OSI2017

REPORT ON THE 2ND ANNUAL CONFERENCE OF THE GLOBAL OPEN SCHOLARSHIP INITIATIVE APRIL 18-21, 2017 AND INTERVENING WORK FROM MAY 2016-SEPT 2017

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Written by Glenn Hampson, Executive Director of the Science Communication Institute. The ideas and opinions expressed in this publication are those of the author and not necessarily those of OSI, individual OSI participants, or hosts, partners or sponsors, or their trustees, officers, or staff.

OSI2016-25

THE OPEN SCHOLARSHIP INITIATIVE

OSI2017 SUMMARY REPORT

EXECUTIVE SUMMARY

The Open Scholarship Initiative (OSI) is the world's only global, large-scale, multi-stakeholder effort to improve the flow of information within research and between researchers, policymakers, funders and the public. This effort, which is nearing its third full year of operation, was developed in partnership between the Science Communication Institute (SCI) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) in early 2016. There is no other initiative like this, focusing on improving the entire landscape of research communication (from peer review to open access to publish or perish pressures in academia) by working together instead of separately through dozens of individual and often conflicting efforts.

As you will see in this report, OSI participants are beginning to understand how they might be able to work together as a global community on this issue. Most participants see eye to eye on the broad outlines of this challenge, and their reports—considered together and building upon each other—point to specific solutions that can be developed starting this year with minimal funding. Fully pursuing all the recommendations will require much more funding, but our hope is that we can get started now on a tight budget and build from there.

On behalf of SCI and OSI, thank you to our sponsors who have made this work possible, and to OSI participants who have contributed so much of their time and energies to this important effort.

Sincerely,

Glenn Hampson
Executive Director, SCI
Program Director, OSI

BACKGROUND ON WHY OSI2017 WAS IMPORTANT

Anyone who thinks they fully understand scholarly communication probably doesn't. This may sound like a harsh assessment— there are a great many very smart people who have been involved in and around this marketplace for a long time. But this is one of those "the more you know the less you know" kinds of environments. Scholarly communication is a massively complicated space that looks different for each of the two million plus papers published every year, connecting researcher needs with author incentives, publishing options, journal options, copyright choices, funder mandates, institutional guidelines, government policies, discipline norms, personal preferences, technological advances, evolving social mores, and probably at least ten other variables. It would be hard to concoct (why would you want to anyway?) a more Rube Goldberg-esque system of ramps and levers.

Unfortunately, this system isn't just for our entertainment. It is very consequential, responsible for vetting and communicating the outputs of researchers from around the globe—outputs that reflect billions upon billions of dollars of annual investment, that are rapidly increasing beyond our ability to completely capture, that are not equitably distributed around the world, and that are critical to our collective future.

So, no pressure.

How did all this happen anyway? Not deliberately. Slowly and over time, competing and overlapping interests have collided and morphed around no clear center. What we have now in scholarly communication is what we need to have—it's where this system has naturally evolved. But no one in this space thinks the current system if efficient, effective, or where it needs to be in order to effectively manage the future of research in today's communication environment.

How do we get to this future from where we are now? And who speaks for scholarly communication reform? Is it the researchers (and if so, in what discipline or even institution)? Governments (which ones)? Maybe universities or university libraries? Open access advocates? Publishers (new or old, big or small, subscription or open, scholarly societies or university presses)? Ask anyone from any of these groups what scholarly publishing means and where it's headed and you'll hear plenty of ideas and opinions but no clear answers.

Indeed, if you stay in your bubble in scholarly communication you're bound to be more misinformed than informed: You'll believe that universal open access is just around the corner, that green repositories are on the cusp of success, that a global flip to APCs will fix all problems, that a myriad of small changes in the system are serving everyone's needs just fine, and so on. There is no shortage of hope, which is great. But hope doesn't make it so. Everyone acknowledges that the promise of open has enormous potential and people are pushing from many different directions to make this happen. But the reality is that the path to rapid, widely adopted and sustainable open solutions is strewn with obstacles. Creating a truly effective and sustainable future of open scholarship will require input and cooperation from the entire global ecosystem of research and scholarly publishing—scientists, university administrators, non-university research institutions,

libraries and library groups, repository managers, publishers, government policymakers, funders (private and government), educational policy groups and more, and from all parts of the world. The last 15 or so years of open access reform has raised our awareness of the open issue and the challenges it faces. But we are quite far from succeeding and no one wants to wait another 15-20 years before moving the ball another short distance down the field. The broad goals of open can be realized more quickly and effectively if all proponents of open work together—if we find common ground, embrace the big picture, collaborate and coordinate our efforts, fill in the gaps in our understanding, and make it easier for institutions and governments to work together on rapid and sustainable open solutions.

To this end, UNESCO and the Science Communication Institute joined forces in early 2015 to create the Open Scholarship Initiative. The goal was to lay out a 10-year plan for developing a new and robust framework for direct communication and cooperation among all nations and stakeholders in order to improve scholarly communication, beginning with scholarly publishing and the issues that surround it. OSI's approach involves not only discussing solutions that work across stakeholder groups and countries but also building a stronger foundational case for open that all stakeholders agree with and support.

Why is collaboration needed? What proof is there that collaboration will succeed, and what of criticisms that any effort like this is just co-opting or watering down existing open goals? For one, it's clear to many people who have followed the changes happening in scholarly publishing over the years that an incredible amount of tension and uncertainty exists in the system. People want to know what to do and how, but they aren't sure who to follow and why, who's leading and who's following, what the long-term implications of change will be for scholars and researchers (not to mention the difficulty of pushing change at a university), how much change needs to be made and how quickly, who will pay for this progress and how, and a whole slew of other critical questions that don't have simple black and white answers or even a workable playbook for making change happen if it was clear what change was needed. Having a forum where these issues can be discussed across stakeholder groups is critical to making more rapid progress on this issue. It's also clear that no one actor can affect change in this very diverse and interconnected space. Only by working together will be able to achieve open goals. In addition, it has become increasingly clear to the OSI community that we need to work harder to ensure that what we're doing is makes sense for researchers and not just for consumers of research—that we involve more of them in these conversations, listen to

their concerns, and design solutions that work for their disciplines and institutions. This really isn't being done anywhere on a global and interdisciplinary scale. A one-size-fits-all approach to open hasn't worked over the past 15 years, and it won't work over the next 15.

OSI is the world's only global, cross-stakeholder effort to reform scholarly communication. At present, over 380 leaders from 250 institutions, 24 countries and 18 stakeholder groups are part of this effort. Most OSI participants are high-level representatives of their institutions—people who are positioned to lead change. In several cases these people are not subject matter experts but instead lead the teams that employ these experts. Our hope is that the scale of this effort will only grow—particularly with more involvement from the global south, which has been marginalized by the information revolution and whose marginalization may only increase if some of the current scholarly publishing reforms being discussed are enacted (such as the so-called "global flip" from subscription to APC, although we don't know this for a fact; more study is needed, and indeed we've earmarked this particular concern for study).

What is the anticipated impact of this effort on access to scientific research results? Realistically, OSI holds the potential to improve the scholarly communication landscape for everyone by (1) achieving open goals faster and on a more predictable trajectory by bringing all stakeholders to the same side of the table to push together toward their common goals, (2) creating multiple platforms for working on scholarly communication improvements together as a broad stakeholder community, (3) increasing the efficiency and effectiveness of all stakeholder efforts by facilitating the development of a common roadmap of goals, policies, and standards in scholarly communication, and finally (4) in the end, increasing the amount of research information available to the world and the number of people who can access this information. Our sincere hope is that after 10 years, open scholarship will be a reality—that everyone (including the public) who needs access to research will have it and that with OSI's help, new tools and professions will emerge to help mediate the flow of information from research to the public. Whether this access translates into more discovery is anyone's guess—we certainly hope this will be the case, but first things first.

And finally, how do we measure success along the way? To some, success will only mean the immediate resolution of every heretofore intractable problem in open publishing. The official OSI position, however, is that there is a gradient of success on this difficult challenge. We've already achieved some measure of success by simply bringing this diverse group together, having them speak directly to each other, and share their perspectives directly with each other, and by beginning the long process of trying to find common ground on a variety of issues. The next step—actually finding this common ground and building workable solutions—is where we're at now. We hope this dialogue will in itself also lead to productive outcomes and other benefits for the scholarly publishing reform movement and its bearing on open scholarship.

WHAT WAS ACCOMPLISHED AT OSI2017?

The first OSI conference was held in April 2016 (OSI2016). Immediately afterward, papers and recommendations from the conference were published and an OSI planning group began debating the long-term future and structure of OSI. The goal of OSI2016 and the conversation leading up to it was to explore the scholarly communications terrain, expose a wide variety of perspectives, and daylight possible common interests. The delegates at OSI2017, which ran from April 18-21, 2017 (and whose deliberative process will continue throughout 2017), started looking for answers—a long and interesting road indeed. Here are some common themes that came out of this meeting:

1. **Open isn't free**. The focus of open cannot be about cost-savings. Open is going to cost money—the jury is still out on exactly how much. So if we all agree that more open is important, it is this importance that needs to drive our efforts going forward and not the promise of spending less. This said, cost is a critical issue. Developing ways to make access less expensive is essential. The extent to which open will do this, however, is unknown and needs more study.
2. **Open isn't easy**. Aside from the cost involved there is mixed messaging in this space (both in terms of what's being communicated at universities and from whom) and a lack of incentives for several key audiences, namely researchers. More trust and understanding between global scholarly communication stakeholders and stakeholder groups is needed (as discussed below). More balance is also important such as solutions that involve local input and incentives (local as in geographic, but also institution and discipline-specific), and approaches to open that are more inclusive (wherein we can all agree on the idea of open and then identify multiple paths to get there).
3. **Publishing is critical**. Vint Cerf mentioned this in his brilliant opening address and it was echoed by Keith Yamamoto in his equally brilliant closing. For Vint, increasing the reproducibility of published research was paramount, and this requires increasing access, and this in turn requires a much more serious focus on digital preservation—from hardware and operating systems to software and formats. Without preservation and access, there is no modern scientific record. For Keith, the focus was on the act of publishing. "If you don't publish your experiment, it is exactly like not doing it." But the current system of publishing is too expensive for universities (barring any major restructuring of how much money is allocated to libraries, or how much money comes directly from the government to support publishing and sharing of data), so our focus needs to be on what now—figuring out who pays, figuring out what we publish and where, understanding how to

measure the global impact of research and of our attempts to improve the flow of research information, making sure we're resolving researcher concerns, and more.

4. **OSI can help.** Several concrete ideas were proposed regarding where OSI can help push the ball forward on open. These included creating new resources for the open community, designing new open outreach materials tailored to specific audiences (instead of one-size-fits-all materials), funding studies to look at issues like how much libraries are spending on open, developing a more globally comprehensive understanding of researcher needs and incentives, convening conversations between funders, helping to identify best practices, promoting the DART framework for open (discovery, accessibility, reproducibility and transparency), and getting behind efforts like OA2020 and DORA. Please see the "Summary of Recommendations" section of this paper (as well as individual workgroup and stakeholder group reports) for more details.
5. **We're on the right track.** OSI isn't going to be able to tackle this issue by itself—we all acknowledge that this effort's current lack of significant funding makes it an unlikely candidate to manage a global revolution in scholarly communications, but most participants seem to agree (based on a survey following OSI2016, plus informal impressions and feedback since then) that OSI has potential. Whether this means serving as a forum for discussion, a proponent of inclusive ideas, a convener of parties, or even a developer or funder of new products and projects, the big tent approach is better understood this year than last (although as a group we're still not settled yet on exactly how this group should be managed, if at all). Keith Yamamoto noted one specific way in which OSI might be on target: Helping identify a set of common principles that define what we want at the endpoint. If we can identify these principles as a group we can then make a broad model that can be adapted or adopted.
6. **We're more alike than unalike.** Several stakeholder groups (in their reports) pushed back against the idea of having distinct groups represented in OSI. We have differences of opinion in this community but there is often as much diversity of opinion within a single stakeholder group as there is between groups. Everyone agreed that we need more involvement from the global community, and also from researchers themselves.
7. **Convergent needs are everywhere**. The OSI2017 HSS & Scientists workgroup in particular identified a raft of areas where these often disparate communities can find common ground—for instance, on the need for visibility, public engagement, preservation, and interdisciplinarity. Convening action on this common ground is the next step. Some stakeholder groups (namely scholarly societies) felt they were already cohesive enough and well-positioned enough that they could advance agendas and promote culture change—that these convergent needs were (or could become) clear and as actionable. Similarly, several scholarly infrastructure groups are ready to work together and with OSI to help promote and secure open.
8. **Accountability & recognition**. We need to get institutions invested in this effort (not necessarily financially). We all have a stake in the outcome. What this means in practice is to be determined. As far as recognition is concerned, several groups expressed an interest in developing a way to recognize good work in open—a type of Nobel Prize for open.
9. **Trust**. This conversation needs trust to move forward. There is a lot of mistrust in the system—generally not inside OSI, which is seen by many participants as something of a unique refuge and a valuable opportunity to speak across the aisle—but in the larger

scholcomm system which has been so polarized for so long (indeed, there are people and groups in the scholcomm system who are actively opposed to OSI because it includes commercial publishers, and this is seen as a waste of time and/or potentially harmful to the cause of open). Still, even within OSI we haven't started the process yet of negotiating solutions to issues based on the recommendations of OSI2016 and OSI2017 participants, so our fault lines may just be buried for now. How and where to have these conversations is to be determined—maybe not in full-group annual meetings but we will continue to make progress in this regard over the next several years (most immediately through more online engagement and more regional meetings, as noted later in this report).

To date, OSI's annual meetings have really only showcased the tip of the iceberg as far as participant engagement is concerned. Many OSI participants have also been deeply engaged in listserv conversations for the past two years; others have been involved in meeting planning, strategic planning, and project management, and our list of engaged volunteers will probably grow in the coming years (hopefully our paid staff as well). With regard to the OSI listserv, this currently has 377 members on it who exchange about 2,500 messages per year, often quite substantial dives into complicated topics. In the two years since it started, a great many issues have been discussed at length, not necessarily with an eye toward finding solutions at this juncture—the "action" stage of OSI's work will begin in 2018, as noted later—but to air perspectives and educate each other. Detailed issue briefs will be culled from these conversations as part of the forthcoming OSI communications reform plan (also described later in this report).

What has this group learned about itself during this two-year period? For one, as noted previously, there seems to be growing philosophical alignment on a number of matters and this alignment forms the foundation of our action plans going forward, as described in the next section of this report. More specific to OSI itself, it might be safe to conclude that most participants are of the option that:

1. Despite the enormous expertise in this group, there are significant gaps in our understanding (and in the scholcomm community's understanding) of many key issues, from the proper length of embargos to the economic impacts of open to the magnitude of the open access citation advantage and much more. More study is needed on a wide range of topics so our advocacy can be firmly rooted in facts and evidence and our solutions can be properly tailored.
2. Opinions in the broad scholcomm community are polarized and OSI is not immune from this polarization. Breaking through the acrimony to work together on solutions is not going to work for everyone. Several key research universities haven't been interested in joining OSI, nor have several key advocacy groups (see the trust discussion, above). The door is wide open—OSI has always welcomed all groups and perspectives—but some groups appear to have made up their mind about what a more open future should look like and the best way

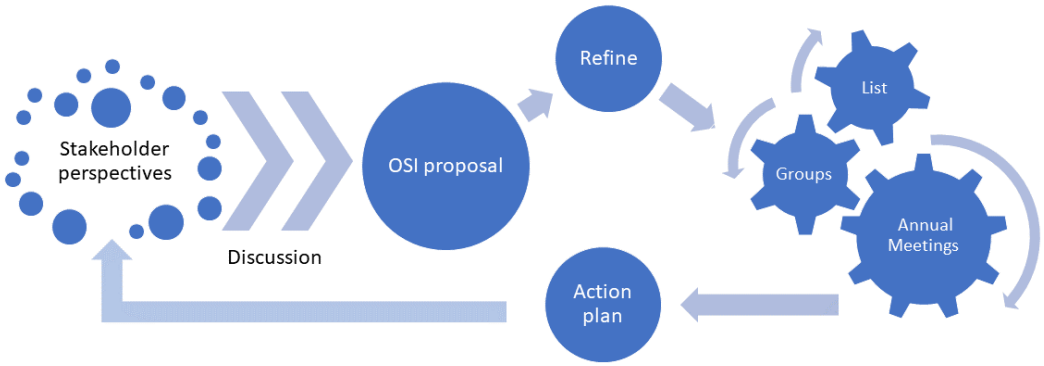
to get there and aren't interested in revising their course at the moment. This effort will be, as Wim Van der Stelt has noted, "a coalition of the willing." Thankfully, there are many participants in OSI who are ready and willing to work across the aisle.

3. OSI is under-resourced to do all this alone. This effort need significant funding support if it is going to be more than just a convener of discussions and annual meetings (which is important, of course, but it doesn't fulfill the lofty expectations that have been set forth by OSI participants).
4. The OSI group will need to come up with new ways of communicating in order to push past simply discussing issues to actually working on them. A new communication plan for OSI has been developed and is described later in this document.

SUMMARY OF RECOMMENDATIONS FROM OSI2016 AND OSI2017

As described in the first section of this paper, there appears to be broad consensus among OSI participants on the general contours of the road ahead. As described in this section, there also appears to be consensus on many specific ways this group can begin moving down this road together toward workable solutions.

The OSI deliberative process has so far been a mixture of listserv conversations and annual meetings—fact-finding activities designed to assess this community's perspectives, identify the most significant issues and discuss the best ways to go about solving these. More specifically, this process has a cross between triangulation and iteration—seeking out a wide range of perspectives and from these trying to find common concerns, then exploring these concerns in detail to see which are most salient, then looking for solutions to these concerns, raising these ideas with the OSI community for feedback, and continuing to refine the answers we get.



There are probably more sophisticated ways to map out an issue and solution space but this conversation-based approach has been effective and the recommendations developed are original and insightful. Even more important, these recommendations are workable solutions put forward by a diverse group of experienced global leaders who are well-positioned to follow through with action.

The workgroup topics tackled at OSI2017—12 in all—grew out of workgroup recommendations from OSI2016. Some topics represented common threads from the OSI2016 meeting (such as the culture

of communication topic), some were follow-up of particularly thorny topics (such as impact factors and peer review) and some were new topics that were added by popular demand (such as the issue of rogue solutions). The charge of these groups was to try to develop solutions to these issues (see the OSI2017 program in the Annex for details on the evolution of these topics). Specifically, OSI2017 participants were instructed to:

> (1) Quickly summarize the issue and the various perspectives involved (please refer to and build off of the work done by OSI2016 delegates as much as possible and appropriate), (2) In more detail, describe areas of general agreement and disagreement between stakeholders and the knowledge, perspective and/or policy gaps that may be powering these different viewpoints, and very importantly this year (3) Propose a set of specific actions or outcomes that can balance the needs and interests of all stakeholders (or a mechanism for finding solutions or bridging gaps). Also describe the challenges your proposal faces and how these can be addressed in a realistic and collaborative way (for instance, by linking together existing efforts with a similar focus).

Beginning below are tables summarizing the recommendations put forward by OSI2017 participants. A "tools" column has been added to suggest what kinds of strategies and resources might be needed to move forward with these recommendations. The unedited drafts of workgroup and stakeholder group reports from OSI2017 are included in the Annex section of this report (edited and formatted versions are still in the process of being published by Mason Press and will be publicly available soon).

