 8 in 12 minutes, 12 in 15 minutes, 20 in 30 minutes. Additionally, once authors understand the Accepted Manuscript requirement, they tend to follow it for subsequent deposits.

The dramatic rise in deposits necessitated increased attention to procedures, particularly with new and less experienced staff coming on board to assist. Responsibilities were shifted to add expertise in workflow management as well as process and policy documentation. An application profile was developed for SOAR (MODS) metadata, and a LibGuide created to provide detailed instruction on processing deposits, including workflow, metadata guidelines, handling of supplementary data, publisher contacts, discerning versions, and

responding to author questions. Spreadsheets were set up to track deposits as well as to report out statistics. Boilerplate language was developed to address many commonly received questions and issues, so that responses could be consistent and prompt. These included topics such as Accepted Manuscript explained, Request-A-Copy button explained, scope of SOAR, permission requests to publishers, faculty authorization for graduate student deposits, proxy deposit instructions, etc. We also began building a list of publisher contacts we could consult as authors increasingly asked to deposit entire CVs.

With dramatic increases in deposits, we are encountering new scenarios on a regular basis. How does one acquire self-archiving permissions from high-profile non-scholarly publications like Financial Times or Elle? How does our PDF server handle LaTeX files? What is the best thumbnail for an audio file? Can we accept posthumous deposits for distinguished former faculty? Can deposits be pulled from arXiv? SSRN? What permissions are required, if any? We are happy to report to faculty that SOAR easily accepts textual, audio, video, and data files, and we welcome any resources that are considered by the faculty to be scholarship. We have extended proxy deposit services in exceptional cases, and will research permissions on pre-Policy works if authors wish to submit entire CVs. The latter can be a labor-intensive process, since authors rarely have Accepted Manuscripts from years past, and acquiring publisher permissions for retrospective works entails additional correspondence and thus delays. We have found that faculty understand our priorities (works published under the Policy have precedence) and are grateful for the services we do provide.

The issue of user queries represents one of several areas in which our organizational policies and procedures must evolve to meet an expanding research landscape and increased demand for services. The number of user queries received via SOAR is growing significantly, and we have submitted a proposal to integrate these reference questions into our existing LibAnswers platform, in order to provide centralized management and comprehensive statistics for reference queries. Questions originate from Rutgers faculty, staff, and students, as well as from outside users, and cover an array of topics. Many of the questions originate from Contact Us forms submitted from SOAR and other IR pages, but a number of people, including faculty and staff outside the mainstream of RUL's traditional reference/public services areas, directly receive significant numbers of SOAR- and Policy-related phone and email questions, through personal contacts, referrals, and outreach materials listing their contact information. Responses to these questions require widely varying levels of effort, specialized knowledge, expertise and research. Integration of the repository questions into our LibAnswers platform would help to ensure expert, timely, and consistent responses to user queries and facilitate the claiming, referring, documenting, tracking, counting, analysis, and reporting of

these reference questions. Additionally, it would permit us to more accurately demonstrate the volume and effectiveness of our reference interactions, measure outcomes, and inform decision-making on Libraries priorities. Because these reference questions are outside the mainstream of reference query processing, we do not have good records of reference questions pertaining to the Rutgers Open Access Policy, SOAR, or the IR in general. Scholarly communication interactions are underrepresented in reporting, and the level of demand for scholarly communication services cannot be readily gauged.

Another focus of our continuing repository development work is the tracking, monitoring, and reporting of SOAR submissions. Although the Rutgers IR has supported faculty self-archiving for ten years, deposit rates remained fairly low prior to the advent of SOAR and the Rutgers Open Access Policy. Perhaps for this reason, there was no automated mechanism for tracking deposits. Instead, staff had to judiciously organize deposit and ingest email notifications to keep track of papers in the pipeline. Suddenly, with the OA Policy in place, deposits began coming in at a rapid clip. Several additional staff members were called into service to help with processing, and assignments were made based on expertise and system authorization. Any one staff member might have multiple deposits in various stages of completion, and several people might share responsibility for any single deposit, with no centralized management of the process. At this point, monitoring and tracking of deposits became paramount, and we ultimately commenced work on an administrative portal to allow authorized staff users to claim, assign, track, monitor, and report all deposits. This functionality will be available in our fall software release, and we look forward to the time savings and metrics it will offer.