WORKGROUP	GOAL	KEY RECOMMENDATIONS	TOOLS	TAKEAWAY
Culture of Communication	Improve the culture of communication around open access inside academia, particularly inside research	1. Clarify the message about OA. Identify what OA is, and what it is not 2. Create and communicate messages for particular communities regarding the benefits and impacts of Open 3. Determine what resources and information are needed before this messaging can be effective (1)	Website, plus partnerships, awards, workshops, stories, social marketing, communication mapping (for each institution), OSI as fulcrum or catalyst	Better communication needed to advance open
Funding	Identify and/or design new funding models for open, or propose ways to improve existing funding by improving the flexibility of library budgets	1. One model of open will not work for all communities. Stop pursuing one-size fits all. 2. Share lessons from different communities (blogs, case studies, etc.) and set and track goals to increase OA 3. More research: Find more info on APC costs and spending, identify income-generating possibilities in scholarly publishing, identify	Website	Need better OA tech, coordination, communication, incentives, rewards, and more. Address these issues first and more money for OA will follow.

		economies of scale to reduce access costs		
Global flip and other studies	Create a broad action plan for the global flip. Other studies were acknowledged but not addressed (embargos, publisher services disaggregation and an assessment of open impacts)	1. Support development and dissemination of tools to increase understanding of the potential impact of a Global Flip on library budgets. 2. Commission a third-party study to analyze the financial and scholarly implications of the flip on both publishers and the academic community, 3. Identify, support, and share information about cooperative models that align with the Global Flip strategy to increase trust and transparency among stakeholders	Website (gathering more understanding about concerns, impacts, and showcasing global flip as a path and not a destination)	More understanding needed, followed by broad sharing of best practices
HSS & Science	What are the universal solutions for both HSS & STEM with regard to open? HSS and STEM have different challenges and much more focus and funding) is available for STEM than HSS.	1. Disciplines need to find their own solutions from within. Pilot an OA program in HSS or social science. 2. Promote areas of interest/benefit convergence between HSS & science: a. Visibility b. Public engagement c. Preservation d. Text and data mining e. Interdisciplinarity	Website, more funding for HSS (legislation), common solutions	OA models are not strong in HSS. More communication is needed about the different needs of HSS & STEM
Impact factors	Improve ways to measure research impact	1. Interview journal editors to find out what's working, what's not, and what's missing 2. Get behind effort to share information on metrics best practices and drive innovation across disciplines and outputs 3. Encourage disciplines to own their own assessments (work with societies to get this effort stated)	Website, studies, collaborations	Measuring the impact of the broad range of scholarly communication output isn't happening with current tools
Open IP	Develop recommendations relevant to improving the discovery, access and use of patent data and closely-related IP	1. Promote guiding principles for Open IP as detailed in workgroup report and explain how this ties in to the open spectrum 2. Work with WIPO to help establish international standards for open IP 3. Create IP literacy materials for the research community	Partner with WIPO	Open IP is an emerging issue with many needs and challenges. OSI can help coordinate these needs and challenges with respect to scholarly communications.
Peer review	Develop a broader and clearer description of peer review that takes into account the different needs for different stages of review, as well as discuss possibly emerging issues such as the need to promote uniform interpretation and enforcement of peer	1. Work as a community (coordinating with partners like COPE) to define more clearly what is and isn't peer review, in order to impose an accepted standard that all journals will need to follow. 2. Support or conduct studies that investigate the effectiveness of different modalities of peer review (open vs. closed, two-person vs. many, etc.) to help provide support and direction to the scholarly communication	Coordination with partners	The best course of action for this community will be to support continued investigation and experimentation with new methods and weigh the pros and cons of each

	review definitions, and develop proposals for moving forward.	community as it experiments with different peer review systems 3. Investigate the feasibility of publisher services disaggregation, whereby peer review (and other services such as editing) can be offered as discrete services		
Institutional repositories	Propose a way forward for repository and infrastructure solutions, detailing what's needed before action to be taken, what this action should look like and what actors should be involved	1. Step 1: Study and map the current IR network. Identify the nodes, as the potential networks and sub-networks. 2. Step 2: Convene a conversation with major and globally diverse IR stakeholders under the auspices of UNESCO to ask what problems we're trying to solve, etc. (2)	UNESCO-led global meeting	Institutional repositories mean many different things to different people. Finding common ground on the future of IRs is important—aligning incentives that will result in more interoperability and sustainability.
Rogue solutions	What are the impacts of Sci-Hub and other rogue solutions on open access and what is the future of this approach?	1. Sci-Hub and any other service that acts in blatant violation of copyright laws, does not fall within the definition of open access and is not a solution to be considered by the workgroup 2. To get away from the solely negative connotations of "rogue," we decided to coin a more expansive term and asked, what can we learn about scholarly communication from the rise of New and Entrepreneurial Approaches to Open or...NEATOs	Observe and educate	NEATOs highlight pain points in the current scholcomm system. They are less effective at addressing the large-scale problems in scholcomm or advancing the cause of open.
Standards	Identify existing relevant standards, evaluate areas of overlap or perhaps conflict, which can be used to foster increased collaboration, and areas where relevant standards do not yet exist, which can be used to focus future effort	1. Modify DART spectrum from OSI2016 to become the DARTS spectrum (adding "sustainability") and officially endorse this as a group (3). Connect DARTS to the Open Science Framework and also a new Open Standards Matrix (as described in the report) 2. Work toward standardization across many other issues and questions in scholcomm, from peer review to data deposits by coordinating with other actors in this space and connecting related efforts 3. Advocate for tools that make every part of the research workflow more connected, efficient, and preserved, such as the Open Science Framework.	Promote DART, collaborate with many partners, marketing/outreach (website)	Creating a more transparent scholarly ecosystem requires rethinking how each individual and institution is rewarded and recognized for their roles in knowledge creation and dissemination, so that transparency becomes a key metric of success and accountability. Furthermore, it requires careful attention in order to design a system that is sustainable, just, and responsive to new evidence.
Promotion & tenure reform	How can professional advancement practices—including and beyond promotion and tenure review standards—be	1. Research the existing landscape to better understand open research recommendations and requirements in professional advancement materials (P&T guidelines, job advertisements, university contracts, annual	Research, partnerships (to aid in both research and outreach/promotion), and then carry out a plan to present recommendations,	Academia needs: A closer reading of research by committees charged with evaluation, rather than relying on

	realigned to encourage researchers' adoption of open access, open research, and open educational practices?	appraisal guidelines, etc.) at leading universities worldwide. 2. Engage scholarly societies and high-level university research administrators and provosts to learn more about the challenges of promoting openness in promotion and tenure from their perspective. 3. Most debate around open research practices and professional advancement only address STEM use cases. OSI delegates should conduct a thorough literature review and interview and survey faculty from across all disciplines, career levels, and institution types to find answers to key questions (4)	gather feedback, and promote piloting and adoption of new p&t guidelines	the surrogates of publication venue and impact factor; a broader view of the types of scholarly outputs that committees should consider as evidence of productivity and impact; an explicit acknowledgement of the benefits of publishing in open access venues; and incentives that encourage openness.
Underserved	What are the unique challenges in scholcomm faced by the global south?	1. Build an APC-finder tool 2. Policy shifts needed: Encourage more public sector shifts toward openness, more incentives for universities to publish in in-country journals, strengthen regional OA publishing systems, linking of OA with science policy agendas, expansion of LMIC aggregator platforms, more south-south networking and collaboration 3. Development of visible displays of verified, appropriate, and objective standards is needed to showcase excellent journals from developing countries and mentor young emerging ones, dispelling stereotypes and excluding fake journals.	Partnerships, broad policy development and implementation, standards and best practices initiatives	There is much bias in the current global system of scholarly publishing. Unless corrected, this bias will continue to widen the gap between the global north and global south with regard to scholarly publishing opportunities and outputs.

Notes:

(1) including showing the benefits of Open to a skeptical research community; addressing the many concerns of stakeholders; clearly explaining the pros and cons; and demonstrating the case for why the transition to Open is worth the trouble

(2) These questions include: What problems are repositories trying to solve? What repository behavior would we like to see and why? How can we work together to incentivize it? How can we attend to different scholcomm needs across different fields? How can we make everyone accountable: publishers, libraries, funders, researchers? How can we achieve a sustainable, decentralized, networked system while gaining efficiency through higher levels of aggregation? How do we minimize waste and maximize value in the repository ecosystem?

(3) Proposed: The Opens Scholarship Initiative envisions a scholarly community where all parts of the research lifecycle are openly available. In order to achieve this vision, OSI adopts the following principles in order to evaluate policy proposals and actions: research products must be made more Discoverable, Accessible, Reusable, Transparent, and Sustainably supported. Policies that increase openness among one or more of these dimensions, while having no net decrease on any other, are aligned with the mission and purpose of OSI delegates and member institutions.

(4) These questions include: Where are the pain points for researchers with respect to Open Access and open research practices? How many researchers worldwide have funding requiring open publishing and open research mandates? What are the pain points for those researchers? How do institutional OA policies impact tenure-track faculty that are also required to follow promotion and tenure requirements that disincentivize open research practices? Do funder requirements for Open Access positively affect open research practices in the tenure and promotion process, where such P&T requirements weigh research funding into P&T cases? What can we learn about researcher evaluation from research institutes or academic libraries that don't have tenure (e.g. Scripps or HHMI)? What are the best parts of research evaluation practices worldwide, which we can borrow from to promote openness? What are the worst evaluation practices that should be avoided?

In addition to workgroup meetings, stakeholders were also asked to meet with the following instructions:

> (1) Quickly summarize the various perspectives involved with regard to open, (2) In more detail, describe areas of general agreement and disagreement between stakeholders and the issues and questions that may be powering these different viewpoints, and (3) Propose a set of specific actions or outcomes that can balance the needs and interests of all members of your group (or a mechanism for finding solutions or bridging gaps). Also describe the challenges your proposal faces and how these can be addressed in a realistic and collaborative way.

Stakeholder meetings were an experiment at OSI2017. This exact same meeting format probably won't be repeated in future meetings. There simply wasn't enough time for stakeholder groups to get organized, not all groups were adequately represented, and the additional report-writing requirement created a burden for some participants. It also became evident that some stakeholder groups were entirely too heterogeneous to really be called a stakeholder group at all, so this realization may in fact force some reconsideration of the stakeholder group structure of OSI (or at least the rigidity of it). All this said, the stakeholder meetings served an important purpose insofar as refocusing this group's attention on what it can do together to advance the cause of open. While workgroup conversations focus on issues, stakeholder groups focus on relationships, and it's these relationships that will be at the center of OSI's reform efforts going forward.

STAKEHOLDER	GOAL	KEY RECOMMENDATIONS	TOOLS	TAKEAWAY
Infrastructure	More collaboration and cooperation amongst infrastructure groups is needed to advance goal of open. Given that research transcends disciplines, geography, institutions and stakeholders, the infrastructure that supports it needs to do the same.	1. Scan the current bits and pieces of infrastructure and evaluate their adoption on a global scale 2. Engage with the "owners" of the infrastructures to push for measures that can secure global implementation/adoption	Collaboration, partnerships with and between infrastructure groups, negotiation with and between other stakeholder groups	Infrastructure is critical to open but these structures originated and are oriented toward the North/West, and most developed without sufficient consultation with the global community

Journal editors	What are the common issues across all journals in all regions that can be improved, particularly with regard to journals in the global south?	1. Pursue systemic changes regarding standards, indexing and language access (1) 2. Educate the academic community about the importance of journals to research culture and open publishing (including editors, peer reviewers, editorial boards); the role of impact factors in P&T in undermining smaller, more specialized journals and those in the global south; the importance of mentorship; learning from global south journals, many of which are already OA and publishing at low cost; and addressing academic culture change to improve research standards (2).	International collaboration and agreement across disciplines on new standards and approaches	Journals in the global south face unique challenges. These are partly the result of having to try to fit into an expensive and rigid "northern" system, and partly because of lack of funding and training and a less developed research and academic infrastructure.
Libraries	What are the common interests and perspectives of libraries and how can they work together to help advance open?	1. Support, engage and/or collaborate on actions that continue to build out the framework for more open (3) 2. Support, engage and/or collaborate on actions that continue connecting resources and efforts to make more open possible (3) 3. Support, engage and/or collaborate on actions that continue to improve the capacity of existing open resources and efforts (3)	Outreach, discussion, and collaboration efforts/tools	Despite wide differences in resources, definitions and more, there is broad support amongst libraries everywhere for open—to provide stewardship in discovery, preserve and disseminate the scholarly record, ensure the efficient and effective use of budgets, and to advocate for equitable access.
Open knowledge groups	What are the common interests and perspectives of open knowledge groups?	1. Address question 1: OA jargon is a barrier to understanding amongst stakeholders. What can we do to reduce the jargon? 2. Address question 2: We need to deliver more content to the communities who need it. How do we do this? 3. Address question 3: How do we establish financial sustainability for a free-free environment (free to publish, free to consume)?	Communication, clarity, standards, agreements, outreach	There's a lot of diversity in the open knowledge stakeholder group. This is an exciting time to innovate, and there are lots of good solutions emerging.
Commercial publishers	What are the common interests and perspectives of publishers with regard to open?	1. Address question 1: There is little engagement from funders at the OSI meetings and there is virtually no attendance from the Global South. Will we fix this? 2. Address question 2: It is unclear what the exact impact of the initiative can be, particularly as it will be very difficult to unite all stakeholders in recommendations or even opinion statements. How	More funding, more discussion. Also more joint ventures in the development of common frameworks for storage, common definitions for open, etc.?	Open access is an important subject for virtually all publishers. Publishers are also important drivers of innovation in scholarly communication, and are committed to serving their clients and customers. However, there are wide variety of publishers with a

		will this work with regard to commercial publishers? 3. Address question 3: Publishers are concerned about the vulnerability of the organization, as it is basically a one-man-show in its current form. Will this be fixed?		wide variety of business models, not to mention different opinions, policies and strategies. Also, because many of them compete with each other, it is in many cases forbidden by law and/or unwanted (for competitive reasons) to share opinions, policies and strategies.
Research universities	What are the common interests of research universities in advancing open?	1. Thought exercise: If we were reinventing the modern research university library from scratch, what would it look like? 2. Thought exercise: Think critically and creatively about the development of programs and platforms that explore open in ways that meet the needs of our scholars. Can we imagine and realize, for example, university-supported platforms for open data sharing that invite peers in as collaborators rather than competitors? Can we incorporate commercialization into our vision of open scholarship as one of a number of modes of dissemination? 3. Real advancement requires support for the innovation and experimentation of our scholars, structures tolerant of failure and admitting of a new range of techniques and approaches. Solutions will come from the many, many stakeholders that comprise our institutions – our scholars, libraries, computing support, offices of sponsored projects and our information technology and high performance computing infrastructure.	Dialogue (plus a convening party) to expand into creative solutions at local and consortia levels, and openness to a variety of solutions and approaches	Research universities are committed to exploring ways to advance open research, but also sensitive to the reality that one-size-fits-all approaches do not reflect the needs and concerns of all scholars (without whom there would be very little intellectual product to debate).
Scholarly communication experts	What are the common interests that scholcomm experts have with regard to open?	1. Internal to OSI: Get more input and involvement from authors, researchers, research offices and administrative leaders. 2. Between OSI and the broader scholcomm community: Create/facilitate an OSI fellows program that helps share insight between scholcomm silos by seconding staff from libraries to publishers, research admin offices to scholcomm offices and so	More dialogue, engagement, involvement, bridge-building, participation, flexibility—more of everything	This stakeholder group shares a perspective of OA that reflects both the need for clarity in communicating about what open scholarship means, and a richer underlying landscape enabling a spectrum of openness for different scholarly objects. This group also shares an interest in more

		on. Also, ask OSI participants to serve as ambassadors to their respective communities to facilitate the broader exchange of ideas and perspectives. 3. In the scholcomm community: Establish open norms and standards to make it easier for everyone to participate in the open ecosystem. Also, support more author choice in this ecosystem		clearly fostering and articulating the incentives for OA publishing to effectuate behavioral changes.
Scholarly societies	What are the common interests of scholarly societies and how can they work together to advance open?	1. Socialize concepts of open more within communities, including by educating constituencies on the benefits and requirements of open. Additionally, offer platforms and recognition for those making the shift by managing member metadata, connecting, tracking, and rewarding contributions to open, offering discipline-specific awards for open, building scholarly communication networks, and offering micro-credentialing in open. 2. Bring together independent society publishers to determine if collaborations can be made. Determine how to increase efficiencies across the ecosystem. 3. Determine how the funds in the system can be redistributed (institutionally, nationally, internationally) to provide a more transparent economic relationship among producers, consumers, and publishers of information.	Conversation, collaboration, pilot programs	Societies are in a unique position to influence the move toward open because they represent large groups of professional constituencies. This said, society publications are self-sustaining and fund other society programs and services, and traditional society publishing take care to steward and advance research, so there's a disincentive to change models.
Summit group	What are the high-level takeaways from OSI2018?	1. OSI needs to put new communication tools and processes in place in order to continue to engage people productively, particularly across stakeholder groups, throughout the year.	Communication	Even more important than governance structure, OSI needs to put new communication tools and processes in place.

Notes:

1. Proposed systemic changes include:
    a. Standards:
        1. Establish (with global representation) clear, achievable, evidence-based journal standards focused on improving the quality, transparency, and reproducibility of research, rather than the appearance of the journal. Standards should have few out-of-pocket financial requirements and means for journals to pay for them should be addressed.
        2. Contact CrossRef and CLOCKSS regarding how to achieve (markedly) reduced costs for Global South and other small under-resourced journals
        3. Develop (with global representation) data policy standards regarding authors' retaining and sharing data
        4. Identify free or nearly free data repositories such as Figshare for author and editor reference
        5. Develop (with global representation) standards for data privacy for Global South authors, institutions, and editors to use

6. Develop (with global representation) approaches for Global South institutions to develop institutional repositories – funding and best practices
7. Study why some journals may cease to adhere to standards and determine ways to prevent declining standards

b. Indexing:
1. Catalog requirements of major indexes for editors to easily reference; synthesize requirements into standards to improve likelihood of indexing; identify issues with Global South journal practices that impede indexing, and causes and ways to alter their practices
2. Identify liaisons at major indexing organizations to turn to when editors have questions
3. [Until truly global indexing is available] Strengthen regional journal indexes that national research evaluation systems, institutions and researchers (including systematic reviewers) can use to ensure that they are capturing all relevant research
4. Evaluate standards of "international" indexes to determine why Global South journals are preferentially not indexed
5. Approach indexing organizations regarding requirements that may not be essential and inequality practices that may introduce bias against Global South journals
6. Approach Google Scholar re: increasing the likelihood that Global South journals and articles will appear in search results

c. Language Access:
1. Identify (with global representation) ways to encourage journals to publish in the main language of the country (with English abstracts provided by the author if the journal cannot afford professional translation)
2. Convey (with global representation) the importance of publishing in the country's language to academic institutions within the country
3. Convey to Google (with global representation) the importance of improving automated translations of research (particularly medical research) to at least improve the first pass of research translation before professional translators or authors refine translations.

2. Proposed culture changes include:
a. Importance of Journals to the Research Culture
1. Convey to academic institutions and funders the importance of journal editors to the culture of academic scholarship
2. Encourage institutions to recognize the services that peer reviewers and editorial boards provide as important academic achievements

b. Impact Factor
1. Convey to Global South academic institutions and funding organizations the problems that use of impact factor and publication in Global North journals as criteria for research impact create for Global South journals and the fostering of academic culture in the Global South; explain the limitations of the impact factor and the alternative means of judging impact set out by DORA and implemented by some funding organizations such RCUK/MRC
2. Examine incentives for Global South researchers and how incentives might be changed to promote open publishing and publishing in Global South journals

c. Importance of Mentorship
1. Examine with potential funders ways in which a Global South network might be developed, incorporating existing standards such as ORCID
2. Contact scholarly societies to determine feasibility of new programs pairing specialty societies in the Global North and South

d. Learning from the "South"
1. Create a clearinghouse for ways in which journals, publishers, and indexers in the Global South and North are improving quality, implementing standards, streamlining publishing, evaluating journals, or otherwise improving the publishing process. The clearinghouse should be available for researchers to evaluate the efficacy of particular approaches for different regions of the world.

e. "Open" questions
1. Develop (with global representation) best practices for journals based on their funding model, including those funded by government, institutions, and other funders, to preserve editorial freedom and prevent conflicts of interest
2. Involve stakeholders in various regions in discussions around how to change academic culture to value openness and to value publishing regionally in the research language
3. Involve stakeholders to identify ways in which institutions and funders can incentivize ethical research and detect and prevent research misconduct.

3. Library-identified efforts for support, collaboration and/or engagement include:
a. Shared training and teaching resources
b. OERs as a means to promote more open practices on campus
c. Optimization of open source repository platforms
d. Improve discovery of what is already made available
e. Engage with projects such as Initiative for Open Citations (I4OC)
f. Identify opportunities for cross-institutional OA publishing
g. Exploration and investment into the different models of Open Access from a library perspective that recognizes institutional diversity (i.e. Pay it Forward project)
h. Journal Assessment (possibly addressing white/black lists of journals)
i. Advocacy efforts that push a need for greater transparency in the pricing of OA journals
j. OSI facilitation of more communication and information sharing across stakeholder groups (i.e. Tenure reform and Impact Factor groups)

OSI2016 workgroups also developed important and detailed recommendations. Most OSI2017 recommendations align with these recommendations since the 2017 reports were grounded in OSI2016 deliberations. The following table contains the key findings and recommendations from OSI2016 (as noted in the OSI2016 final report):

WORKGROUP	KEY ACTION ITEMS	TOOLS (SUMMARY)	TAKEAWAY (SUMMARY)
What is publishing? 1	Explore disaggregating the current services provided by publishers (such as filtering, editing, dissemination, registration, and so on) and how current scholarly publishing stakeholders might be incentivized to embrace these changes.	1. Develop partnership agreements to work together to change the culture of communication inside academia (and as part of this effort, clarify messaging with regard to benefits and impacts of open). 2. Lay the groundwork for promotion and tenure reform (a framework agreement with stakeholder partners to disentangle the influence of journal publishing and make evaluation more transparent). 3. Pilot new spectrum measures for "open" and impact (see the reports from the "Open Impacts" and "What is Open?" workgroups). Also assess the routes by which such measures might come into common use and the lessons to be learned from previous attempts that have not been taken up. 4. Develop and recommend new tools to replace the journal impact factor. 5. Fund studies or pilots that will help: a. Identify which publishing services can/should be better handled by others (disaggregated). b. Assemble and supplement as needed an evidence base to better inform our policies regarding embargoes. c. Develop a stronger underpinning (economic modeling?) for the discussion surrounding the idea of pushing a global flip to open using APCs (e.g., how might this	• **Acknowledging**: Scholarly communication is changing and this change presents opportunities and challenges. • **Describing**: Some of the change that is happening involves shaking up the current system to utilize publishing tools and approaches that may be better suited to an Internet-based information world. But not all current and needed changes fall into this category. Indeed, some of the most needed changes do not. • **Doing (general guidelines for action)**: o We don't have a clear, coordinated action plan for improving open. What needs to happen today, tomorrow and the day after? Who are the actors, what are the mileposts, what are the likely impacts, and how do we measure success? (Note that these concerns don't necessary suggest that OSI itself should create and evaluate specific programs of work. Rather, this is a commentary on the need for OSI to identify what it can do and how it will operate, and then farther down the road, what kinds of synergies OSI can encourage.) o Some change will need to involve
What is publishing? 2	Explore ways to change the publishing culture inside of academia, including systems of academic recognition and reward. Identify unmet author needs, and gaps in evidence and knowledge, develop disciplinary approaches, and use pilots rather than one-size-fits-all approaches.		
What is open?	The scholarly community's current definition of "open" captures only some of the attributes of openness that exist across different publishing models and content types. We suggest that the different attributes of open exist along a broad spectrum and propose an alternative way of describing and evaluating openness based on four attributes: discoverable, accessible, reusable, and transparent. These four attributes of openness, taken together, form the draft "DART Framework for Open Access." This framework can be applied to both research artifacts as well as research processes.		
Who decides?	1. Evaluation: Re-assess the criteria for academic tenure and promotion a. Fully consider OA publications on the same footing as all other outlets in research assessment b. Research and validate the use of altmetrics c. Reward greater openness 2. Incubation: Nurture alternative, community-driven publishing models 3. Transformation: Facilitate a "global flip" of research journals from subscription-based to OA.		
Moral dimensions	In this transition period, we need to encourage a period of exploration and grace in the search for new models, while being prepared to judge such efforts by the highest moral standards. We must consider, for example, whether a particular invention maximizes the new digital affordances in order to increase universal access. We consider it our responsibility to make judgments about the morality of acts, artifacts, systems, and processes, but not on the morality of people and organizations.		
Usage dimensions	1. Perform a landscape assessment of scholarly communication and		

	workflow tools to categorize current best practices, standards and norms. 2. Create an issue brief concerning funder support of open access. OSI should identify conversations that are already happening in this area, looking for synergies and potential partnerships, and facilitate knowledge sharing in this area.	affect access in the global south?). d. Identify the economic impacts of open. e. Get a better understanding of how the system works now, and then identify scholarly publishing standards, norms, best practices, exit strategies, incentive systems, and a future ideal.		reforming the communications culture inside academia, where old publishing methods, measures and perceptions can drive author choices and be used as proxies for merit when evaluating grant awards and tenure decisions. And some will need to involve examining our own biases that publishing is a binary proposition involving either open or closed, subscription or APC-based, right or wrong. Open, impact, author choices, peer review and other key concepts all exhibit a range of values. Identifying non-binary measures for some of these values (as proposed by several workgroups) may be helpful insofar as allowing stakeholders to focus on improving areas most in need of change and comparing progress and best practices across disciplines, institutions, publishing approaches, funders and so on. o Any widespread change is going to require a widespread effort. There are simply too many stakeholders with different interests and perspectives who influence different decision points. No single stakeholder or group will be able to affect this kind of change unilaterally.
Evolving open 1	1. We need a better understanding of how the system works now. Specifically, we need a comprehensive study that shows in detail, country by country, how funding, tenure, and promotion decisions are made and the role of research outputs and activities within this decision making process. 2. As a community and at a high level, define an ideal future across all issues—peer review, impact factors, etc. 3. Ensure that any new impact system adopted be transparent.	6. Identify which scholarly publishing stakeholders can work together on these and other efforts and how (multiple stakeholders require a convening power). 7. Develop new funding models such as a venture fund that can allow more support for joint efforts, or improve the flexibility of library budgets (e.g., by examining the efficiency of "big deals"). 8. Propose radical new repository interoperability and infrastructure solutions. 9. Develop a broader and clearer description of peer review that takes into account the different needs for different stages.		
Evolving open 2	1. We recommend that OSI commission the development of a comprehensive set of resources and messaging efforts, targeted to specific audiences, to increase the profile of open access across stakeholder groups. 2. We recommend that OSI appoint a Task Force to develop a strategy for the establishment of an open access venture fund, and deliver a report at OSI 2017. 3. We recommend that the topic of liberating subscription budgets (and the dissolution of "big deal" models) be a future OSI Working Group, with representation from both libraries and publishers. 4. We recommend that an OSI Working Group identify and seek ways to close gaps within the OA infrastructure, beyond STM journals (the lack of developed infrastructure beyond STM journals and the fragmentation and lack of interoperability of systems and processes.			
Open impacts	Openness scores should be developed, as well as utilization and economic impact measures. Ideas are proposed for what would be included in the baselines of each such evaluation. More research is needed and proposed, perhaps as standing (ongoing) OSI efforts.			
Participation	1. Cultural change 2. Consistent messaging 3. More and better open publications 4. Institutional commitments to scholcomm efforts (including adjusting incentive and reward systems) 5. Support more research into solutions and sticking points			
Overload & underload	1. Increase information literacy efforts toward understanding the behavior of information systems and economies, which can in turn			

	prepare students and scholars to make both more understandable to others. 2. Expand information literacy to include knowledge about the nature of computation and its control over what is accessible from and delivered to our devices. 3. To address the overabundance of information that causes overload, filtering systems are needed to identify, sort, select, and summarize relevant information. 4. To address the problem of underdelivery of or lack of access to information, known as information underload, remove widespread sociopolitical, technological, educational, geographic, and financial barriers. 5. Apply more open metadata, social media, digital tools and networked expertise to advance discovery. Better exposure and discovery options for scholarly products are still needed, as well as the means to understand and apply them. 6. Convert more content into a machine-shareable form and continue promoting openness through responsible curating, archiving and discovery of raw data. 7. Advocate for mandatory copyright exception for text mining and encourage publishers and vendors to remove obstructions to mining content.	o How do we make these reforms in response to the needs and concerns of authors rather than in spite of authors (authors are not a homogenous group with common interests or opinions, of course, but there was some sense among delegates that reform efforts could be better attuned to what authors needed)? o How do we make changes across disciplines (which have different needs) and that also effectively build on the efforts of the many stakeholders in this space? o How do we reform the system without losing its benefits? o How do we move from simply repairing dysfunction to creating a more ideal publishing world and reaping the benefits that such a world could provide in terms of participation, efficacy, efficiency, and discovery? o Developing standards and norms would be helpful as we move forward, as well as answers to a number of key questions.
Repositories & preservation	1. Clarify opportunities for UNESCO and WSIS to engage in this effort 2. Coordinate action among meta-organizations (e.g., COAR, CLIR/ DLF) 3. Raise funds for improved sustainability and stewardship through investments and endowments in repositories 4. Support aggregation driven by preservation concerns, such as: a. Electronic legal deposit (UK) b. Portico, Chronopolis, APTrust, and DuraSpace c. DPN, MetaArchive Cooperative, CLOCKSS 5. Build workflows and an ecosystem in order to ensure long-term access and preservation.	
Peer review	1. Pre-publication peer review: o We encourage the use of preprint servers o We also encourage the facilitation of a flexible, nonlinear process of peer review outside of and supplementing journal-based peer review 2. Traditional peer review: o We recommend that all disciplines work toward a culture of openness in peer review.	

	o We encourage the exploration and addressing of the problems, real and perceived, with transparency in peer review. 3. Post-publication peer review: o We recommend the facilitation of post-publication review of traditionally reviewed publications. o We recommend experiments with crowd systems that incentivize broad, representative participation—for example, with a currency, rating, or credit system. o Any credits or ratings should be acknowledged by employers or funders of those doing the reviews as valid metrics in career progression. 4. Overall, more study, pilots and standards are recommended, as detailed in the report.
Embargoes	A project is proposed to study and reform the current embargo system. The stages of this project are as follows: 1. funder identification (already begun) and brief (drafted) 2. literature review (already begun) 3. case studies analysis 4. employing researcher(s) and surveying stakeholders 5. analysis of survey data and presentation at OSI 2017 (by the OSI 2016 Embargo Workgroup). The OSI Embargo Workgroup has prepared a set of draft survey questions and will analyze the survey data and present it to OSI 2017
Impact factors	1. DORA recommendations should be implemented. Future OSI workgroups should assess the initial response of research funders, especially in the biomedical field, to this proposed action and amend the following actions accordingly. 2. Create templates for universities / disciplines, to facilitate the development of appropriate tenure and promotion frameworks to implement DORA 3. Create an international metrics lab, learning from prior attempts to do this, and staffed with a coalition of groups already in this space (as identified in the report). 4. Share information about the JIF, metrics, their use and misuse, via a resource page on the OSI website and partnerships with institutions as identified in the report 5. Improve the validity of the JIF as one indicator of journal quality (OSI

		workgroups focused on indicators or impact factors should draft a list of improvements required to the JIF)
At-large	1.	Promotion and tenure was discussed at some point in most, if not all, workgroups. Notably, there was no team expressly designated to tackling the question of promotion and tenure. There is recognition that while promotion and tenure is a key component of the publishing ecosystem, there is perhaps little that publishers themselves can do to influence the process. In this sense, OSI could conceivably work with other stakeholders throughout the academic system to express perspectives and positions on this evolution.
	2.	More focus on impact is another idea. The at-large committee's observations lend credence to the idea that a "spectrum of impact" measure might be developed by OSI to parallel the spectrum of open proposal. Specifically, a theme running as an undercurrent in many workgroup discussions was a greater need to focus on assessment of the value of research and scholarship. Notably, nearly all participants in the OSI2016 conference, and most stakeholders in the entire scholarly publishing ecosystem, have an interest and need to measure the impact of research and scholarship.
	3.	Improve composition and representation for OSI2017, begin focusing on action instead of ideas

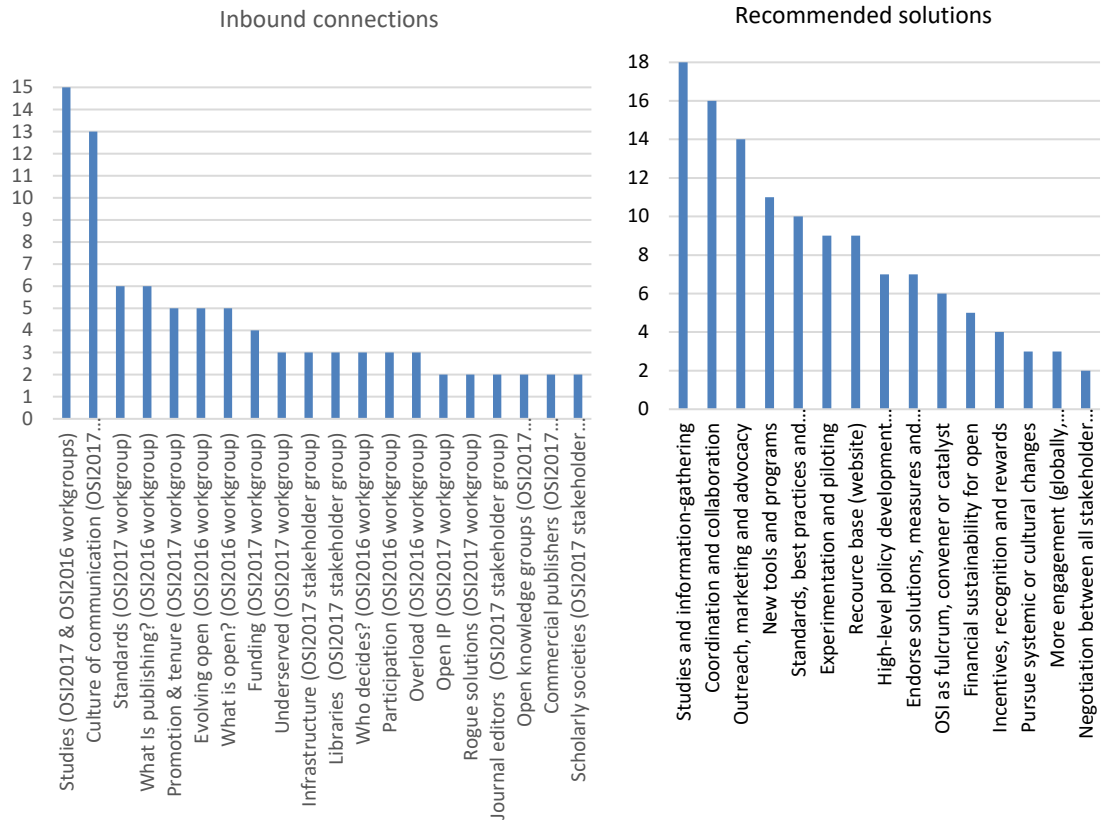
SYNTHESIS OF OSI2016 AND OSI2017 RECOMMENDATIONS

There are several ways to synthesize all these recommendations. The method used here is to calculate the "connectedness" of the reports produced at OSI2016 and OSI2017 in order to supplement the "gut feeling" takeaways described at the outset of this report (both are distinctly subjective approaches, of course; see the spreadsheets included in the Annex section for more details, as well as the analysis critique later in this report). Most OSI2017 reports have three to five "outbound" connections where the issues being addressed by other workgroups are noted as being key. At the same time, most reports have a smaller number (zero to three) of "inbound" connections, where other groups identify the particular issue they are working on as being key. In other words, if a group of 12 people is asked to name the 10 most famous people in history, that's an outbound connection. To the extent that these 12 people are on other's lists, that's an inbound connection.

This discrepancy between inbound and outbound connections is owing to the large number of inbound connections being made to the studies groups, the culture of communications group and a few others. That is, a large number of groups across OSI2016 and OSI2017 concurred that two foundational concerns with regard to reforming scholarly communications are the critical need for

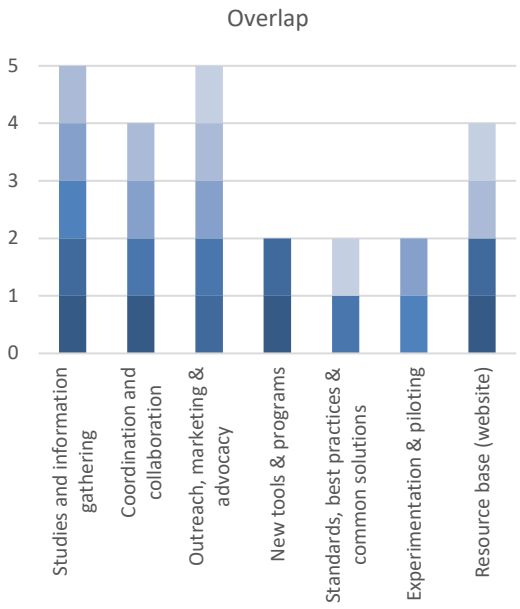
more studies and information, and the need to reform the culture of communication in academia. Issues such as standards and developing a clearer sense of what "open" means are also among the issues that OSI participants frequently judged to be key.

Another approach to synthesizing these recommendation is to examine the connectedness of specific tools and processes—more meetings, more collaboration, outreach efforts and so on. Here, as you can see from the graph on the next page, it's clear that the key recommendation from OSI2016 and OSI2017 participants is that we need more information. There are many gaps in our understanding, and more information is needed before we can move forward aggressively and assuredly in a number of areas. However, not every recommendation involves gathering more information. Almost as many recommendations simply call more coordination and collaboration toward common goals, more outreach programs geared toward clarifying the open landscape and sharing information with each other (key to reforming the culture of communication), and more focus on standards development and the deployment of tools and resources that can serve the scholarly communication stakeholder community.



There is overlap in a lot of this terminology, of course—this is a rough pass to help us understand the general road ahead. But it interesting to note from this representation that some of the more complicated approaches like high-level meetings and cross-stakeholder negotiations—approaches that many in OSI have been skeptical about due to the wide range of perspectives in this group—aren't necessarily the approaches we need to explore first. It's possible that OSI can make significant headway merely by picking the low-hanging fruit first—by gathering more information, partnering

on significant efforts, reaching out to the scholarly communication community, creating a resource base for open, and more.



As the OSI group moves forward in 2017 and 2018, therefore, its main focus should be on the most prominent issues and study areas first. Practically speaking, though, OSI may need to skip over the first recommendation calling for more studies until and unless this initiative receives a significant boost in funding. However, we can move forward with "information gathering" to the extent that we can scour the landscape for facts that exist but aren't in our possession yet, or facts that don't require a complicated study to collect (like researcher attitude surveys, for instance). Combined with this effort, we can also try to begin collaborating and coordinating in earnest to work on reforming the culture of communication in academia, developing open outreach programs and products, developing open access information and guidance resources for the stakeholder community, discussing new international standards, and so on down the line.

How can we reconcile these two sets of recommendations, though—that is, how can we maximize our limited resources to both the right focus area and the right approach? Specifically, if we're agreed that, other than studies, culture of communication is the most salient topic to pursue, and that we should develop the most recommended solutions we can afford, where do these two sets of recommendations intersect? What specific projects should we work on that encompass both the most salient topics and with the most recommended solutions? As the chart to the right illustrates, this intersection happens for four areas of activity: studies and information-gathering; outreach, marketing and advocacy; coordination and collaboration; and developing a resource base (essentially, a website devoted to open access coordination and education).

RECOMMENDATIONS FOR 4Q17-2Q18

At present, OSI lacks the financial and labor resources to undertake the entire suite of recommendations put forward by OSI2016 and OSI2017 participants. However, as the above synthesis suggests, if we focus just on the most "connected" recommendations we can stay within our capabilities and also achieve significant impact. Specifically, OSI should focus on three main tasks first and foremost: (1) Outreach, marketing and advocacy efforts—first on behalf of the issues listed in the above table and then spreading to other issues as time and resources permit, (2) building a resource base for use with the issues listed above and then spreading to other issues as time and resources permit, and (3) building coordination and collaboration efforts, again primarily for the central issues for now but spreading later.

As OSI attracts more resources in the future and builds a resume of accomplishment, we can fund studies, develop new tools, work together on standards, support pilots and so on, geared first toward the central issues. Other approaches such as high-level meetings will come over time, as will

a focus on issues such as information underload, but for now, OSI's priorities will be to address the highest needs first with the most recommended solutions. These plans will no doubt evolve and change at the margins as they're rolled out, but this is the general direction OSI will start heading in the Fall of 2017.

As these plans roll out, they will build on the common perspective of OSI participants mentioned at the outset of this paper—to wit, that open isn't free, it isn't easy, publishing is critical, OSI can help, we're on the right track, we're more alike than unalike, convergent needs are everywhere, we all have a stake in the outcome and should recognize each other's efforts and hold each other accountable, and that there is a lot of mistrust in the system which needs to be overcome.

How does all this reconcile with the action plan previously developed for 2016 and 2017 (see Annex section)? Reasonably well. Coming out of OSI2016, most of our goals for the last half of 2016 and early 2017 were to figure out how to approach OSI2017—how to interpret and distill the outcomes of the first full year of OSI effort into forward progress and action. This was achieved quite successfully, as the OSI2017 conference outcome can attest. The only goal which wasn't met was forming "tiger teams." The idea behind these teams—groups of OSI participants who are concentrated in a particularly institution or geographic area, or who met regularly as part of a stakeholder group (like scholarly librarians)—was that they could address their institutions, and also key meetings (to be identified). These teams are still a popular idea and can be part of the marketing and outreach strategy for 2017 and 2018. Once outreach materials are developed, tiger teams can draw on these resources for their work.

In addition to this emphasis, OSI participants have recommended taking a closer look at a handful of topics. Small discussion groups peeled off during 2017 to work on these; some may end up becoming 2018 workgroup topics. Going forward, communications reforms (as noted below) should help make these side conversations more fruitful and enduring than just email or listserv groups:

1. Cash incentives to publish: What are the cash incentives to publish in academia? There is anectdotal evidence from some parts of the world that this is a significant and corrosive phenomenon.
2. Publisher profit margins: The profit margins of commercial publishers has long been cited in debates about scholarly communication reform. Facts, however, are in short supply. A group of industry leaders and analysts is willing to pull together an authoritative on this topic.
3. Open protocols: Open study protocols is an important and under-researched area. There are a few open protocol sites but none for major clinical work. What are the challenges? Is this a solvable problem?

4. Blacklist: Should a new blacklist be developed? A whitelist? Some other solution? Various ideas have been discussed at length both on and off list and in a side group but a final decision hasn't been reached yet.
5. APCgrabber.com: A website that pulls in data on APCs for easy comparison or where publishers can self-post pricing info (granted there would be lots of caveats) would be a valuable resource for this community. This idea preceded the blacklist discussion—we wouldn't want to create a tool that makes it easier for fraud dealers to peddle their wares.
6. Open impacts: Follow-up on a listserv conversation regarding a hotly-disputed report on open impacts (circulated to the list in February) by restarting this conversation with one of the report's authors included.
7. iTunes model: Would an iTunes model work for scholarly journals? Would providing a-la-carte access to journal articles at 99 cents apiece be attractive to scholars and publishers?

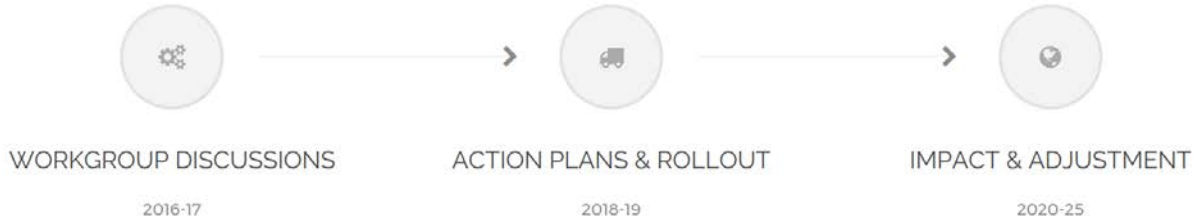
ANALYSIS CRITIQUE

As noted above, absent full funding, OSI simply isn't able to address all challenges at the same time so some prioritization is necessary. This prioritization does not mean, however, that lower priority challenges are less important or that all OSI participants agree with the priorities identified in this report. OSI will endeavor to stay focused on all the issues and solutions identified by OSI participants and tackle these going forward as possible.

It is also important to note that this synthesis has not had broad input yet from all OSI participants, nor is this approach necessarily the best way of identifying priorities. More input and analysis is needed. To this end, OSI steering committee and summit group members are currently in the process of going over these recommendations and will set aside significant meeting and discussion time between end-2017 and early-2018 to discuss these recommendations and make adjustments as needed. In addition to broadening input into this decision, improving the transparency of this process will also be important.

THE 2018-19 ACTION TIMEFRAME

Because the scholarly communication stakeholder community is so diverse, the first step in this group's journey has been to acknowledge and value where each stakeholder group is in the process. This stage of OSI took place during 2016 and 2017. The next two years, 2018 and 2019, will involve figuring out what course adjustments can be made to the current system to continue to improve scholarly communication and what assistance this community can offer—new standards, new incentives, better definitions, coordinated policies, collaboration efforts, formal partnerships, new studies, pilot products, and so on. Actively involving the full international community will be vital during these next few years to make sure we're doing the right things for the right reasons. Our hope is that by 2020 the OSI group will be fully engaged in significant reform efforts, fine-tuning these efforts until 2025.