The rise in deposit rates and faculty queries about self-archiving naturally point to the question of harvesting. Despite an increasing utilization of automated harvesting to populate repositories, at Rutgers we continue to look for a behavior change that signals compliance with the Rutgers Open Access Policy: deposit of the authors or their designees of Accepted Manuscripts at the point of acceptance for publication. As Steven Harnad has noted, “the only thing standing between us and universal OA is author keystrokes” (Poynder, 2010, p. 40). Harvesting carries a certain appeal in terms of more volume and fewer keystrokes, but there are downsides. Harvesting generally allows only an incomplete record of an organization’s scholarship, since much of the harvest is metadata only, with supplementary materials and grey literature seldom harvested. Thus individual self-archiving under a permissions-based open access policy yields a larger pool of legal open access copies than harvesting. The purpose of the Open Access policy is to get the scholarship out on the Internet, to a worldwide audience, quickly. This is accomplished by authors self-archiving the Accepted Manuscript at the point of acceptance for publication. Early deposit affords maximum visibility, exposure, and impact, as well as early gathering of usage data. In contrast, harvesting, which always

occurs after the fact, after formal publication, may create a disconnect with open access objectives and message. Harvesting removes the author's incentive to deposit, the leverage of the Harvard-model license, and any connection to the institutional open access policy.

5. Working with Liaisons

The Rutgers University Libraries faculty organization includes disciplinary subject specialist librarians whose responsibilities include roles as departmental liaisons. As scholarly and scientific communication is very different from one discipline and subfield to the next, it is very advantageous and even necessary to visit departments and discuss the Open Access Policy and its implementation from a very targeted disciplinary point of view. For this reason we offer a variety of departmental models for implementation of the Policy via SOAR. By implementing the OA Policy at the departmental level, it is possible to customize workflows in a more nuanced way that resonates with the disciplinary norms. This important discussion about self-archiving and scholarly publishing from a targeted disciplinary perspective involves the subject specialist librarian as well as the departmental faculty and leads to a common understanding of the goals and processes involved in working with the OA Policy and SOAR. With a variety of departmental models for implementation available (along a continuum of options), presentations often lead to interest and buy-in.

Because the Rutgers University Libraries constitutes a departmental unit, it was important to decide on and pilot one of the models of implementation in the Libraries. This involved discussing the OA Policy and SOAR at library faculty meetings in order to get feedback from colleagues on a proposed plan, presenting information about the Policy and the various implementation models available, taking a faculty vote on the adoption of the plan (which was positive), and then codifying the decision made on the library faculty webpages. The implementation model chosen by the Libraries is one with "teeth," that states that all library faculty-authored articles that fall under the Rutgers Open Access Policy must be available from SOAR, and the SOAR DOI must be included on any citation (falling under the Policy) that is reported out to the university via "area updates" or other similar recording systems. Library faculty, like all other faculty, would be able to opt out for any single work, but not for all of their works. What we did not do at Rutgers was to make any kind of a larger focus in our outreach on the existence of the library implementation. The authors are of the opinion that it is best not to focus on the "library aspect" of institutional OA policies, or to use SOAR for our own scholarship first. Populating the Libraries-hosted repository is not the objective of open access or the Policy, and we don't want to leave anyone with the impression that it is. That would suggest that open access is a "library issue" and in terms of the implementation, an outward focus is more advantageous.

Our objective is to move the implementation to a point where open access resonates with all faculty and self-archiving becomes just a regular part of the faculty's research process, at the publication end.

At Rutgers, the authors have been invited, often by chairs or deans, to speak on the OA Policy and SOAR at faculty meetings or graduate student symposiums. We always involve the liaison librarian with planning for these presentations. We have developed materials and services in support of a program for liaison librarians that would ensure that a consistent message is received and that faculty hear the messages from those who could place all information in the context of scholarly communication norms of the discipline. A scaffolded level of support for liaisons was developed. Liaisons would make all of the contacts with the departments and faculty groups that they serve; the authors would provide materials such as a standard set of handouts and a boilerplate PowerPoint (PPT), and offer to accompany the liaison to deliver some or all of the presentation. Some liaisons preferred the authors accompany them and do much of the presentation, others wanted only materials and to do the actual presentation themselves. This approach totally customizes a presentation to a particular department and discipline while supporting liaisons in whatever level of open access information and support desired. It also allowed the authors, through the process of preparation with the liaison, a very valuable opportunity to see the OA Policy and SOAR through the very focused lens of the discipline and that particular faculty cohort. The liaison program developed around SOAR offers a welcome new collaboration opportunity between librarians who don't often work closely together, especially in new areas such as open access.