To better engage the international community and ensure that our action plans are the right ones, OSI is currently evaluating several proposals for international meetings in 2018 and 2019. These meetings can do any or all of the following (depending on the interests of the meeting hosts):

1. Invite local researchers and research leaders from various disciplines and institutions to comment directly about their scholarly communication needs and challenges. What problems are we trying to solve and what are our options?
2. Help coordinate the scholarly communication reform policies of libraries, universities and other institutions around the world. How can we improve our efficiency and effectiveness?
3. Address the specific needs of each particular country or region---for instance, improve the global indexing of local journals (or better understand how to improve indexing), improve journal publishing standards (or awareness of standards, or work to adjust global standards to new and emerging realities such as the impracticality of current peer review standards), and/or improve government policies with regard to open.
4. Focus on one evaluating, fine-tuning, and broadly adopting solutions (with the backing of UNESCO) for just one key issue in scholarly communication—for instance, impact factors, peer review, or embargoes.
5. As mentioned earlier, identify a set of common principles that define what the global scholarly communications community wants as an endpoint. If we can identify these principles as a global group we can then make a broad model that can be adapted or adopted.

OSI participants will be invited to participate in these meetings, depending on the focus (for a meeting on impact factors, for instance, we would want to invite experts in this field). Supplementing this group will be local experts and officials who will be able to sign on to agreements and implement recommendations—university provosts, ministry officials and the like. The structure of each meeting will depend on the nature of challenge—whether we're simply presenting a solution for local discussion and adoption, collecting information for consideration by OSI, and so on.

COMMUNICATION REFORM

A common refrain from OSI2017 was that OSI's communication channels need to be improved. While the OSI listserv has been a conspicuously active, rich and informative information space, it was never intended to be a decision-making tool for this group. Additionally, as a discussion space it isn't ideal since many individuals prefer more time to weigh in and don't always want to engage in contentious conversations. Here's what's been proposed for late 2017 and beyond:

1. The OSI listserv will transition into becoming a forum for discussing moving OSI action-items forward—pros/cons, collaborations, etc.

2. OSI will launch a new listserv in late 2017 as part of the outreach and resource tools being developed (see above recommendations). This list will be open to the public and will host the deep conversations about the future of scholarly communication that have heretofore been mostly only on the OSI website.
3. OSI will launch a new website in late 2017 as part of the outreach and resource tools being developed (see above recommendations). This site may host communication tools of use to the OSI group.
4. Slack channels will be set up to start handling the detailed group work on specific topics and projects. Basecamp will be phased out. By using Slack, our hope is that workgroups and issue groups will be able to pull in a wider variety of participants, and that these participants will have an easy-to-use, long-term resource for keeping track of conversations and efforts.
5. A provisional summit group comprised of 35 OSI stakeholder representatives has been appointed (and will be elected by early 2018). This group will take control of the OSI agenda and will begin deciding as a group what to do and how. These decisions will be presented to the full OSI group for comment.
6. A new monthly MailChimp newsletter will be launched to sum up topics and efforts and give everyone executive summaries of who's doing what.
7. Action teams will have periodic video chats.

GOVERNANCE REFORM

A governance plan for OSI was developed in late 2016 and circulated to OSI participants for comment and feedback. The most recent version of this plan is included in the Annex section of this report.

Our goal was to discuss this proposal as a group at OSI2017—participants had several months of preparation time to review this proposal and prepare feedback—and also to elect a summit group to serve as the "executive board" for OSI (as called for in the governance plan). However, the full group quickly voted to table this effort for further consideration.

To help develop a permanent workable plan for some sort of executive board for OSI, and also refine the governance plan, a provisional summit group was appointed by the OSI program director in July of 2017. This group represents all stakeholder groups in rough proportion to the ratios originally proposed at OSI2017 (seven reps from research universities, three from publishers, and one each from every other group; see the "Bookkeeping details" section below for details), and also includes OSI's conference planning committee. Individuals so appointed will serve in dual roles as both the OSI2018 planning committee and the "steering committee" for the OSI summit group. The provisional summit group will figure out how to transition to a permanent OSI executive group before the next full group meeting.

SUMMIT MEMBER	TITLE	STAKEHOLDER GROUP	STEERING
Abel Packer	Co-founder and director, SciELO	Scholarly journal editors	
Ali Andalibi	Associate Dean of Research, Science, George Mason University	Research universities	
Anthony Watkinson	Principal Consultant CIBER Research	Scholarly communications & publishing industry experts	

Barbara DeFelice	Program Director, Scholarly Communication, Copyright, and Publishing, Dartmouth	Research universities	
Bhanu Neupane	Program Manager, UNESCO	Government policy organizations	
Bryan Alexander	President, Bryan Alexander Consulting	Scholarly communications & publishing industry experts	x
Christopher Erdmann	Chief Strategist for Research Collaboration, NCSU Libraries	Scholarly communications & publishing industry experts	x
Glenn Hampson	Program Director, OSI	Ex officio	x
Claudia Holland	Scholarly Communication Coordinator, Mississippi State	Scholarly communications & publishing industry experts	x
Colleen Campbell	Director, OA2020 Partner Development, Max Planck Digital Library	Non-university research institutions	
David Mellor	Project Manager, Journal and Funder Initiatives, Center for Open Science	Open knowledge groups and "born-open" publishers	
Dee Magnoni	Assistant Vice President for Information Services, Rutgers University	Research universities	x
Emma Wilson	Director of Publishing, Royal Society of Chemistry	Scholarly societies and society publishers	
Eric Olson	US Outreach Coordinator, ORCID	Scholarly communications & publishing industry experts	x
Gemma Hersh	VP, Policy and Communication, Elsevier	Commercial publishers	
Glenorchy Campbell	Managing Director, BMJ North America	Commercial publishers	
Jack Schultz	Director, Christopher Bond Life Sciences Center	Research universities	
Jason Steinhauer	Director, Lepage Center for History in the Public Interest, Villanova University	Open knowledge groups and "born-open" publishers	
Joann Delenick	Biocurator, Jackson Lab	Active researchers and academic authors	x
John Warren	Head, Mason Publishing Group, George Mason University	University and library publishers	
Joyce Ogburn	Digital Strategies and Partnerships Librarian, Appalachian State University	Research universities	x
Keith Yamamoto	Vice Chancellor for Science Policy and Strategy, U of California San Francisco	Research universities	
Kim Barrett	Distinguished Professor of Medicine and Editor-in-Chief, The Journal of Physiology	Scholarly journal editors	
Lars Bjørnshauge	Founder and Managing Director, DOAJ	Scholarly research infrastructure groups	
Margaret Winker	Secretary, World Association of Medical Editors	Scholarly journal editors	
Mel DeSart	Head, Engineering Library and Head, Branch Libraries, University of Washington	Scholarly libraries and library groups	
Nancy Davenport	University Librarian, American University	Research universities	
Patrick Herron	Senior Research Scientist for Information Science + Studies, Duke University	Research universities	
Richard Gedye	Director of Outreach Programmes, STM and Publisher Coordinator, Research4Life	Scholarly communications & publishing industry experts	
Rick Anderson	Associate Dean for Collections & Scholarly Communication, University of Utah	Scholarly communications & publishing industry experts	x
Scott Plutchak	Director of Digital Data Curation Strategies, UAB	Scholarly communications & publishing industry experts	x
Sioux Cumming	Programme Manager Journals Online, INASP	Open knowledge groups and "born-open" publishers	
Susan Murray	Director, African Journals Online	Scholarly journal editors	
Susan Veldsman	Director of Publishing, Academy of Science of South Africa	Government policy organizations	
William Gunn	Director of Scholarly Communications, Elsevier	Commercial publishers	

One change that will occur in the final version of the governance document is the use of the word "member" to define the status of individuals who are participating in OSI. Other words have been used as well, including participant, delegate, and representative. It's important that everyone feels welcome to discuss issues in OSI without also conferring some level of community buy-in that isn't warranted (as Jean-Claude Guedon pointed out on the OSI listserv earlier this year). This said, OSI is an invitation-only group whose purpose is to work together across stakeholder perspectives and divisions, so this isn't just another conversation but an action-oriented group of people who possess some common denominator of willingness to try working in a cross-stakeholder effort. In a poll of

OSI members conducted in August 2017 (n=59) a majority of respondents felt the word "participants" best described their affiliation with OSI, followed by "member" and "delegate." Going forward, we will use the term "OSI participant" to describe the people who are involved in OSI.

BOOKKEEPING DETAILS

The OSI2017 meeting was held on April 18-21, 2017 in Washington DC. About 115 participants took part (compared to about 190 in 2016). Travel budgets were a significant issue this year, as well as concerns about international travel vis a vis the incoming Trump Administration's efforts early in 2017 to curb international travel into the United States (in response to this ban, OSI participants discussed the possibility of holding future meetings outside the US, and a statement of international solidarity in this effort was posted on the OSI website). In response to the travel budget issues being experienced by many would-be participants, OSI extended $20,000 in travel and lodging scholarships, made possible by the generous support of OSI2017 sponsors and by efforts to keep conference costs at a minimum.

George Washington University was the host university this year. Most participants stayed at the One Washington Circle Hotel across the street from GWU. Most workgroup presentations were made at the end of the final full day of the conference and stakeholder presentations were made on the final morning of the conference at the Ritz Carlton, located a few blocks north of GWU.

Participants followed the same workshop-centric format as for OSI2016, breaking off into 12 workgroup meetings and giving full-group presentations on these meetings during the final afternoon and morning of the conference. New this year, participants also broke into nine stakeholder group meetings and reported out on these conversations as well. Also new this year, participants welcomed two keynote speakers: Vint Cerf (VP, Google) provided the opening remarks, and Keith Yamamoto (Vice Chancellor for Science Policy and Strategy, UCSF) provided the closing remarks. A number of participants also carved out time to be interviewed for a short film on scholarly publishing ("Paywall").

OSI2017 also featured a quick "fast pitch" segment on the closing morning of presentations where participants were invited to share their ideas about what OSI should work on at 2018 or update participants on their own projects. Several of these ideas and projects clearly tie in with the broader recommendations and conclusions from OSI2017 and others will be considered by the summit group for follow up. The following table provides an overview of this input:

PARTICIPANT NAME(S)	FAST PITCH SUMMARY	DETAILS
Ali Andalibi and Bhanu Neupane	UNESCO-funded hackathon to develop apps to get at hidden databases	Collectively identify the technical challenges that open source faces (e.g., databases and interoperability issues). These problems would then be pitched each year at the OSI annual conference and the students from the host institution would be able to form teams to propose solutions to the problem. A panel of judges would then pick the top three (or whatever number we feel is right) and we would give them up to $10k to work on the solution and report at the next conference. Of course, we would pay for their travel to that conference.
Cheryl Ball	VEGA, an OA content access tool	
Peter Berkery	OA monograph access initiative, just launched by AAUP. Coalition of the willing, including 61 university presses.	
Stacy Konikel	idealis.org	*The Idealis* is a new kind of open access overlay journal, powered by PressForward and curated by librarian-experts. Each week, editors recruit the very best scholarly communication literature from across the Web, working with authors to make their research available, ensuring that librarians are connected to excellent research that's relevant to their work. You can subscribe to *The Idealis* here; we'd also welcome applications for new editors.
Rachael Samberg	Rewrite the OA2020 marketing language to make it clearer that this is not an APC-centric effort or one that dictates a specific roadmap.	
John Dove	Create a discipline-by-discipline approach (controlled internally by each discipline) on how to improve open	
Crispin Taylor	Scenario-planning effort for OSI (with workgroups based on different future scenarios)	
Alexander Kohls	SCOAP3- *the OA solution for particle physics*	SCOAP3 is a global collaboration that brings together libraries from all over the world to join forces and enables OA in particle physics at no burden and at no cost for researchers. In fact, researchers continue to publish in their journal of choice but retain the copyright to their work. In the background, SCOAP3 arranges with publishers to make all the particle physics content available OA with a CC-BY license. The agreements with publishers includes a clause that guarantees that all customers benefit from reduced subscription fees (proportionate with the OA content) which frees funds on library side. Consequently, libraries can support OA by paying a SCOAP3 membership fee. We look back to three successful years during which the SCOAP3 partnership grew to more than 3,000 libraries from 43 countries. We supported more than 13,000 articles for a competitive average cost of $1,100 USD (mainly from "recycled" subscription funds). Thanks to the articles being now OA, their downloads increased by 300% which results in more visibility and recognition of the discipline. More details can be found at: https://scoap3.org.
Catherine Mitchell	Online book production and conversion tool, open source, supported by the Koko Foundation	
Chris Erdmann	Develop tool that tracks all linked data	What if the scholarly community could rise above the current network of repositories and leverage the common infrastructure demonstrated by Wikidata (https://www.wikidata.org/wiki/Wikidata:Main_Page) and the Initiative for Open Citations (https://i4oc.org/)? Scholia (https://tools.wmflabs.org/scholia/) is an example of what entrepreneurial activity might be enabled through a common infrastructure.
Bryan Alexander	Ftte.us	Future Trends in Technology and Education (FTTE) is a long-running trends analysis report. Every month it scans the horizon for developments in

		education and technology, assessing them against a battery of more than 75 trends, ranging from transnational higher education competition to growth in social media, the internet of things to the emergence of new certification forms. Since FTTE has been published for years, we now have a good sense of the relative strength and impact of those trends. We create FTTE using social media to discover and elicit feedback about new developments, which helps us gather multiple perspectives and additional context. These reports also work with the Future Trends Forum, a weekly videoconference exploration into the future of education. http://ftte.us

In terms of financial support for OSI2017, commercial publishers provided the single largest source of funds at 37% of the budget, followed by 33% from foundations, 18% from UNESCO and 11% from participant fees. These figures represent a shift from OSI2016 when delegate registration fees accounted for the largest share of the budget at 34%, followed by 29% from UNESCO, 20% from commercial publishers and other sources, 12% from foundations, and 5% from other sources.

Higher overall contributions from commercial publishers and foundations were requested for OSI2017 to help offset lower participant fees and more participant scholarships. This fact, combined with significantly reduced conference costs, gave the appearance to some OSI critics—who think the involvement of commercial publishers in OSI is a bad idea--of large and unwelcome changes. In fact, the overall dollar figures are modest—OSI received $27,000 from six publishers for OSI2016 and $40,000 from five publishers for OSI2017. Without this support, the OSI meetings could not happen, and OSI is grateful for everyone's support. OSI does not grant any special policy or action consideration to sponsors and allows all interested stakeholders to help support this effort. Averaging out the annual changes in budgets and sponsorships, funding support for OSI2016 and OSI2017 taken together, which has totaled $303,000 ($136,000 in 2017 and $167,000 in 2016) has been roughly evenly divided between these main four sources—publishers (26%), UNESCO (24%), participants (24%) and foundations (23%). OSI will endeavor to avoid having any single stakeholder group provide an outsize share of support on an ongoing basis, but annual fluctuations are going to be unavoidable.

The following tables shows the income and expense totals and sources for OSI2017.

OSI2017 INCOME	TOTAL
UNESCO	$25,000
Foundations	
Doris Duke Charitable Foundation	$25,000
Alfred P. Sloan Foundation	$20,000
Commercial publishers	
Elsevier	$20,000
Nature Publishing Group	$10,000
Wiley	$10,000
Sage Publications	$5,000
Taylor & Francis	$5,000
Participant fees (most @ $500 ea)	$15,375
Private donations	$300
Total income	***$135,675***

OSI2017 EXPENSES	TOTAL
Credit card transaction fees (@19.80 each)	$700
Transportation (buses and shuttles)	$1,551
Campus-related	
Meeting room rental charges	$25,240
Catering on Wed & Thurs (lunch plus breaks)	$16,248
Friday morning meeting spot	$29,606
Event videography & photography	$2,219
Delegate scholarships (support for travel/lodging)	$24,000
Conference hotel-related	
Catering minimum	$8,003
Additional meeting rooms	$750
Subsidy ($x/guest/night)	$1,000
Management fees and travel (SCI)	$20,865
Registration fee refunds	$2,000
Signage	
Misc extras (name tags, yard signs, OSI welcome)	$685
Misc printing (pens, jackets, stickies, folders)	$2,808
Total expenses	***$135,675***

In other bookkeeping matters, about 75 new members were added to the OSI list in 2016 and 2017. Retention on the list remains strong. In our annual membership survey, 99% of listserv members asked to stay on the list. This is similar to last year when 98% of listserv members stayed on (four dropped off due to retirement). In terms of engagement, while a number of participants have periodically expressed frustration with the listserv's volume (although there is significant seasonal ebb and flow), over 65% are fine with receiving every message as it is sent. About 35% would like to change to a "digest" format where they receive just one email summary per day.

The current premise of OSI is that it will endeavor to enroll participants by quota according to the table below. Our actual enrollment totals are close to these numbers in most groups but not exact—especially at annual meetings where we have less control over who is able to attend. OSI added two stakeholder groups in 2017, bringing the total to 18 groups.

STAKEHOLDER GROUP	PERCENT OF OSI DELEGATES	TARGET NO. OF OSI DELEGATES (OF 380)	SUMMIT REPS (25)
1. Research universities	35%	133	7
2. Commercial publishers	10%	38	2
3. Scholarly societies and society publishers	5%	19	1
4. Non-university research institutions and publishers	5%	19	1
5. Open knowledge groups and "born-open" publishers	5%	19	1
6. University presses and library publishers	5%	19	1
7. Government policy organizations	5%	19	1
8. Funders, public and private	5%	19	1
9. Scholarly libraries and library groups	5%	19	1
10. Broad faculty and education groups	5%	19	1
11. Tech industry	5%	19	1
12. Scholarly research infrastructure groups	5%	19	1
13. Other universities and colleges	5%	19	1
14. Scholarly communications and publishing industry experts	Up to 20 per meeting	20+	1
15. Active researchers and academic authors	Up to 20 per meeting	20+	1
16. Scholarly journal editors	Up to 10 per meeting	10+	1
17. Journalists	Up to 10 per meeting	10+	1
18. Elected officials	Up to 10 per meeting	10+	1

ANNEXES

Several annexes are included with this report, including the OSI2017 conference program, the OSI2016-17 action plan, the OSI governance plan, tutorials developed for the 2016 meeting and circulated again in advance of the 2017 meeting, and manuscript versions of the workgroup and stakeholder group reports prepared by OSI2017 participants. Final versions of the OSI2017 papers will be posted soon on the OSI website and also the Mason Press website (Mason Press is in charge of editing and formatting manuscripts, which were all submitted over the summer months between

May and July). Videos of workgroup and stakeholder group presentations are posted on OSI's YouTube channel, which can be linked to from the top of the OSI website.

MORE INFORMATION

For more information about OSI, please email nSCI/OSI director Glenn Hampson at ghampson@nationalscience.org. You can also visit the OSI website at osinitiative.org. The National Science Communication Institute (nSCI) is the parent body of OSI. The goal of nSCI is to change the culture of communication *inside* science. Other nSCI projects related to OSI include the All-Scholarship Repository (ASR), the Science Communication Network and the Science Communication PhD program. Funding for OSI and these other efforts flows through nSCI with no overhead. nSCI is a 501c3 tax-exempt nonprofit charity registered in Washington State (EIN 27-4690007). For more information about nSCI, please visit nationalscience.org.

ANNEXES

1. OSI2017 program
2. OSI2016-2017 report synergies
3. OSI governance proposal
4. OSI2016-17 action plan
5. OSI2016-17 tutorials
6. OSI2017 workgroup reports (manuscripts)
7. OSI2017 stakeholder group reports (manuscripts)
8. OSI presentation to SciELO
9. OSI participants

ANNEX 1: OSI2017 PROGRAM

The following version of the OSI2017 program has been modified from the original version distributed at the OSI2017 conference. In this version, participant email addresses have been removed. Also, the full OSI participant list has been moved from this program to the final annex of this OSI2017 report.

OSI2017

Contents

WELCOME TO

OSI2017

THE OPEN SCHOLARSHIP INITIATIVE

On behalf of the OSI2017 organizing committee, welcome to the second annual meeting of the global Open Scholarship Initiative! This is an important year in OSI's history as we begin the transition from building a broad community to building broad networks and policies for improving the future of scholarly communications. This is a unique effort—the only one of its kind which brings together so many leaders from so many different stakeholder groups, all united in common cause to work together on the vital challenges in this space. Thank you again for being part of this effort and for attending this important meeting.

OSI was created by the National Science Communication Institute (nSCI), and is being managed by nSCI in long-term partnership with UNESCO (the United Nations Educational, Scientific, and Cultural Organization). Our host for the first OSI conference (OSI2016) was George Mason University. This year, we are grateful to George Washington University for hosting our annual meeting. Special thanks goes out to Geneva Henry, GW's Dean of Libraries and Academic Innovation, Robin Delaloye, the Director of Communications & Outreach for GW Libraries, and to GW's events, AV, and catering teams.

Thank you as well to the OSI2017 planning team which has wrestled with the many issues related to this event since June of last year—in particular Scott Plutchak, Joyce Ogburn, Dee Magnoni, Joann Delenick, Bryan Alexander, Eric Olson, Claudia Holland, John Warren and Rick Anderson for their frequent help sorting through all the details of OSI and OSI2017. And we are grateful as well to the staff of the One Washington Circle hotel and the Ritz-Carlton DC for their help and support planning this event.

Finally of course, we owe a tremendous debt of gratitude to the organizations that provided the financial support to make this year's meeting even possible: UNESCO, the Doris Duke Charitable Fund, the Alfred P. Sloan Foundation, Elsevier, Wiley, Springer Nature, Sage Publications, and Taylor & Francis, with in-kind support from nSCI.* Thank you!