Adequate preparation for the presentations has resulted in a successful and professionally prepared outcome each time. An initial one-hour meeting is set up by one of the authors with the subject specialist liaison, the boilerplate PPT is shared, and a discussion about disciplinary scholarship starts the process. The liaison identifies journals most important for the discipline based on that department's own publication record, or other factors such as journal impact factor. Examples of "hybrid" OA journals, fully OA journals charging APCs, and OA journals that don't levy author charges are often identified during the initial discussion. The liaison then works with one of the authors to determine self-archiving policies for the journals that are most important to the departmental faculty, and notes how the OA Policy will likely play out for this community. This information is then slotted into the boilerplate presentation. The ability to sit with the subject specialist for this discussion has allowed the authors to learn from expert librarians about what matters to faculty in the particular disciplines, in terms of their own journals and other scholarship. These discussions often become wide-ranging and create a conversation about many aspects of scholarly communication that deeply involves liaison librarians in the presentation, the process, and any follow up. Following the first hour-long meeting in the liaison's office to introduce the materials and discuss the liaison's interests, a second brief meeting is scheduled a week

before the scheduled departmental presentation to answer any final questions, confirm logistics for the meeting, and to finalize the now discipline-focused presentation.

Some departmental presentations that occurred early in our rollout of the liaison model included Economics (with heavy emphasis on working papers), Political Science (where self-archiving of book chapters would be of interest), Anthropology, and others. Because each of these disciplines has a distinct scholarly communication tradition, one can see that having had the targeted preparation with a subject specialist librarian beforehand allows for more confidence in the final meeting outcome. Some liaisons have become interested in the process to the point of becoming involved with various SOAR processes, for example contacting publishers regarding self-archiving rules in other countries using their own contacts and advanced language skills. The liaison for Engineering became involved in the department's desire to self-archive patents alongside articles and conference papers, leading to a more complete listing of that department's scholarship. Liaisons have a new entry point to begin conversations with departmental faculty.

The liaison librarian has responsibility for all communications with the department. No matter whether any departmental implementation takes place immediately after the initial presentation, many conversations have resulted, the liaison librarian is available to answer further questions from faculty, and individual faculty have self-archived their articles in SOAR as a result of the presentations. This model has been a success in terms of its being well received by liaison colleagues as well as the various departmental faculty audiences. Liaisons know that we are available for any further consultation necessary.

The types of questions asked in these presentations are far-ranging. There are always questions about why faculty would do something new when current practices in their discipline are well ingrained in workflows and traditions; any extra work must be well explained and benefits understood. Key to our approach, and apparent after a few meetings was the fact that faculty groups have various types and levels of questions about scholarly communication, the Open Access Policy, use of the repository, the deposit process, metrics of all types, and research data management. For disciplines where other subject-based repositories are well known (such as those that use SSRN), follow up questions range from sustainability of subject repository content over time, how departments might harvest their work from SSRN, or Elsevier's possible motivations for purchase of such a major social sciences resource (and what that might mean for all of the Rutgers material available there). There are questions of all kinds, and the topics are not easy to anticipate. For this reason, having the diversity of expertise (open access, publishing, repository, and disciplinary) at presentations has proven very beneficial and leaves all

audiences satisfied that questions and concerns have been addressed.

It is also true that in the absence of diverse expertise, an OA Policy presentation can be quickly derailed by a single contentious question, particularly one that other audience members find it easy to rally around. A common example is the conflation of green and gold open access, wherein faculty believe that they're being asked to change their publication habits and to choose open access journals instead of self-archiving a copy of each article (no matter where it's published) in the IR. This can sometimes lead to discussions around issues such as high APCs (and how faculty will be able to pay), loss of academic freedom, or the open access phenomenon of bogus/fake journals. There are a variety of roadblocks that can appear suddenly in these presentations and having the right presenters in the room quells all concerns. It has been the authors' experience that once all questions are answered, there is no further issue and virtually all of our departmental presentations to a variety of disciplines have ended with a willing audience that voices support for OA, the Policy and for SOAR.

The handouts are kept up to date and are always available in paper and online for liaisons' use. All liaisons were contacted about handouts before the anticipated rollout of presentations across departments and disciplines. Our three standard handouts were placed in the administrative offices of all library units so that librarians could easily pick them up on the way to presentations and informal gatherings.