So that's it! Good luck, have fun, and here's to a productive, successful and enjoyable week, and to working together to achieve our shared goals for OSI2017 and beyond.

Sincerely,

Glenn Hampson
OSI Program Director

United Nations Educational, Scientific and Cultural Organization

DORIS DUKE CHARITABLE FOUNDATION

Alfred P. Sloan FOUNDATION

ELSEVIER

SPRINGER NATURE

WILEY

SAGE

Taylor & Francis Group
an informa business

nSCI

*The conclusions reached or positions taken by this conference represent the views of OSI2016 and not those of our sponsors, or their trustees, officers, or staff.

OSI2017 Schedule

Tuesday April 18

6:00-9:00 PM	One Wash. Circle		Circle Bistro	Dinner & registration

Wednesday April 19

8:30-9:00 AM	GWU Marvin Center	Grand Ballroom	Delegate registration	
9:00-10:00 AM		Grand Ballroom	Breakfast & welcome	
10:00-10:15 AM		Grand Ballroom	Coffee break	
10:15 AM-12:00 PM		Meeting rooms	Workgroup meeting 1	See workgroup section
12:00-1:30 PM		Grand Ballroom	Lunch	
1:30-3:00 PM		Meeting rooms	Workgroup meeting 2	
3:00-3:30 PM		Grand Ballroom	Coffee break	
3:30-5:30 PM		Meeting rooms	Stakeholder meeting 1	See stakeholder section
5:30 PM			Adjourn	See DC Guide for ideas

Thursday April 20

8:30-8:45 AM	GWU Marvin Center	Grand Ballroom	Delegate registration	
8:45-9:45 AM		Grand Ballroom	Breakfast & meeting	Full group meets
9:45-10:00 AM		Grand Ballroom	Coffee break	Submit fast-pitch ideas
10:00-10:45 AM		Meeting rooms	Workgroup mix + summit	See note 1, below
10:55 A-11:40 PM		Meeting rooms	Stakeholder mix + summit	See note 2, below
11:45 A-12:15 PM		Meeting rooms	Stakeholder mini-meeting	See note 3, below
12:15-1:30 PM		Grand Ballroom	Lunch	
1:30-3:00 PM		Meeting rooms	Workgroup meeting 3	
3:00-3:30 PM		Grand Ballroom	Coffee break	
3:30-5:30 PM		Grand Ballroom	Workgroup presentations	
5:30 PM			Adjourn	See DC Guide for ideas

Friday April 21

7:30-7:45 AM	Ritz-Carlton DC	Salon 2	Late delegate registration	
7:45-10:00 AM			Breakfast & stakeholder presentations	Plus summit group report & extra workgroup Q&A
10:00-10:20 AM			Coffee break	
10:20-11:45 AM			Full-group meeting	Votes, open-mic, fast-pitch
11:45 A-12:00 PM			Closing remarks	
12:00-1:30 PM			Adjourn & lunch	
1:00 PM & 2:30 PM	One Wash. Circle		Buses leave for airports	See transportation page

Notes:

1. Summit reps meet. All other delegates (except 2 per group) go to workgroup meetings of their choice.
2. Summit reps continue meeting (if desired). All other delegates (except 2 per group) go to stakeholder meetings of their choice.
3. Stakeholders return to original groups for a brief wrap-up to consider new ideas and modifications.

OSI2017 **Format & goals**

1. **OSI2017 meeting format**
2. **OSI2017 goals**
3. **OSI's approach**
4. **OSI's methods**

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1. OSI2017 meeting format

Last year's meeting format was designed to introduce this stakeholder community to new people and perspectives and to help harness everyone's collective goodwill, experience and energy to begin creating a better future for scholarly publishing. To the extent we can, this year's format will begin nudging this group toward making decisions and detailed action plans. Whether we can do this on the fly or first need create more decision mechanisms remains to be seen. OSI is a 10-year effort so we weren't expecting to fly out of year one at full throttle. However, this year our collective expectations for actionable outputs are higher.

To this end, like OSI2016, OSI2017 will still be workgroup-centric, but 2017 workgroups will for the most part build on the work started by 2016 delegates. There will also be more full group discussion and debate at the 2017 meeting, as well as stakeholder group meetings, meetings of the "OSI summit group" (which is explained in the stakeholder section of this program), and opportunities to wander more between workgroups.

2. OSI2017 goals

Exactly what is OSI advocating? It's open—not particular open agendas or specific solutions (yet), but a robust, realistic, sustainable framework for moving open forward, which means being able to discuss issues and options as a community, collaborate on efforts, and adapt solutions and approaches the community can get behind and help grow. The OSI2016 report wanders into the weeds a bit more about what OSI is trying to accomplish and why, and also describes what OSI2016 was able to accomplish. Specifically, the goal of OSI as described in this report, is "to build a sustainable, robust framework for direct communication and cooperation among nations, universities, researchers, publishers, funding organizations, scholarly societies, libraries, policy makers, and other scholarly publishing stakeholders, in order to shape the future of scholarly communication, beginning with scholarly publishing and the issues that surround it, to support a climate for finding common understanding and workable solutions and to help this stakeholder community move toward these solutions together." The eventual outcomes of this effort will include:

- Achieving open goals faster and on a more predictable trajectory by bringing all stakeholders to the same side of the table to push together toward their common goals (while continuing to work out their differences on tangential issues),
- Creating multiple platforms for working on scholarly communication improvements together as a broad stakeholder community (these platforms will expand as OSI's ability to collaborate and communicate increases),
- Increasing the efficiency and effectiveness of stakeholders by facilitating the development of a common roadmap of goals, policies, and standards in scholarly communication, and

- In the end, increasing the amount of science information available to the world and the number of people who can access this information.

3. OSI's approach

Apart from annual meetings and reports, how exactly does this group plan to achieve these lofty outcomes? The short answer is not in one step. Because the OSI community is coming at this issue from so many different directions, the best strategy for encouraging more open is to acknowledge and value where each stakeholder group is in the process and then figure out what course adjustments can be made to the system to continue to expand open and what assistance this community can offer—new incentives, coordinated policies, collaboration efforts, formal partnerships, new studies, pilot products, expanded perceptions, and so on—to help flip to a more open mindset going forward and thereby accelerate the growth rate of open publishing and also increase the volume of scholarship available in open format.

As the OSI2016 report notes, "No single actor in a multi-stakeholder system like this can enact system-wide change unilaterally; a mechanism for collaborative action needs to exist but it doesn't currently exist in scholarly communication on a broad scale." Therefore, OSI has been designed to work on this change collaboratively and deliberatively, in a way that involves input from all stakeholders in the scholarly communications community, and always with an acute awareness that the new world of scholarly communications being designed needs to be accepted by the research community and be of benefit to this community, needs to work in every country, institution and field of study, and needs to be reliable and effective over the long term.

It is at these intersections of idealism and reality, of open knowledge and intellectual property, and of politics and policy that OSI's most important work will be done—-determining the best balance point between embargoes and immediate release, designing data repositories that scientists actually want and will use, curbing the unintended consequences of publish or perish without dismissing the importance of publishing in academia, improving access to scholarship for underserved regions of the world without unintentionally making the access problem worse, and more.

The OSI report notes that scholarly communication is changing and that this change presents opportunities and challenges. Some of the change that is happening involves shaking up the current system to utilize publishing tools and approaches that may be better suited to an Internet-based information world. But not all current and needed changes fall into this category. Indeed, some of the most needed changes do not. The general guidelines for action as defined by the OSI2016 group are therefore as follows (with the specific recommendations contained in workgroup reports):

- We don't have a clear, coordinated action plan for improving open. What needs to happen today, tomorrow and the day after? Who are the actors, what are the mileposts, what are the likely impacts, and how do we measure success? (Note that these concerns don't necessary suggest that OSI itself should create and evaluate specific programs of work. Rather, this is a commentary on the need for OSI to identify what it can do and how it will operate, and then farther down the road, what kinds of synergies OSI can encourage.)
- Some change will need to involve reforming the communications culture inside academia, where old publishing methods, measures and perceptions can drive author choices and be used

as proxies for merit when evaluating grant awards and tenure decisions. And some will need to involve examining our own biases that publishing is a binary proposition involving either open or closed, subscription or APC-based, right or wrong. Open, impact, author choices, peer review and other key concepts all exhibit a range of values. Identifying non-binary measures for some of these values (as proposed by several workgroups) may be helpful insofar as allowing stakeholders to focus on improving areas most in need of change and comparing progress and best practices across disciplines, institutions, publishing approaches, funders and so on.

- Any widespread change is going to require a widespread effort. There are simply too many stakeholders with different interests and perspectives who influence different decision points. No single stakeholder or group will be able to affect this kind of change unilaterally.
- How do we make these reforms in response to the needs and concerns of authors rather than in spite of authors (authors are not a homogenous group with common interests or opinions, of course, but there was some sense among delegates that reform efforts could be better attuned to what authors needed)?
- How do we make changes across disciplines (which have different needs) and that also effectively build on the efforts of the many stakeholders in this space?
- How do we reform the system without losing its benefits?
- How do we move from simply repairing dysfunction to creating a more ideal publishing world and reaping the benefits that such a world could provide in terms of participation, efficacy, efficiency, and discovery?
- Developing standards and norms would be helpful as we move forward, as well as answers to a number of key questions.

4. OSI's methods

The two most important communication instruments OSI has been using in this process so far are:

1. **Listserv conversations**. The OSI listserv was a robust tool in 2016 for tossing around ideas and will continue to play an important role in 2017. When engaging in this forum, delegates try to abide by a code of conduct that respects that everyone in OSI is committed to working on scholarly communication issues together. As members of this select group, the role of delegates is to contribute facts, share perspectives and experiences, and to the extent possible, help bridge the gap with fellow OSI colleagues by trying to see the big picture, find common ground, propose new solutions, and debate ideas. "What if" and "why not" discussions will be increasingly important in 2017.
2. **Workgroups**. OSI2017 will have 12 different workgroups focusing on a wide variety of issues such as needed studies, peer review, impact factors, and underserved populations. Workgroup members are the sherpas who guide OSI through particular issues and challenges and recommend solutions for consideration. Last year, OSI2016 delegates worked exclusively with one workgroup team to come up with the papers published on the OSI website at http://osinitiative.org/2016-outputs/. These papers were an opening volley of cross-stakeholder group collaboration and hit on familiar points in some sections, and broke new ground in others. The next phase of workgroup recommendations will begin to combine analysis with consensus and action plans for full-group consideration. Participating in workgroups is an opportunity open to all OSI members and not just meeting delegates.

Other communication instruments may evolve over the coming year (the OSI2016 group talked about forming tiger teams, for instance—maybe geographically close groups of delegates who could talk about OSI at meetings and institutions), but for now, the listserv and workgroups are OSI's two main drivers for action.

Going forward, OSI planning groups have put forward a draft governance plan which will be discussed at the upcoming meeting. Also to be discussed will be the strategic recommendations from OSI2016 delegates to create a united front for OSI by taking actions such as:

1. Sign a statement of purpose affirming that all OSI delegates are working toward a common goal of making research information more accessible. A draft of this statement was prepared last year but the general sentiment was that most people weren't quite ready to take this step.
2. Endorse a pluralistic approach to these challenges. OSI doesn't necessarily need to endorse a specific solution, for instance. Rather, it would help as a first step to simply acknowledge that many solutions exist on the same open spectrum and that we're all working toward the same end goal of more openness. By embracing all of these efforts, taking credit for them as a community, and then continuing to onboard new ideas and efforts, we can energize this space and make it a safer place for others to join. There are innovation advantages to this approach as well— to having a pluralistic approach, that is. As many delegates have noted, we're not entirely positive which way is up right now and having a broad approach will allow the market to find the best solutions—not all gold, or all green, but somewhere in between. Second, few universities have wanted to be the first to pioneer new forms of scholarly communication—kudos to Harvard and others for taking the risks here. But over time (as Susan Fitzpatrick has noted), few universities will want to be the last to adopt a new all-encompassing ethos of open we're promoting, with an array of stable and well-populated pathways that all tilt toward open, and that over time can continue to tilt more in this direction as policies and practices evolve. If we can push this approach to a critical mass of acceptance, it can reach a tipping point (as Ivy Anderson has mentioned) where it clearly makes sense to participate—where the benefits of participation clearly outweigh the risks.
3. Endorse a collaborative approach. Change the tenor of this effort to one where we're all working together instead of at cross-purposes.
4. Keep building the case for open (it's not as strong as it needs to be to convince skeptical policy makers) by supporting and/or conducting studies, and otherwise trying to improve the evidentiary base.
5. Lay the foundation for a common vocabulary. For instance, help ensure that funding rules don't discriminate against any of a rainbow of open options and are consistently applied internationally, and make sure we're all talking about the same thing (OA still means different things to different people, even when a definition of open is included in a glossary).
6. Find inroads to reforming systemic issues, from the commoditization of PhDs to publishing fraud to publish or perish hysteria and a hundred other issues in between.
7. Formally get behind appropriate efforts and enhance working relationships with other groups in this space so we can collaborate on efforts and strengthen our approach and outcomes.

OSI2017

Instructions

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1. The OSI workgroup process

1. **OSI's goal.** The goal of the Open Scholarship Initiative is to create an effective, robust framework for discussion and collaborative action between a diverse array of stakeholder groups in scholarly communications and publishing.
2. **Workgroup composition and assignments**. Delegates have been divided into 12 workgroups this year (plus one at-large group) which will focus on 12 different issues scholarly communications and publishing. The composition of these workgroups is balanced and diverse in order to incorporate a broad range of stakeholder perspectives and experiences and also encourage the development of new ideas and approaches.
3. **Keep an open mind.** The perspectives you share at this meeting can be your individual thoughts as well as official institutional perspectives. Stated another way, while many of you are the top executives at your institutions, or have the blessings of your top executives to speak and act in an official capacity, you need not feel that you are only representing an official point of view or that what you say necessarily commits your organization to a particular point of view or follow-up action. This is an opportunity for you to speak freely amongst your peers and search for common ground and new ideas. Keep an open mind, worry less about selling solutions than trying to see the big picture, and be open to the possibility that your views may shift and evolve over the course of this event.
4. **Approaching your workgroup questions**. The touch points of your workgroup deliberations should be to: (1) Quickly summarize the issue and the various perspectives involved (please refer to and build off of the work done by OSI2016 delegates as much as possible and appropriate), (2) In more detail, describe areas of general agreement and disagreement between stakeholders and the knowledge, perspective and/or policy gaps that may be powering these different viewpoints, and very importantly this year (3) Propose a set of specific actions or outcomes that can balance the needs and interests of all stakeholders (or a mechanism for finding solutions or bridging gaps). Also describe the challenges your proposal faces and how these can be addressed in a realistic and collaborative way (for instance, by linking together existing efforts with a similar focus).
5. **Operational details**. Each workgroup will meet several times on Wednesday and Thursday, April 19th and 20th for several hours of face-to-face conversations. These meetings will be generously interspersed with meals and breaks. Each team will be responsible for putting together a 5-minute slide presentation at the end of the day on 4/20 for the full group's consideration. Teams are also tasked with submitting a brief summary paper within four weeks of the end of the conference.

2. The OSI stakeholder group process

1. **OSI's goal.** The goal of the Open Scholarship Initiative is to create an effective, robust framework for discussion and collaborative action between a diverse array of stakeholder groups in scholarly communications and publishing. Stakeholder meetings provide a unique opportunity for stakeholder representatives to talk amongst themselves and discuss what they are willing to do together to support OSI and/or the goals of OSI.
2. **Group composition and assignments**. All delegates have been assigned to one of 18 different stakeholder groups (and have had an opportunity to review and change their stakeholder assignments). We acknowledge that at the career level of most OSI delegates, these distinctions are somewhat arbitrary—a number of delegates have been both publishers and researchers, for instance, or both library and government policy officials. Also, not all groups are equally represented at this meeting—delegates are more evenly distributed (by quota) in the full OSI group, but who is able to attend the meetings is subject to different influences beyond our control. Funders, for example, will be under-represented at OSI2017 and may not be able to meet as a full group. A separate online meeting for groups unable to meet will be considered. Delegates without a stakeholder group meeting will be invited to listen in on other meetings of their choice.
3. **Keep an open mind.** Obviously, simply belonging to the same stakeholder group doesn't guarantee the same outlook. Delegates are encouraged to speak freely, look for common ground, and build bridges with an eye toward figuring out how to work together to advance OSI and/or the goals of OSI.
4. **Approaching your stakeholder group discussion**. Similar to the approach of the issue workgroups, the touch points of your stakeholder group deliberations should be to: (1) Quickly summarize the various perspectives involved with regard to open, (2) In more detail, describe areas of general agreement and disagreement between stakeholders and the issues and questions that may be powering these different viewpoints, and (3) Propose a set of specific actions or outcomes that can balance the needs and interests of all members of your group (or a mechanism for finding solutions or bridging gaps). Also describe the challenges your proposal faces and how these can be addressed in a realistic and collaborative way.
5. **Operational details**. Stakeholder groups will meet on Thursday, April 20th. Each group of three or more members will be responsible for putting together a 5-minute slide presentation for Friday morning, 4/21, for the full group's consideration. Groups are also tasked with submitting a brief summary paper within four weeks of the end of the conference.

3. Facilitation

Each workgroup can decide on the organizational structure that works best for it. At least one person from each group should familiarize themselves with the OSI facilitation guide in order to help the group get through rough spots and stay on track as needed. However, these individuals won't necessarily be your group's conversation leaders. Give your group an opportunity to find its own equilibrium without sticking to Robert's Rules or some other strict code. The goal of this meeting is to talk openly and honestly about difficult subjects, expand your perspectives, and still come up with tangible outputs as outlined above.

If you want to refer to the facilitation training slides for ideas and guidance (including ideas about what to tackle in each workgroup session), you can find these on the OSI website at http://osinitiative.org/wp-content/uploads/2017/04/OSI-Facilitation-reference-2017.pptx. In general, to get started, introduce yourself and your connection to your workgroup challenge. Also, establish some basic ground rules for discussion, which may be as simple as agreeing to be respectful, not interrupting when someone is speaking, and making sure that everyone participates. Also, workgroup conversations should be kept inside the room in order to encourage people to be open and honest and to respect the process in which you are engaged.

4. Chatham House rules

Last year, OSI0216 delegates proposed using Chatham House Rules for group conversations, which basically means that until your workgroup and stakeholder group reports become public, you can say what was talked about, but you can't say who said what. What we want to avoid in these small conversations is having anyone live-Tweeting that so-and-so just said this and that, which will quickly sink your group into silence. Your discussions should be embraced as opportunities to speak frankly and privately. Then, as you wrap up your group meetings, you'll be able to put your names behind reports and ideas as you see fit, and these final reports will be presented to the full group and made public (late Thursday and early Friday), and THEN you can tweet away.

5. Technology use

1. You can use your laptop during workgroup sessions—writing, slides, research, etc. Each room will have a projector and screen.
2. You can check your email whenever you'd like (note that you'll also have morning and afternoon breaks, plus long breakfasts, lunches and dinners)
3. You can step out from your workgroup as needed to handle urgent business
4. No one will be monitoring your use of cell phones and such.

6. Reporting requirements

Each team will be responsible for putting together two 5-minute slide presentations for the full group's consideration. Workgroup presentations will be made on Thursday afternoon (with the order determined by hat draw). Stakeholder group presentations will be made on Friday morning. Teams will need to select a member of their group to make each presentation. Teams are also tasked with submitting a written paper within four weeks of the end of the conference. Teams should take notes and collaborate accordingly and circulate a paper for review and comment while everyone's recollection of this event is fresh. The final papers will be posted online for public comment and used as the basis for further discussion and action (as warranted).

OSI2017

Workgroups

1. **Meeting locations**
2. **Meeting times**
3. **Workgroup questions**
4. **Delegates by workgroup**

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1. Meeting Locations

All meeting locations on Wednesday and Thursday are at the Marvin Center on the GWU campus.

Workgroup	Wednesday 4/19	Thursday 4/20
Impact factors	Room 401	same
Global flip & other studies	Room 309	same
Standards, norms & best practices	Room 405	same
Funding models	Room 301	same
Institutional repositories	Room 407	same
Peer review	Room 413	same
Culture of communication	Room 308	same
Promotion & tenure reform	Room 413	same
Underserved populations	Room 310	same
Patent literature & other info	Room 311	same
HSS scholars & scientists	Room 302	same
Rogue solutions & new resources	Room 403	same
At-large	Ballroom (anywhere)	Room 307

Please also note that three meeting rooms have been reserved in the One Washington Circle hotel for Thursday night from 6-9 p.m.—the Meridian, Crescent, and Zenith rooms (which hold 65, 45, and 30 people respectively). These rooms are available on a first come, first served basis for any groups that want extra time and space to continue their discussions and/or prepare for Friday presentations.

2. Meeting Times

Day	Time	Workgroup Meeting
Wed April 19	10:15 AM-12:00 PM	1
	1:30-3:00 PM	2
Thurs April 20	10:00-10:45 AM	3 (mix)
	1:30-3:00 PM	4

3. Workgroup Questions

Impact factors

Following up on recommendations from OSI2016, this team will dig deeper into the question of developing and recommending new tools to repair or replace the journal impact factor (and/or how it is used), and propose actions the OSI community can take between now and the next meeting. What's needed? What change is realistic and how will we get there from here?

Global flip & other studies

Following up on the research ideas proposed by OSI2016 delegates, this workgroup will create broad action plans for a variety of studies, beginning with the global flip, moving next to embargos, and also including publisher services disaggregation and an assessment of open impacts if possible—how fast, how even, systemic pressures and so on (referencing the OSI2016 workgroup papers on these various topics). Detailed study protocols aren't expected, but rather an outline of what to prioritize, and how to conduct this work without necessarily relying on large grants from neutral parties. With regard to the global flip, this research is needed to help answer the question of whether a flip using APC's is the right model to pursue (given concerns, for instance, about how this might affect access in the global south).

Standards, norms & best practices

What standards, norms, best practices, exit strategies, and incentive systems does the world of scholarly communications need? What is the future ideal? What will it take (including studies or pilots) to develop a better understanding of how the scholarly communication system works now? This workgroup will also necessarily touch on norms and definitions, so will include discussions as warranted about open and impact spectrums as covered in OSI2016.

Funding models

Following up on a proposal from OSI2016, this workgroup will identify and/or design new funding models for open, such as a venture fund that can allow more support for joint efforts, or propose ways to improve existing funding by improving the flexibility of library budgets (e.g., by examining the efficiency of "big deals").

Institutional repositories

Building on the findings of OSI2016's preservation, repositories and mandates workgroup, this workgroup will propose a way forward for repository and infrastructure solutions—detailing what's needed before action can be taken, what this action should look like, what actors should be involved, and so on.

OSI2017 Workgroups

Peer review

Building on the peer review workgroup's proposals from OSI2016, this workgroup will develop a broader and clearer description of peer review that takes into account the different needs for different stages of review, as well as discuss possibly emerging issues such as the need to promote uniform interpretation and enforcement of peer review definitions, and will develop proposals for moving forward.

Culture of communication

Following a common thread from throughout OSI2016, this workgroup will develop partnership proposals for this community to work together to improve the culture of communication inside academia, particularly inside research. As part of this effort, it may be important to clarify messaging with regard to the benefits and impacts of open—and/or determine what resources and information are needed before this messaging work can be done effectively (including proving the benefits of open to a skeptical research community, addressing the many concerns involved, explaining the pros and cons, and making the case for why this is worth the trouble).

Promotion & tenure reform

Following a common thread that ran throughout OSI2016, this workgroup will discuss promotion and tenure reform, developing a widely-accepted and inclusive model (or a path to a model) that stakeholder partners can use to help reduce the influence of journal publishing on promotion and tenure decisions and help make these decisions broader, more transparent, and less reliant on publishing and impact factor measures. Note that this group is not trying to remove publishing from tenure decisions—just break the feedback loop that is fueling undesirable outcomes in scholarly publishing, academia, and grant funding.

Underserved populations & information underload

A new issue for OSI2017, this workgroup will focus on the unique challenges faced by the global south, the global diversity of scholarly communication, and the different issues, challenges and opportunities in both underserved regions of the world and underserved segments (like small colleges and small research firms). This group will also follow up on the information underload issue explored in OSI2016 (specific to research).

Patent literature

As a new issue for OSI2017, this workgroup will look at patent literature, research reports, databases and other published information. OSI by design has a university-centric and journal-centric bias to the perspectives being considered. Patent literature, research reports, and databases are also important sources of research information—more so than journals in some disciplines (although these still reference journal articles). As with journal articles, this information isn't always free or easy to find and is suffering from some of the same usability issues as journal articles.

HSS scholars & scientists

What are the unique needs and concerns of HSS scholars in this conversation? What are the unique needs and concerns of scientists (particularly in health/medicine)? This workgroup will recommend approaches and solutions to scholarly communications reform that work for both groups—a challenging assignment but important since common-ground conversations are what the research community is missing.

Rogue solutions & new open resources

What are the impacts of Sci-Hub and other rogue solutions on open access and what is the future of this approach, which may be gaining new mainstream support (noting for instance Wellcome's recent funding of ResearchGate)? What new resources should the scholarly community develop (and how) that would be useful and legal additions to our progress toward open (a new blacklist for instance, or new repositories)? This group will also integrate (to the extent possible) ideas raised by the information overload workgroup from OSI2016.

4. Delegates by workgroup

The tables below and on the following page list OSI2017 delegates by workgroup assignment. For a complete list of OSI2017 delegates and their email addresses, see the directory section of this program. A complete list of the names and titles of all OSI delegates is also included in the directory. For a list of delegates by stakeholder group, please see the stakeholder section of this program.

At-large
Brad Fenwick
Mangala Sharma
Jason Schmitt
Geneva Henry
John Dove
Scott Plutchak
Stephanie Westcott
Michael Forster
John Warren

Culture of communication
Louise Page
Mary Yess
Jason Steinhauer
Barbara DeFelice
Rachael Samberg
Eric Olson
Susan Haigh
Barrett Matthews
Leslie Reynolds
Dan Morgan

Funding models
Michael Zentner
Carrie Calder
Alex Kohls
Celeste Feather
Christine Stamison
Karla Cosgriff
Kris Bishop
Nick Lindsay

Global flip & other studies
Caroline Sutton
Wim Van der Stelt
Colleen Campbell
Ralf Schimmer
Kamran Naim
Eric Archambault
Roy Kaufman
Krista Cox
Megan Wacha
Lorcan Dempsey

HSS & scientists
Aimee Nixon
Concetta Seminara
William Gunn
Joan Lippincott
Keith Yamamoto
Annie Johnson
Shira Eller
Diane Scott-Lichter

Impact factors
Eric Brown
Todd Carpenter
Ali Andalibi
Suzie Allard
Patty Baskin
Marilyn Billings
Stephanie Orfano
Brian Selzer

OSI2017 Workgroups

Patent lit	Joann Delenick
	Donald Guy
	Patrick Herron
	Joyce Ogburn
	Denise Stephens
	Crispin Taylor
	Larue Haak

Peer review	Lorena Barba
	Ann Gabriel
	Richard Price
	Nancy Davenport
	Mark Newton
	Lacey Earle
	Abel Packer

Institutional repositories	Dave Ross
	Andrew Tein
	Geraldine Clement-Stoneham
	Michele Woods
	Jake Orlowitz
	Najko Jahn
	Terri Fishel
	Catherine Mitchell
	William Simpson

Rogue & OA resources	Paul Peters
	Tom Reller
	Bryan Alexander
	Hillary Corbett
	Christopher Erdmann
	Meg Oakley
	Nancy Gwinn
	Lars Bjørnshauge

Standards	Brianna Schofield
	David Mellor
	Michelle Gluck
	Adrian Ho
	Martin Kalfatovic
	Howard Ratner
	Emma Wilson

Tenure reform	Amy Jessen-Marshall
	Holly Falk-Krzesinski
	Cheryl Ball
	Stacy Konikel
	Sheree Crosby
	Kim Barrett
	Jessica Clemons

Underserved	Talmesha Richards
	Bhanu Neupane
	Williams Nwagwu
	Sioux Cumming
	Richard Gedye
	Margaret Winker
	Susan Murray
	Helena Asamoah-Hassan

OSI2017

Stakeholders

1. **Meeting locations**
2. **Meeting times**
3. **Stakeholder representation**
4. **Stakeholder group voting**
5. **Delegates by stakeholder group**

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1. Meeting Locations

All meeting locations on Wednesday and Thursday are at the Marvin Center on the GWU campus.

Stakeholder group	Wednesday 4/19	Thursday 4/20
Commercial publishers	Room 301	Room 301
Open knowledge groups and "born-open" publishers	Room 302	Room 302
Summit reps	No meeting	Room 307
Scholarly libraries and library groups	Room 308	Room 308
Scholarly communications and publishing industry experts	Room 309	Room 309
Scholarly societies and society publishers	Room 310	Room 310
Scholarly journal editors	Room 311	Room 311
Other universities and colleges	No meeting	Room 400
Broad faculty groups & education groups	Room 401	Room 401
Funders	No meeting	Room 402
Research universities	Room 403	Room 403
Active researchers and academic authors	No meeting	Room 404
Non-university research institutions	Room 405	Room 405
Government policy organizations	Room 407	Room 407
Scholarly research infrastructure groups	Room 413	Room 413
University and library publishers	Room 414	Room 414

Please also note that three meeting rooms have been reserved in the One Washington Circle hotel for Thursday night from 6-9 p.m.—the Meridian, Crescent, and Zenith rooms (which hold 65, 45, and 30 people respectively). These rooms are available on a first come, first served basis for any groups that want extra time and space to continue their discussions and/or prepare for Friday presentations.

2. Meeting Times

Day	Time	Workgroup Meeting
Wed April 19	3:30-5:30 PM	1
Thurs April 20	10:55-11:40 AM	2 (mix)
	11:45 A-12:15 PM	3 (mini)

3. Stakeholder representation

Article 4: Membership & representation [from draft OSI governance guidelines]

It is vital that the scholarly publishing stakeholder community works together to build OSI, and views this effort as a collective investment—of time, money, intellect, effort, and goodwill—in order to ensure that OSI develops in a sustainable manner, and is both representative of and responsive to this community. To this end, OSI membership guidelines are key:

4.1. **Quotas**. Because OSI aims to be a representative body, the OSI annual meetings will endeavor to include proportional representation from the stakeholder groups defined below (recognizing that OSI may in reality be unable to successfully recruit enough members from each group).

Stakeholder group (percent of OSI delegates)

Stakeholder group	Percent of OSI delegates	Summit reps (25)
1. Research universities	35% (of 20 reps from 1-13)	7
2. Commercial publishers	10%	2
3. Scholarly societies and society publishers	5%	1
4. Non-university research institutions and publishers	5%	1
5. Open knowledge groups and “born-open” publishers	5%	1
6. University presses and library publishers	5%	1
7. Government policy organizations	5%	1
8. Funders, public and private	5%	1
9. Scholarly libraries and library groups	5%	1
10. Broad faculty and education groups	5%	1
11. Tech industry	5%	1
12. Scholarly research infrastructure groups	5%	1
13. Other universities and colleges	5%	1
14. Scholarly communications and publishing industry experts	Up to 20 per meeting	1
15. Active researchers and academic authors	Up to 20 per meeting	1
16. Scholarly journal editors	Up to 10 per meeting	1
17. Journalists	Up to 10 per meeting	1
18. Elected officials	Up to 10 per meeting	1

a. **Election or appointment mechanism**. There is no formal mechanism for appointing members and delegates to OSI. Stakeholders are free to decide who their members should be in cases where clear stakeholder groups exist. Where such groups don’t exist, the OSI program director with guidance from OSI members will attempt to identify the appropriate nominees, and these people are free to reassign their appointment to colleagues.
b. **Balance**. The OSI group will grow and change over time as more members are added, and as former members drop out. OSI management will monitor the composition of this group and report to OSI members on an annual basis. While this group balance may possibly have some affect on listserv conversations, it will not affect strategic decisions due to the bicameral structure of OSI as described herein (whereby both the full membership and the current summit group—which will maintain proportional representation—need to approve any changes in OSI’s strategic direction originating from outside the OSI management structure).

4. Stakeholder group voting

Article 3: Authority [from draft OSI governance guidelines]

3.3. Deliberative structure. OSI members will utilize a G20 model for discussions and consensus-building to ensure that this effort doesn't seek out majority-rules solutions that can't be enforced (since OSI agreements are voluntary; see Article 6), but instead, actual consensus solutions that are built on common ground and can be widely implemented.

a. **Sherpas**. OSI workgroup members will serve as sherpas in this effort, thoroughly researching and preparing agreements for consideration by the OSI summit group.
b. **Summit group**. The OSI summit group will consider the agreements presented by workgroups, and then deliberate, revise as needed, and prepare policy statements for action to agencies and institutions (in a manner as yet to be determined; it is possible that the OSI group will also want to ratify these agreements by majority vote).
    1. **Summit representatives**. Members from each stakeholder group will be elected by OSI members to serve in the OSI summit group.
        i. **Numbers.** The summit group will consist of 25 OSI members. The number of members from each stakeholder group who are elected to serve as part of the summit group will be based on the quota percentages described in table 4.1 below. For instance, research universities will be entitled to seven summit representatives (35% of 20 from the "core" stakeholder groups of 1-13) while businesses will have one summit representative (5% of 20).
        ii. **Qualifications**. Candidates for representative must be OSI members at the time of voting.
        iii. **Voting**. OSI members from a given stakeholder group can vote only for their group's representatives. The OSI program director shall divide delegates into groups and will seek input about these assignments from the OSI members before voting occurs.
        iv. **Provisional group.** The first summit group representatives will be elected by their peers at OSI2017. This group will serve as OSI's provisional summit group until they decide on a permanent form for electing OSI summit reps.

Please note that the provisional summit group members you elect will meet on Thursday for at least one group meeting and will also present on Friday morning. At minimum, the one item on this group's agenda will be to revise and recommend for approval a draft version of the OSI governance guidelines (starting from the current draft). What this group decides to do beyond this agenda item is entirely up to the group.

5. Delegates by stakeholder group

The table below and on the following page lists OSI2017 delegates by stakeholder group. Delegates have self-assigned into these groups. For a complete list of OSI2017 delegates and their email addresses, see the directory section of this program. A complete list of the names and titles of all OSI delegates is also included in the directory. For a list of delegates by workgroup, please see the workgroup section of this program.

Active researchers & authors	Michael Zentner
	Joann Delenick
	Lorena Barba
Broad faculty & education groups	Brianna Schofield
	Amy Jessen-Marshall
	Talmesha Richards
Commercial publishers	Brad Fenwick
	Carrie Calder
	Caroline Sutton
	Wim Van der Stelt
	Aimee Nixon
	Concetta Seminara
	William Gunn
	Ann Gabriel
	Dave Ross
	Andrew Tein
	Paul Peters
	Tom Reller
	Holly Falk-Krzesinski
Government policy	Mangala Sharma
	Michele Woods
	Bhanu Neupane
Non-university research	Alex Kohls
	Colleen Campbell
	Ralf Schimmer
	Eric Brown
	Todd Carpenter
	Donald Guy
	Williams Nwagwu

Open knowledge groups	Louise Page
	Mary Yess
	Jason Steinhauer
	Kamran Naim
	Joan Lippincott
	Richard Price
	Jake Orlowitz
	David Mellor
	Cheryl Ball
	Stacy Konikel
	Sioux Cumming
Research universities	Geneva Henry
	Barbara DeFelice
	Keith Yamamoto
	Ali Andalibi
	Patrick Herron
	Joyce Ogburn
	Nancy Davenport
	Mark Newton
	Michelle Gluck
Scholcomm & publishing experts	John Dove
	Scott Plutchak
	Stephanie Westcott
	Rachael Samberg
	Eric Olson
	Eric Archambault
	Roy Kaufman
	Annie Johnson
	Suzie Allard
	Lacey Earle
	Najko Jahn
	Bryan Alexander
	Hillary Corbett
	Christopher Erdmann
	Adrian Ho
	Sheree Crosby
	Richard Gedye

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Stakeholders

Journal editors	Patty Baskin
	Abel Packer
	Kim Barrett
	Margaret Winker
	Susan Murray
Scholarly libraries & groups	Susan Haigh
	Barrett Matthews
	Leslie Reynolds
	Celeste Feather
	Christine Stamison
	Krista Cox
	Megan Wacha
	Lorcan Dempsey
	Shira Eller
	Marilyn Billings
	Stephanie Orfano
	Denise Stephens
	Terri Fishel
	Catherine Mitchell
	Meg Oakley
	Nancy Gwinn
	William Simpson
	Martin Kalfatovic
	Jessica Clemons
	Helena Asamoah-Hassan

Funders	Geraldine Clement-Stoneham
Other universities	Jason Schmitt
Infrastructure	Lars Bjørnshauge
	Laure Haak
	Howard Ratner
Scholarly societies	Michael Forster
	Karla Cosgriff
	Kris Bishop
	Diane Scott-Lichter
	Brian Selzer
	Crispin Taylor
	Emma Wilson
University & library publishers	John Warren
	Dan Morgan
	Nick Lindsay

OSI2017

Directory

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1. OSI2017 delegates

The following OSI delegates (listed here alphabetically by first name) confirmed they will be attending OSI2017. At the time of the printing of this program, not all delegates in this list have been assigned to a workgroup or stakeholder group and therefore aren't listed in these particular sections of the program.

OSI2017 delegate	Current title & institution	Email address
Abel Packer	Co-founder and director, SciELO	
Adrian Ho	Director of Digital Scholarship, University of Kentucky Libraries	
Aimee Nixon	Head of Open Access Publishing, Emerald	
Alexander Kohls	SCOAP3 Operation Manager, CERN	
Ali Andalibi	Associate Dean of Research, Science, George Mason University	
Amy Jessen-Marshall	Vice President Integrative Learning and the Global Commons, AACU	
Andrew Tein	Vice President, International Government Partnerships, Wiley	
Ann Gabriel	Vice President Global Academic & Research Relations, Elsevier	
Annie Johnson	Library Publishing and Scholarly Communications Specialist, Temple University	
Barbara DeFelice	Program Director, Scholarly Communication, Copyright, and Publishing, Dartmouth	
Barrett Matthews	Copyright & Scholarly Agreements Specialist, GWU	
Bhanu Neupane	Program Manager, UNESCO	
Brad Fenwick	Senior Vice President, Elsevier	
Brian Selzer	Assistant Director of Publications, American Public Health Association	
Brianna Schofield	Executive Director, Authors Alliance	
Bryan Alexander	President, Bryan Alexander Consulting	
Caroline Sutton	Head of Open Scholarship Development, Taylor & Francis	
Carrie Calder	Director, Business Operations & Policy, Springer Nature	
Catherine Mitchell	President, Library Publishing Coalition and Director, Access & Publishing Group, California Digital Library	
Celeste Feather	Senior Director of Licensing and Strategic Partnerships, Lyrasis	
Cheryl Ball	Director, Digital Publishing Institute, West Virginia University	
Christine Stamison	Director, NorthEast Research Libraries Consortium	
Christopher Erdmann	Chief Strategist for Research Collaboration, NCSU Libraries	

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Colleen Campbell	Director, OA2020 Partner Development, Max Planck Digital Library
Concetta Seminara	Editorial Director, Social Science & Humanities Journals, Routledge/Taylor & Francis
Crispin Taylor	CEO, American Society of Plant Biologists
Dan Morgan	Digital Science Publisher, University of California Press
Dave Ross	Executive Director, Open Access, SAGE Publishing
David Mellor	Project Manager, Journal and Funder Initiatives, Center for Open Science
Denise Stephens	University Librarian, UC Santa Barbara
Diane Scott-Lichter	Sr. Vice President, Publishing, American College of Physicians; Chair, AAP/PSP Executive Committee
Donald Guy	Manager, Research Collaboration & Library Services, Sandia National Labs
Donna Scheeder	President, IFLA
Emma Wilson	Director of Publishing, Royal Society of Chemistry
Eric Archambault	President and CEO, 1science
Eric Brown	Division Leader, Explosive Science and Shock Physics, Los Alamos National Laboratory
Eric Olson	Outreach coordinator, PressForward Institute
Geneva Henry	Dean of Libraries and Academic Innovation, George Washington University
Geraldine Clement-Stoneham	Knowledge and Information Manager, Medical Research Council, RCUK
Glenorchy Campbell	Managing Director, BMJ North America
Helena Asamoah-Hassan	Executive Director, African Library and Information Associations (AfLIA)
Hillary Corbett	Director of Scholarly Communication & Digital Publishing, Northeastern University
Holly Falk-Krzesinski	Vice President for Strategic Alliances in Global Academic Relations, *Elsevier*
Howard Ratner	Executive Director, CHORUS
Jake Orlowitz	Head of The Wikipedia Library, Wikimedia Foundation
Jason Schmitt	Associate Professor Communication & Media, Clarkson University
Jason Steinhauer	Director, Lepage Center for History in the Public Interest, Villanova University
Jessica Clemons	Associate University Librarian for Research Education and Outreach, SUNY-Buffalo
Joan Lippincott	Associate Executive Director, Coalition for Networked Information
Joann Delenick	Scientist, biocurator
John Dove	Library and publishing consultant
John Warren	Head, Mason Publishing Group, George Mason University
Joyce Ogburn	Digital Strategies and Partnerships Librarian, Appalachian State University

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Kamran Naim	Lead Researcher, Open Access Cooperative Study, Stanford University; Strategic Development Manager, Annual Reviews
Karla Cosgriff	Director of Advancement, *Free the Science*, The Electrochemical Society
Keith Yamamoto	Vice Chancellor for Science Policy and Strategy, Vice Dean for Research, School of Medicine, and Professor of Cellular and Molecular Pharmacology, University of California San Francisco
Kim Barrett	Distinguished Professor of Medicine and Editor-in-Chief, The Journal of Physiology
Kris Bishop	Product Manager, American Association for the Advancement of Science (AAAS)/Science Family of Journals
Krista Cox	Director of Public Policy Initiatives, ARL
Lacey Earle	Vice President of Business Development, Cabell's
Lars Bjørnshauge	Founder and Managing Director, DOAJ
Laure Haak	Executive Director, ORCID
Leslie Reynolds	Senior Associate Dean of Libraries, University of Colorado Boulder
Lorcan Dempsey	Vice President of Membership & Research and Chief Strategist, OCLC
Lorena Barba	Associate Professor of Mechanical and Aerospace Engineering, GWU
Louise Page	Publisher, PLOS
Mangala Sharma	Program Director, Office of International Science and Engineering, National Science Foundation
Margaret Winker	Secretary, World Association of Medical Editors
Marilyn Billings	Scholarly Communication & Special Initiatives Librarian, UMass Amherst
Mark Newton	Director of Digital Scholarship, Columbia University Libraries
Martin Kalfatovic	Associate Director, Smithsonian Libraries
Mary Yess	Deputy Executive Director & Chief Content Officer, The Electrochemical Society
Meg Oakley	Director of Copyright & Scholarly Communications, Georgetown
Megan Wacha	Scholarly Communications Librarian, City University of New York
Michael Eisen	Co-Founder, PLOS and Professor of Genetics, Genomics and Development, U Cal Berkeley
Michael Forster	Managing Director, IEEE Publications
Michael Zentner	Senior Research Scientist, Network for Computational Nanotechnology, Purdue
Michele Woods	Director of the Copyright Law Division, World Intellectual Property Organization (WIPO)
Michelle Gluck	Associate General Counsel, George Washington University
Najko Janh	Scholarly Communication Analyst, University of Gottingen
Nancy Davenport	University Librarian, American University

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Nancy Gwinn	Director, Smithsonian Institution Libraries
Nancy Weiss	General Counsel, US IMLS
Nick Lindsay	Journals Director, The MIT Press
Patrick Herron	Senior Research Scientist for Information Science + Studies, Duke University
Patty Baskin	President, Council of Science Editors (CSE) and Executive Editor, Neurology Journals
Paul Peters	CEO, Hindawi
Peter Berkery	Executive Director, Association of American University Presses
Rachael Samberg	Scholarly Communication Officer, UC Berkeley
Ralf Schimmer	Head of Scientific Information Provision, Max Planck Digital Library
Richard Gedye	Director of Outreach Programmes, STM and Publisher Coordinator, Research4Life
Richard Price	Founder and CEO, academia.edu
Richard Wellons	Program Manager, Grants Resource Center, AASCU
Robert Miller	CEO and Executive Director, Lyrasis
Roger Schonfeld	Director, Library and Scholarly Communication Program, Ithaka S+R
Roy Kaufman	Managing Director, New Ventures, CCC
Scott Plutchak	Director of Digital Data Curation Strategies, UAB
Sheree Crosby	VP of Global Marketing, Cabell's
Shira Eller	Art & Design Librarian, GWU
Sioux Cumming	Programme Manager Journals Online, INASP
Stacy Konikel	Director of Research and Education, Altmetric.com
Stephanie Orfano	Head of Scholarly Communications, University of Toronto
Stephanie Westcott	Research Assistant Professor, Roy Rosenzweig Center for History and New Media, George Mason University
Steve Sayre	Director of Publishing, Ecological Society of America
Susan Haigh	Executive Director, Canadian Associate of Research Libraries
Susan Murray	Director, African Journals Online
Suzie Allard	Associate Dean for Research and Director, Center for Information & Communication Studies, U of Tennessee
Talmesha Richards	Chief Academic and Diversity Officer, STEMConnector
Terri Fishel	Library Director, Macalester College
Todd Carpenter	Executive Director, NISO
Tom Reller	Vice President Global Corporate Relations, Elsevier
William Gunn	Director of Scholarly Communications, Elsevier
William Simpson	Associate Librarian and Institutional Repository Librarian, University of Delaware
Williams Nwagwu	Head of Knowledge Management, Council for the Development of Social Science Research in Africa (CODESRIA)
Wim Van der Stelt	EVP Strategic Relations, SpringerNature

OSI2017 Transportation

OSI2017 shuttle bus schedule

The OSI2017 conference will provide shuttle bus service to local airports following the close of this event on Friday. If you need to reach the drivers, please contact Reston Limo at 703-478-0500.