Using the customizable boilerplate PPT, the same three handouts, and the established preparation practices have allowed the authors to create a situation where liaisons can be supported in whatever way works best for them and for their departments. All are slightly different in their approach and their own knowledge of OA. Library scholarly communication committees are actively working to develop workshops, tutorials, and various online materials that will further prepare liaisons for new roles in scholarly communication areas.

6. Early Reactions to the Policy Implementation

As reported elsewhere, faculty and graduate student responses to the Rutgers Open Access Policy and SOAR have been overwhelmingly positive, wherever we have provided outreach. (Otto, 2016). Once faculty start to experience the benefits, particularly the benefits of increased visibility, they are on board and have ideas to share. Faculty particularly seem to like the DOI, the geographical download statistics, and the "My Bibliography" link. These features allow them to send their works out more widely and see concrete results. Kudos arrive from a variety of constituencies. We've been acknowledged in academic publications for our data file archive services, and received commendations from assistant professors, distinguished professors, administrative assistants depositing on behalf of faculty, liaisons, and deans.

7. Future Priorities

Ideally, we would ramp up our Open Access Policy and SOAR activities with an expanded outreach program, along with additional staffing and system development. Of utmost importance is the formation of a Rutgers University Open Access Policy Advisory Board. We envision this Board providing advice and recommendations to the responsible executive for the Rutgers University Open Access Policy, the SVPAA. It would consider matters related to the continued development of SOAR with an emphasis on features, tools, and services that will increase participation and reduce the administrative burden of deposit; strategies for increasing compliance with the Policy; increasing awareness of issues related to Rutgers scholarship, authors' rights, scholarly identity, and research impact; communication of the Policy and SOAR within Rutgers and to the larger research community; and repository infrastructure and resources required to support increased deposits of research output. A Board with representation from faculty, graduate students, each of the Universities, the Office of Research and Economic Development, Office of Information Technology, and the Libraries will ensure that, within the parameters of available resources and priorities, SOAR and OA Policy changes are driven by key stakeholders.

In terms of development, our primary objectives are to complete the work necessary to maintain currency, meet and exceed user expectations, and conform to best practices. Although the content of the deposit form used by authors to submit their papers to SOAR has changed somewhat over time, the look and feel of this page has remained essentially unchanged for the last ten years. An update would be most welcome and could improve accuracy of data input by authors and their designees. Last year, the University president approved a University-wide ORCID implementation, and the University Librarian was charged with leading the initiative. The implementation planning group is developing an integration map of University systems that should interact with ORCID, and SOAR is on that map. A SOAR integration would likely be a low-cost, high impact proposition and we are looking forward to the possibility of raising SOAR's visibility further by tying it into an expanded, interconnected, and robust research infrastructure through ORCID iD.

In doing outreach, we find that one of the features authors get most excited about is the pie chart showing geographic distribution of downloads. This capability is distinct from strict counts of downloads available through publishers or off-the-shelf metrics tools (e.g. Academic Analytics or equivalent). Open access through SOAR expands the reach of scholarly output and those who are aware of this appreciate it and often increase their level of investment in the Policy and SOAR. We believe faculty would welcome annual or semi-annual emailed reports of SOAR downloads, and such a service would keep the OA Policy and SOAR on people's radar. University Research

Office administrators had noticed the dynamic "pinging map" that some IRs use to show downloads from around the world. We were able to add that high level request to our development planning process while opening up a new conversation based around input from the research office.

Display of alternative metrics could be another low-cost, high-impact addition to SOAR that could raise faculty interest in OA Policy participation and the portal, and we would like to discuss this further. In addition, we would like to turn thoughtful attention to more usability studies, harvesting options, and an graduate student outreach program similar to Harvard's Open Access Fellow (OAF) program.

8. Conclusion

The Rutgers Open Access Policy and its implementation via SOAR has been a valuable learning experience for the authors, and it has been a rare privilege to step out of roles in technical services and public/user services/sciences in our library work in order to collaborate far and wide across a large research university in the work of open access. Although still in early stages, the authors hope that the future of scholarly communication at Rutgers and beyond has a continuing focus on the necessity of sharing research results widely. Any unprecedented work by librarians in an institution helps to showcase the mission-driven, user-centered work of librarians. We expect the Rutgers Open Access Policy and SOAR to continue to develop and evolve to meet the needs of faculty, doctoral students and postdoctoral scholars for making their work open access to the extent possible.

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