Day	Departure time	Departure location	Destination	Notes
Fri 4/21	1:00 PM	Outside One Washington Circle hotel	Dulles airport	30-person shuttle bus
	1:00 PM	Outside One Washington Circle hotel	Reagan airport	30-person shuttle bus. Blue line metro (across the street) also runs to the airport.
Fri 4/21	2:30 PM	Outside One Washington Circle hotel	Dulles airport	20-person shuttle bus
	2:30 PM	Outside One Washington Circle hotel	Reagan airport	20-person shuttle bus. Blue line metro (across the street) also runs to the airport.

Parking & taxis

- **GWU campus parking:** https://www.gwu.edu/foggy-bottom-campus
- **One Washington Circle parking:** On-site parking is available for guests at $42/night
- **Taxi**: Orange cab, 202-832-0436

OSI2017 Maps & wifi

Key conference locations

Opening reception site and hotel for most OSI delegates	Main conference site, located about three blocks southeast of the One Washington Circle	Closing day site, located about one block northeast of the One Washington Circle
The One Washington Circle Hotel 1 Washington Circle NW Washington, DC 20037 Tel: 202-872-1680 www.thecirclehotel.com esimmons@modushotelsdc.com	George Washington University Marvin Center 800 21st Street NW (corner of 21st & H) Washington, DC 20052 www.gwu.edu	The Ritz-Carlton DC 1150 22nd Street NW Washington, DC 20037 Tel: 202-835-0500 www.ritzcarlton.com/ en/hotels/washington-dc/dc

Google maps

Campus wireless access

Select "GWconnect" from your list of available networks. Then open a web browser. You should be automatically redirected to the GWconnect page but if you aren't, try going to gwu.edu to trigger the redirection. On the GWconnect page, look for the "if you are a guest of the university" section. Click on "click here to request or reset credentials." Fill in the form accepting GW's terms of use. Click "register" to submit. You will receive an email with your temporary username and password. Enter these and log in. Campus wifi access is good for 72 hours.

OSI2017 Phone & email

Emergencies

Dial 911

One Washington Circle hotel

Elizabeth Simmons
esimmons@modushotelsdc.com
Tel: 202-872-1680

Buses and taxis

Reston Limo (conference buses): 703-478-0500
Orange cab taxi: 202-832-0436

Conference contact

Glenn Hampson
National Science Communication Institute
2320 N 137th Street
Seattle, WA 98133 USA
Tel: 206-417-3607 (Pacific time zone)
Cell: 206-457-7248
Email: ghampson@nationalscience.org

ANNEX 2: OSI2016-17 SYNERGIES

Table 1: Estimate of inbound connections <u>by topic</u> between OSI2016 and OSI2017 reports

	Culture of communication (OSI2017 workgroup)	Funding (OSI2017 workgroup)	Studies (OSI2017 workgroup)	HSS & science (OSI2017 workgroup)	Impact factors (OSI2017 workgroup)	Open IP (OSI2017 workgroup)	Peer review (OSI2017 workgroup)	Institutional repositories (OSI2017 workgroup)	Rogue solutions (OSI2017 workgroup)	Standards (OSI2017 workgroup)	Promotion & tenure (OSI2017 workgroup)	Underserved (OSI2017 workgroup)	Summit (OSI2017 stakeholder group)	Infrastructure (OSI2017 stakeholder group)	Journal editors (OSI2017 stakeholder group)	Libraries (OSI2017 stakeholder group)	Open knowledge groups (OSI2017 stakeholder group)	Commercial publishers (OSI2017 stakeholder group)	Research universities (OSI2017 stakeholder group)	Scholarly communication experts (OSI2017 stakeholder	Scholarly societies (OSI2017 stakeholder group)	Evolving open (OSI2016 workgroup)	What Is publishing? (OSI2016 workgroup)	What is open? (OSI2016 workgroup)	Who decides? (OSI2016 workgroup)	Moral dimensions (OSI2016 workgroup)	Usage dimensions (OSI2016 workgroup)	Open impacts (OSI2016 workgroup)	Participation (OSI2016 workgroup)	Overload (OSI2016 workgroup)	Preservation (OSI2016 workgroup)	Peer review (OSI2016 workgroup)	Embargos (OSI2016 workgroup)	Impact factors (OSI2016 workgroup)	At-large (OSI2016 workgroup)
Culture of communication (OSI2017 workgroup)			x																					x											
Funding (OSI2017 workgroup)	x		x																			x													
Studies (OSI2017 workgroup)	x																						x		x			x				x		
HSS & science (OSI2017 workgroup)	x	x																										x							
Impact factors (OSI2017 workgroup)	x																							x	x								x		
Open IP (OSI2017 workgroup)										x	x			x										x											
Peer review (OSI2017 workgroup)			x																				x												
Institutional repositories (OSI2017 workgroup)	x		x																													x			
Rogue solutions (OSI2017 workgroup)	x																					x													
Standards (OSI2017 workgroup)	x																							x											
Promotion & tenure (OSI2017 workgroup)	x		x																			x													
Underserved (OSI2017 workgroup)									x	x																					x					
Infrastructure (OSI2017 stakeholder group)									x			x																			x					
Journal editors (OSI2017 stakeholder group)										x		x		x																	x					
Libraries (OSI2017 stakeholder group)					x			x			x												x													
Open knowledge groups (OSI2017 stakeholder group)		x																					x	x	x										
Commercial publishers (OSI2017 stakeholder group)															x	x	x		x		x		x												
Research universities (OSI2017 stakeholder group)	x										x					x														x					
Scholarly comm. experts (OSI2017 stakeholder group)	x		x							x		x			x	x	x	x			x			x						x					
Scholarly societies (OSI2017 stakeholder group)		x																						x		x									
Summit (OSI2017 stakeholder group)																																			x
Evolving open (OSI2016 workgroup)	x	x	x							x				x																					
What Is publishing? (OSI2016 workgroup)	x		x								x							x																	
What is open? (OSI2016 workgroup)																																			
Who decides? (OSI2016 workgroup)			x								x																								
Moral dimensions (OSI2016 workgroup)						x																													
Usage dimensions (OSI2016 workgroup)			x																																
Open impacts (OSI2016 workgroup)			x																																
Participation (OSI2016 workgroup)	x		x																																
Overload (OSI2016 workgroup)						x																													
Preservation (OSI2016 workgroup)																																			
Peer review (OSI2016 workgroup)			x																																
Embargos (OSI2016 workgroup)			x																																
Impact factors (OSI2016 workgroup)										x																									
TOTAL INBOUND CONNECTIONS	**13**	**4**	**14**	**0**	**1**	**2**	**0**	**1**	**2**	**6**	**5**	**3**	**0**	**3**	**2**	**3**	**2**	**2**	**1**	**0**	**2**	**5**	**6**	**5**	**3**	**0**	**0**	**1**	**3**	**3**	**1**	**0**	**1**	**1**	**1**

Table 2: Estimate of inbound connections <u>by strategy</u> between OSI2016 and OSI2017 reports

	Studies and information-gathering	Experimentation and piloting	Coordination and collaboration	High-level policy development meetings	Outreach, marketing and advocacy	New tools and programs	Resource base (website)	OSI as fulcrum, convener or catalyst	Incentives, recognition and rewards	Standards, best practices and common solutions	Endorse solutions, measures and approaches	Negotiation between all stakeholder groups	Pursue systemic or cultural changes	Financial sustainability for open	More engagement (globally, researchers, etc.)
Culture of communication (OSI2017 workgroup)	x		x	x	x	x	x	x	x						
Funding (OSI2017 workgroup)	x		x			x			x						
Studies (OSI2017 workgroup)	x		x			x	x								
HSS & science (OSI2017 workgroup)	x						x			x					
Impact factors (OSI2017 workgroup)	x		x		x		x								
Open IP (OSI2017 workgroup)			x		x			x		x					
Peer review (OSI2017 workgroup)		x	x							x					
Institutional repositories (OSI2017 workgroup)	x		x	x											
Rogue solutions (OSI2017 workgroup)	x														
Standards (OSI2017 workgroup)			x		x					x	x				
Promotion & tenure (OSI2017 workgroup)	x	x	x	x	x										
Underserved (OSI2017 workgroup)				x	x	x	x			x					
Infrastructure (OSI2017 stakeholder group)	x		x									x			
Journal editors (OSI2017 stakeholder group)	x		x	x	x	x	x			x		x	x		x
Libraries (OSI2017 stakeholder group)		x	x		x						x				
Open knowledge groups (OSI2017 stakeholder group)	x		x		x					x				x	
Commercial publishers (OSI2017 stakeholder group)														x	x
Research universities (OSI2017 stakeholder group)		x				x		x							
Scholarly communication experts (OSI2017 stakeholder group)						x				x					x
Scholarly societies (OSI2017 stakeholder group)		x	x		x				x					x	
Summit (OSI2017 stakeholder group)															
Evolving open (OSI2016 workgroup)	x		x	x	x		x	x							
What Is publishing? (OSI2016 workgroup)	x	x											x		
What is open? (OSI2016 workgroup)					x					x	x				
Who decides? (OSI2016 workgroup)	x	x						x			x				
Moral dimensions (OSI2016 workgroup)		x													
Usage dimensions (OSI2016 workgroup)							x			x					
Open impacts (OSI2016 workgroup)	x														
Participation (OSI2016 workgroup)	x				x	x			x				x		
Overload (OSI2016 workgroup)					x	x								x	
Preservation (OSI2016 workgroup)			x	x		x		x			x			x	
Peer review (OSI2016 workgroup)	x	x									x				
Embargos (OSI2016 workgroup)	x														
Impact factors (OSI2016 workgroup)						x	x				x				
TOTAL INBOUND CONNECTIONS	**18**	**9**	**16**	**7**	**14**	**11**	**9**	**6**	**4**	**10**	**7**	**2**	**3**	**5**	**3**

Table 3: Estimate of overlapping connections <u>of topics and strategies</u> for OSI2016 and OSI2017 reports

	Studies and information gathering	Coordination and collaboration	Outreach, marketing & advocacy	New tools & programs	Standards, best practices & common solutions	Experimentation & piloting	Resource base (website)
Studies	X	X		X			X
Culture of communication	X		X	X			X
Standards		X	X		X		
What is publishing?	X					X	
Promotion & tenure	X	X	X			X	
Evolving open	X	X	X				X
What is open?			X		X		X

ANNEX 3: GOVERNANCE PROPOSAL

Proposed on 11/2/16 for adoption by OSI members
Revised on 11/16/16 and 4/5/17 based on feedback from OSI members
Final version presented to OSI2017 delegates on 4/18/17
Revised (simplified) version emailed to OSI2018 planning group on 6/30/17
New revised version incorporates recommendations from planning group, 7/5/17
New revised 2, incorporates more simplifications and recommendations, 7/21/17

Preamble

The principles and practices of scholarly communication are critical to the advancement of research and research knowledge. OSI's mission is to build a robust framework for communication, coordination and cooperation among all nations and stakeholders in order to: improve scholarly communication; find common understanding and just, achievable, sustainable, inclusive solutions; and to work collectively toward these solutions that increase the amount of research information available to the world, as well as the number of people who can access this information regardless of location or financial capability. The guiding principles of OSI are to involve the entire stakeholder community in a collaborative effort; to value all stakeholder voices and perspectives; to thoughtfully consider the consequences of all approaches; to coordinate and collaborate on developing joint solutions and efforts; and to pursue and continue refining solutions over time to ensure their implementation, effectiveness, and success.

Definitions

- nSCI: The National Science Communication Institute, a 501c3 non-profit charity.
- OSI: The Open Scholarship Initiative, created and presently managed by nSCI.
- OSI management: The OSI program director, any staff reporting to the director, and any oversight above the director from nSCI or UNESCO.
- OSI member: An individual who belongs to the OSI listserv.
- OSI summit group: An advisory group for OSI comprised of OSI members.
- UNESCO: The United Nations Educational, Scientific and Cultural Organization.

Article 1: Goals

The goals and priorities of OSI are defined by OSI management, the OSI summit group (defined below), and members of OSI subject to the provisions described herein.

Article 2: Mechanisms

The mechanisms for achieving OSI's goals will vary and evolve over time, including but not limited to online conversations and annual meetings.

Article 3: Authority

OSI relies on participation and feedback from OSI members to ensure that the focus and priorities of OSI's activities reflect the focus and priorities of the broad stakeholder community in scholarly communication and scholarly publishing.

3.1. Stewardship. Until such time and unless otherwise desired by OSI members, the stewardship responsibility for this effort will rest with the National Science Communication Institute (nSCI). The nSCI executive director appoints the program director for OSI, subject to such considerations that nSCI may deem appropriate (such as consultation with OSI member and the nSCI board).

a. **OSI program director**. The OSI program director is responsible for hiring program staff, raising funds, managing all other aspects of OSI, and making all final decisions regarding the operation and financing of OSI, in consultation with partners as they may exist over time on strategic matters and with thorough and careful consideration given to input provided by the OSI summit group. The OSI program director reports to and is overseen by nSCI (as described above).

3.2. Consultation. On all matters related to the content and substance of OSI, the OSI program director shall work together with OSI members and the OSI summit group to produce programs, products, position papers and more, which accurately reflect the sense of the OSI community. The OSI program director shall solicit and consider advice and feedback provided by the OSI members and summit group to the fullest extent practicable where the director deems this information to be helpful and/or necessary. This advice is crucial for the proper functioning of OSI but it is not binding—there shall be no mechanism, for instance, compelling the program director to adopt measures by majority vote of the members (in order to protect OSI from imbalance that may occur as a result of member recruitment over time, or member engagement).

a. **OSI members.** OSI members shall work together on a variety of scholcomm projects and discuss matters with each other on the OSI listserv, at annual OSI meetings, and through other channels. They will be informally consulted as warranted (in the judgement of OSI management or the OSI summit group) for feedback on OSI-related matters.
    1. **Appointment.** OSI management will attempt to identify individuals who should become OSI members and will reach out to these individuals as needed on an ongoing basis.
    2. **Balance.** See Article 4: Member representation.
    3. **Rights and authority**. All OSI members have the same right to participate in OSI listserv conversations, make recommendations to the OSI summit group, offer advice and perspective to OSI management, participate in OSI projects and efforts, and other activities not otherwise described herein.
    4. **Tenure**. OSI members will opt-in annually to reaffirm their commitment to participate in OSI.

b. **OSI summit group**. A committee of OSI members known as the OSI summit group will be empowered to revise (as needed) the proposals developed by conference workgroups and other OSI members and groups, and to prepare agreements and action plans built on these proposals after first consulting with relevant workgroups, member groups, and

the full OSI group. The summit group will also be empowered to recommend changes to the OSI governance guidelines or other OSI materials.

1. Details on how the summit group shall operate and be elected will be added to this document as an amendment by the summit group itself.
2. The first summit group will be appointed by the OSI director. Members of this first group will serve until an election process is determined for future OSI summit groups.

Article 4: Member representation

It is vital that the scholarly publishing stakeholder community works together to build OSI, and views this effort as a collective investment—of time, money, intellect, effort, and goodwill—in order to ensure that OSI develops in a sustainable manner, and is both representative of and responsive to this community. To this end, including a broad array of perspectives in OSI is important. OSI will strive to ensure that listserv membership, annual meeting attendance, and summit group composition reflect this variety in rough proportion to the goals and quotas defined annually by the OSI summit group and reviewed by the OSI membership (noting that group definitions and numbers are going to be continually refined over time as OSI's outreach and understanding grows).

Article 5: Sponsors, partners & hosts

OSI sponsors, partners and hosts (as defined below) receive no special privileges or consideration in terms of agenda items or favorable decisions—only increased visibility from sponsorship acknowledgements. Sponsorship and funding decisions that may be problematic will be referred to the OSI summit group for advice.

5.1 **Sponsors and funders**. OSI may be supported by sponsors and funders over time, including individuals, universities, companies and government organizations.

5.2 **Partners**. Some OSI sponsors and funders will be deemed "partners" on the basis of their financial support or project involvement at the discretion of OSI management.

5.3 **Hosts**. Hosts will most often be universities. Hosting OSI meetings gives institutions a unique opportunity to showcase work and involve individuals (in the case of universities, these might be administrators, researchers, faculty, staff and students) beyond what would be possible as a meeting participant. Hosts may also be granted certain privileges with regard to participating in planning meetings, and may also be considered partners in some cases.

Article 6: Legal commitments

There are no legal commitments involved in participating in OSI as an individual member, institution, summit group member, supporter, or any other capacity, except for the OSI program director, who is legally bound to this effort through the contracts that are signed for its funding and for program-related needs and activities.

Article 7: Durability

As long as the National Science Communication Institute is entrusted with this effort, nSCI will ensure the long-term durability of OSI and its products and assets at a minimum through calendar year 2025, barring any other management arrangements that OSI members choose through the mechanism described herein.

Article 8: Transparency

All records related to OSI (apart from private communications and the unique reports filed to sponsors so requesting) will be available for public review from nSCI until 2026. If another entity assumes responsibility for OSI (or if OSI becomes its own entity), this responsibility for transparency will be required to endure.

ANNEX 4: OSI2016-17 ACTION PLAN

Step	Description	Timeline	Status
1	Publish OSI2016 outcomes	Spring and summer 2016	Done
2	Outreach	Summer 2016	Step 1 done, step 2 pending
3	Start inviting delegates to OSI2017	Summer 2016	Step 1 done, other steps pending
4	Quick wins	October 2016	Pending
5	OSI2017 workgroups and focus areas	Fall 2016	Pending
6	OSI2017 meeting schedule	Winter 2016	Pending

Step 1: Publish OSI2016 outcomes

1. Finalize the OSI2016 workgroup papers and publish these online.

Step 2: Outreach (Summer 2016)

1. Circulate the OSI2016 papers and summary for comment and feedback.
2. Circulate the official OSI2016 summary report to a variety of stakeholder audiences, and encourage these audiences to share this summary with their institutions and networks for feedback/comment.

Step 3: Start inviting delegates to OSI2017 (Summer 2016)

1. Identify which OSI2016 delegates would like to attend OSI2017 (aim for a 50-75% return rate).
2. Confirm the list of OSI2017 nominees.
3. Determine which audiences and individuals we still need to include. OSI2016 delegates recommended including more authors, researchers, provosts, government policymakers, and international delegates.
    a. Approve the stakeholder quota system proposed in the table below.
    b. With regard to international delegates, determine whether we should attempt to institute some sort of quota system to ensure global representation at the annual meetings (building a larger virtual audience of global representatives might be easier to achieve). Our experience with OSI2016 is that without a significant budget for travel scholarships, attracting a large global audience to meetings is going to be challenging and that because of this, we need to be prepared to better understand the perspectives of global stakeholders and incorporate these perspectives into our

deliberations. Also, it is important to note that since a great deal of scholarly publishing work originates in the US and UK and the majority of publishers are US and UK-based, any global solutions need to realistically weight US and UK perspectives.

Stakeholder group		Percent of OSI delegates
1.	Research universities	20%
2.	Scholarly publishers (university presses, commercial publishers, others)	15%
3.	Non-university research institutions	10%
4.	Government policy organizations	10%
5.	Open knowledge groups	10%
6.	Funders (public and private)	5%
7.	Scholarly library groups	5%
8.	Broad faculty and education groups	5%
9.	Tech industry	5%
10.	Scholarly communications experts	5%
11.	Scholarly societies	5%
12.	Other universities and colleges	5%
13.	Scholarly communications & publishing industry analysts	Up to 20 per meeting
14.	Academic authors	Up to 20 per meeting
15.	Research journalists	Up to 10 per meeting
16.	Elected officials	Up to 10 per meeting

c. With regard to outreach strategies, it has been suggested that we make use of delegate institutions to reach out. For instance, Tee Guidoti has offered to reach out to scientists through Sigma Xi, and the World Bank might be willing to reach out to economics ministers.
d. Announce hotel booking links asap (DC will be filling up next April 21 for World Bank annual meetings)

Step 4: Quick wins (October)

1. Develop OSI governance guidelines for review and approval by the full delegate group.
2. Once 2017 focus points are identified, reach out to stakeholder groups to develop partnerships to move forward on these points
3. Consider where to begin to achieve a few quick wins.
4. Start organizing OSI tiger teams around key issues as warranted. Teams could address their institutions, and also key meetings (to be identified). Once the path forward is defined, we can develop an outreach strategy, and then put together talking points, resource lists, an evidence base, handouts, presentations, press releases and other materials that team members can use in their efforts.

Step 5: OSI2017 workgroups and focus areas (Fall 2016)

OSI2017 workgroups will be formed early so they can begin working—leading various aspects of research or planning, making connections, and/or serving as an advisory board for admin work done by OSI. Workgroups report out to the full delegate assembly at OSI2017. Between now and then, these groups may (as desired):

1. Have email and/or phone conversations and compile threads from previous conversations

2. Map the OSI space and figure out how it relates to their group's needs and goals
3. Expose gaps between what's been proposed and what else is needed, and propose solutions to fill these gaps
4. Develop action plans that address challenges specific to their topic
5. Weigh in on other plans as related to their workgroup topic.

Workgroups will be designed around the following tracks:

Track	Description	Needed	Delegates (250)	Notes
1. Follow-up	Follow up ideas and recommendations drawn from OSI2016 papers, notes and conversations.	To the extent we can start working on these plans now, we will.	Groups of 10-12 delegates	
2. Common threads	What are the common themes that run through a number of presentations?		Groups of 10-12 delegates	
3. New issues	What are the other foundational and emerging issues that weren't covered at the previous meeting?		Groups of 10-12 delegates	For instance, global south, Sci-Hub.
4. Streams	What are the specific needs and goals for specific streams?		Groups of 10-12 delegates	Possible streams: HSS, STM, authors, scientists
5. Plenary (see Annex 4)	OSI2017 will have more opportunities for full-group conversation, and also debating broad agreements.	Between now and OSI2017, the structure and function of this body will need to be prescribed (and approved by the full OSI membership). See Annex for proposal.	One group of 30 elected to an upper body as OSI reps; others are delegates.	The full plenary can also give delegates more opportunity to discuss other full-group issues
6. At-large	Observing and also helping facilitate groups as needed.		About 25	This group will also meet to discuss common themes and recommendations.

With these tracks in mind, and combined with outcomes for the OSI2016 reports (see OSI2016 final report), there would tentatively be 22 workgroups at OSI2017 as follows (noting that this number may change):

Track #	Track description	Workgroup #	Workgroup description
1	Follow-up	1a	Dig deeper in the question of developing new spectrum measures for open
		1b	Dig deeper into the question of developing new spectrum measures for open impact
		2	Dig deeper into the question of developing and recommending new tools to replace the journal impact factor (and recommend possible actions between now and the next meeting)
		3a	Conduct more research (even studies or pilots to the extent possible) that will help identify which publishing services can/should be better handled by others (disaggregated)
		3b	Conduct more research (even studies or pilots to the extent possible) that will help create an evidence base to answer the question of whether subscription revenue is negatively affected by removing post-publication embargoes
		3c	Conduct more research (even studies or pilots to the extent possible) that will help answer the questions of whether a global flip using APC's is the right model to pursue (given concerns about how this might affect access in the global south)

		3d	Conduct more research (even studies or pilots to the extent possible) that will help identify the economic impacts of open
		3e	Conduct more research (even studies or pilots to the extent possible) that will help us develop a better understanding of how the system works now, and then identify scholarly publishing **standards, norms, best practices**, exit strategies, incentive systems, and a future ideal
		4	Identify which scholarly publishing stakeholders can work together on these and other efforts, and how (multiple stakeholders require a convening power)
		5	Develop new funding models, such as a venture fund that can allow more support for joint efforts, or improve the flexibility of library budgets (e.g., by examining the efficiency of "big deals")
		6	Propose radical new repository interoperability and infrastructure solutions
		7	Develop a broader and clearer description of peer review that takes into account the different needs for different stages
		8	Continue exploring solutions to overload/underload (specific to research)
2	Common threads	9	Develop partnership agreements to work together to change the culture of communication inside academia (and as part of this effort, clarify messaging with regard to benefits and impacts of open)
		10	Lay the groundwork for promotion and tenure reform (a framework agreement with stakeholder partners to examine the feedback loop influence of journal publishing in promotion and tenure decisions and make these evaluations broader, more transparent, and less reliant on impact measures)
3	New issues	11	The global south, the global diversity of scholarly communication, and the different issues, challenges and opportunities in underserved regions of the world
		12	Sci-Hub and other rogue solutions (impacts, future)
		13	Patent literature, research reports, databases and other published information. The majority of journal articles come from inside universities even though the majority of researchers are outside universities—so OSI by design has a university-centric and journal-centric bias to the perspectives being considered. Patent literature, research reports, and databases are also important sources of research information—more so than journals in some disciplines (although these still reference journal articles). As with journal articles, this information isn't always free or easy to find and is suffering from some of the same usability issues as journal articles.
4	Streams	14	What are the unique needs and concerns of HSS scholars in this conversation and what can we do to help?
		15	What are the unique needs and concerns of scientists (particularly in health/medicine) in this conversation and what can we do to help?
5	Plenary	16	
6	At-large	17	

Step 6: OSI2017 meeting schedule (Winter 2016)

The following meeting schedule is proposed for OSI2017:

Date	Time	Event
Tues 4/18/17	6:00-9:00 PM	Dinner reception
Wed 4/19/17	8:30-10:00 AM	Breakfast and welcoming remarks
	10:00-10:30 AM	Break
	10:45 AM-12:00 PM	Workgroup meeting 1
	12:15-1:15 PM	Lunch
	1:30-3:00 PM	Workgroup meeting 2
	3:15-3:45 PM	Break
	4:00-6:00 PM	Workgroup meeting 3
	6:15-7:30 PM	Dinner & plenary 1
Thurs 4/20/17	8:30-9:30 AM	Breakfast

	9:45-11:45 AM	Workgroup meeting 4
	12:00-2:30 PM	Lunch & plenary 2
	2:30-3:00 PM	Break
	3:15-6:15 PM	Workgroup presentations
	6:15-7:30 PM	Dinner
Fri 4/21/17	8:30-9:30 AM	Breakfast
	9:30-10:30 AM	Plenary 3
	10:30-10:45 AM	Break
	10:45 A-12:00 PM	Discussion & open mic
	12:00:00 PM	Adjourn
	12:00-1:00 PM	Lunch

Possible schedule changes for consideration:

- This proposed format involves having presentations from 22 workgroups (of 9-10 delegates each) on Thursday night and maybe Friday morning as well. But this is a lot of talking, so maybe we should have just a few groups present and the rest submit reports. Or have no presentations at all and just use this time for group discussion. Or maybe reps from each group should together on the dais for three hours and make "lightning presentations" of 5 minutes each. TBD.
- This proposed format involves offering breakfast for delegates. It has been suggested, though, that this makes it more difficult for delegates to take care of personal and work-related tasks during the conference. Unlike last year, delegates won't need to be bused from the hotel site to campus—the hotel is within walking distance of campus. Therefore, one possible option is to drop the breakfast meeting entirely. Another might be to offer breakfast but expect that many delegates will skip this and instead report directly to their workgroup meeting. TBD. To the extent that we can make the breakfast meeting helpful (and networking itself is helpful), it's not a tremendous additional cost to leave it in there.

ANNEX 5: OSI2016-17 TUTORIALS

Listed below are the educational materials circulated in advance of OSI2016 and OSI2017 and intended to help familiarize OSI delegates with some of the issues and challenges in scholarly communications. OSI participants are not expected to review this information, nor is OSI endorsing the viewpoints expressed herein.

Tutorial 1: Overview of OSI challenge

SHORT VIDEOS (44 minutes total)

- What is open access? There are a wealth of materials that can provide a good overview of the OA landscape, from Peter Suber's seminal 2012 book to the many instructional guides published by university libraries. Every description seemingly has its own focus, though—every advocate and critic can slice and dice these definitions because the concepts involved are nuanced, multifaceted and evolving. At a 10,000-foot level, this short video by Nick Shockey and Jonathan Eisen provides a clear and entertaining take on the fundamental motivations and philosophy behind open access publishing—why it's important and where OA advocates would like to see it go. https://www.youtube.com/watch?v=L5rVH1KGBCY (PhD Comics: Oct 25, 2012)
- What is the role of the publisher in the current model of scholarly publishing? This short video from Elsevier goes over some of the tasks that large publishers manage. This recording was made from a webcast and isn't very high quality, but it does provide a reasonably thorough overview. https://www.youtube.com/watch?v=tItsmn7najc (Elsevier: Sept 12, 2012)
- Scholarship is evolving, as well as public attitudes and expectations toward open information. To embrace these changes, cultural and structural changes are needed in scholarly communication, which will require broad and frank conversations between many stakeholder groups. In this overview by JISC (featuring several OSI2016 delegates), the growing role and importance of open scholarship is described. https://www.youtube.com/watch?v=B-YKZigjHSc (JISC: Oct 20, 2014)
- A free flow of information goes to the heart of science, says OSI2016 delegate and PLOS CEO Elizabeth Marincola. Does free flow need to mean free, or is there a way to reconcile the tension between marketplace and public good? https://www.youtube.com/watch?v=9ztwFtF-lgA (TED: May 7, 2013)
- Famed chemist George Whitesides gives a series of short interviews on science writing and publishing. The single video linked below gives Whiteside's quick take on the changing future of science communication. Also included in this collection of videos are details about the publishing process at the American Chemical Society (optional viewing). https://www.youtube.com/watch?v=NHuC5yZeHYQ&index=15&list=PL6544210348021339 (ACS: April 29, 2011)

REPORTS (to skim)

- Open Science Initiative Working Group. "Mapping the Future of Scholarly Publishing." Feb 2015. Seattle: National Science Communication Institute. http://bit.ly/1DJwRLT. (Note: This report was produced by the OSI team, which includes about a dozen OSI2016 delegates.)
- Mark Ware and Michael Mabe. *The STM Report*. 2015 ed. Oxford: International Association of Scientific, Technical and Medical Publishers. http://www.stm-assoc.org/2015_02_20_STM_Report_2015.pdf. (Note: Michael is an OSI2016 delegate.)
- Jon Tennant and Ross Mounce. "Open Research Glossary." May 2015. Figshare. http://dx.doi.org/10.6084/m9.figshare.1482094
- Martin Paul Eve. Chapter 4 in *Open Access and the Humanities: Contexts, Controversies and the Future*. 2014. Cambridge, UK: Cambridge University Press. http://eprints.lincoln.ac.uk/14775/1/Eve_2014_Open%20Access%20and%20the%20Humanities.pdf. (Note: Martin is an OSI2016 delegate.)

OPTIONAL

- Research Information Network, "Monitoring the Transition to Open Access." Aug 2015. http://www.researchinfonet.org/wp-content/uploads/2015/09/Full-report-FINAL-AS-PUBLISHED.pdf. (Note: As stated in the executive summary of this report, "This study was commissioned in response to a recommendation of the Finch Group in its second report in 2013 that reliable indicators should be gathered on key features of the transition to open access (OA) in the UK.")

Tutorial 2: Overview of scholarly publishing

SHORT VIDEOS (about 65 minutes total)

- Historian Aileen Fyfe from the University of St. Andrews speaks about the past and future of scholarly publishing in her September 2015 keynote address at OASPA. Time index 27:25-45:30 focuses on peer review; the first 27 minutes are a wonderful history of scholarly publishing if you have time, and the Q&A session (to time index 54:24) is also great. https://www.youtube.com/watch?v=6X-AbNMWrmE (Zeeba: Sept 30, 2015)
- What is the role of research libraries and scholarly publishing in supporting the research of tomorrow? This 30 minute video features OSI2016 delegate Catherine Murray-Rust, Vice Provost for Learning Excellence and Dean of Libraries at the Georgia Institute of Technology. Murray-Rust spoke at Elsevier's 2013 Digital Libraries Symposium at ALA Midwinter. http://libraryconnect.elsevier.com/articles/where-research-goes-so-goes-research-libraries-and-scholarly-publishing-catherine-murray (Elsevier: Feb 13, 2013)
- Derek Groen, a lecturer at Brunel University London, speaks to some of the unique perspectives, concerns and ideas that early career academics have regarding scholarly publishing in (you can start at about time index 1:00). https://www.youtube.com/watch?v=L65TG9xZgfY (University College London: Sept 30, 2015)
- In this 9-minute video, Gary Spencer, Associate Director of Product Management in Wiley's Global Research Division, ponders the staying power of the PDF format in scholarly publishing. The presentation includes a brief history of digital publishing, and a look at how PDF and HTML have evolved. In spite of significant usability improvements, rich linking, and supporting information in HTML full-text articles, researchers still choose PDF over HTML 65% of the time. http://exchanges.wiley.com/blog/2013/11/11/can-scholarly-publishing-evolve-beyond-the-pdf/ (Wiley: Nov 11, 2013)

ARTICLES & REPORTS (to browse/skim)

- Diane Harley's 2010 work, "Assessing the Future Landscape of Scholarly Communication: An Exploration of Faculty Values and Needs in Seven Disciplines," gives a great overview of the unique and common challenges of scholarly communication across disciplines. The link that follows is to all portions of Harley's work; the executive summary (about 20 pages long) gives a very adequate overview of this study. http://escholarship.org/uc/cshe_fsc (Berkeley: 2010).
- Harley also takes an exhaustive look at the peer review system (particularly in relation to academic promotion) in "Peer Review in Academic Promotion and Publishing: Its Meaning, Locus, and Future." http://escholarship.org/uc/item/1xv148c8#page-1 (Berkeley: 2011). OSI2016 delegate Mark Ware has also written a wonderful overview of the peer review and journal submission and editing process. http://publishingresearchconsortium.com/index.php/122-prc-guides/prc-guide-peer-review/prc-guide-peer-review-executive-summary/156-executive-summary (Publishing Research Consortium: 2013)
- What is the future of scholarly scientific communication? These proceedings from the Royal Academy's April 2015 conference highlight the ideas of participants (the views expressed in this report do not necessarily represent the views of the Royal Society). https://royalsociety.org/~/media/events/2015/04/FSSC1/FSSC-Report.pdf (Royal Society: April 2015)
- *Nature* ran a very interesting series of articles in a special issue in 2013 focusing on the future of scholarly publishing. http://www.nature.com/news/the-future-of-publishing-a-new-page-1.12665 and http://www.nature.com/news/specials/scipublishing/index.html (Nature: 2013)

OPTIONAL

- In Catherine Murray-Rust's above-linked video, she turns her attention to an ARL scenarios report starting at time index 14:45 and continuing through 22:10, making the case for scenarios as a useful tool for library forecasting, and emphasizing their storytelling and imaginative power. The ARL document describes four very different futures for research, collections, and inquiry. http://www.arl.org/storage/documents/publications/arl-2030-scenarios-users-guide.pdf (ARL: 2010). The ACRL also did scenario planning and produced this document. http://www.ala.org/acrl/sites/ala.org.acrl/files/content/issues/value/futures2025.pdf (ARL: 2005)
- In these proceedings from the National Science Communication Institute's 2013 "Journals & Science" conference, Susanna Priest, Tim Jewell, Jevin West, OSI2016 delegates Robin Champieux and Scott Montgomery, and several other speakers weigh in on a constellation of issues at the intersection of science and publishing, from peer review to tenure to impact factors and more. http://nationalscience.org/news/nsci-news/2013/journals-science-conference-wrap-up/ (National Science Communication Institute: Nov 2013)
- If you would like to browse a curated collection of 100 interesting science communication news stories from 2015, nSCI's feed (http://nationalscience.org/feed/) can give you a quick overview of the current science communication landscape. To drill down into a more comprehensive archive of journal-specific news, go to http://nationalscience.org/tag/journals/; publishing-specific news is located at http://nationalscience.org/tag/publishing/, impact factors are at http://nationalscience.org/tag/impact-factors/, and so on. You can view all stories, categories and article tags at http://nationalscience.org/pages/archives/.

- What do publishers do? This *Scholarly Kitchen* post by Kent Anderson details a few of the contributions (96 to be exact) publishers often make to scholarship beyond their more visible activities like peer review, editing, formatting and printing. http://scholarlykitchen.sspnet.org/2016/02/01/guest-post-kent-anderson-updated-96-things-publishers-do-2016-edition/ (Scholarly Kitchen: Feb 1, 2016).
- A reminder from OSI delegate Judy Luther that The STM Association's 2015 report provides a great primer on scholarly publishing. This report was listed in tutorial 1. http://www.stm-assoc.org/2015_02_20_STM_Report_2015.pdf (STM Assoc: 2015). The executive summary on pages 6-11 of this report provides a quick overview of key aspects of commercial publishing including, business models and versions of articles. On a related note, Judy notes that the STM Association's 2015 Innovations seminar is also worth reviewing, with a focus on the key themes of research reproducibility, cyber security and researcher's reputation management. http://www.stm-assoc.org/events/innovations-seminar-2015/?presentations To access all of the videos from this event, use the "Playlist" button in the top left hand corner of the YouTube video.
- OSI delegate Danny Kingsley notes that "The latest Unlocking Research blog discusses the results of a study done at Cambridge University towards the end of 2013 that looked at how the University could meet the compliance requirements of the RCUK open access policy. Recently the person who led the project, involving in depth interviews and 'shadowing' of academics during their work day, came to speak to members of the libraries at Cambridge and this blog summarises that talk." This blog article notes that "As part of the project the team was looking to see if the University was involved in the publishing process in terms of helping it. However the team found that **there is no contact with the University during the process of research and publishing**. There was no official checkpoint where academics had to tell the University about what they were doing. While there might be a discussion between the person and their supervisor, it is not recorded anywhere." https://unlockingresearch.blog.lib.cam.ac.uk/?p=515 (Cambridge: Feb 1, 2016)

Tutorial 3: Open access

SHORT VIDEOS (about 62 minutes)

- In this 3-minute interview with OSI2016 delegate and UNESCO open access manager Bhanu Neupane, Dr. Neupane describes how an overarching policy on open access is essentially lacking in Latin America and how working together toward open access shouldn't be a competition. https://www.youtube.com/watch?v=TdlwIkeozik (CLACSO: Nov 2015)
- Why open access? This 2-minute promotional video from the Coalition of Open Access Policies (COAPI) gives the high-level pitch for why open access is important. https://www.youtube.com/watch?v=UcXpF8bU714 (COAPI: Oct 2015)
- In this 3-minute video from University College London, UCL researchers discuss why OA is important to them and to their research. http://bit.ly/1Q8GsDq (UCL: Jan 2016)
- In this 2-minute NIH interview with Pieter Dorrestein of UCSD, Dr. Dorrestein describes some of the challenges and promises of open data. https://www.youtube.com/watch?v=WTfYTMT95Qc (NIH: Jul 2015).
- In this 5-minute 2014 interview with OSI2016 delegate Martin Paul Eve, Dr. Eve talks about the open access challenges that are specific to the humanities. https://www.youtube.com/watch?v=PdFuUNdG7Q4 (Cambridge: Nov 2014)
- In this 11-minute presentation at the 2010 4th World Congress on Controversies in Neurology (CONy), Dr. Rudy Castellani takes an interesting "consumer perspective" against open access publishing (Dr. Castellani is a pathologist by training, not a publishing expert,

but he presents a lucid case for a wide range of concerns about OA). http://bit.ly/1oN8I5D (4th World Congress on Controversies in Neurology: 2010).

- What impact would there be on science if everything was published, not just positive results? In this 13-minute TED video, Ben Goldacre suggests that about half of all clinical trials are buried, and positive findings are twice as likely to be published as negative findings. What is the impact of this publication bias on medicine and public health? Is this research misconduct? http://bit.ly/21xqKXp (TED: Jun 2012)
- Why CC-BY? In this 18-minute TED presentation, Creative Commons founder Lawrence Lessig discusses the need for "common sense" in accommodating today's remix culture. http://bit.ly/1jQB4cg (TED: Mar 2007)
- In this 4-minute video, Professor Douglas Kell from the University of Manchester explains the value of CC-BY in chemistry research. http://bit.ly/1Fgbrt4 (University of Manchester: Jan 2015)

ARTICLES & REPORTS (to browse/skim)

- Open access can be an alphabet soup of colors and acronyms. This old but still very useful web page by OA pioneer Peter Suber does a great job of explaining what's what: http://legacy.earlham.edu/~peters/fos/overview.htm (Suber: 2012). For an even better description of OA, download Suber's seminal treatise on this subject (linked below under optional reading).
- How did the modern open access begin? On December 1-2, 2001, the Open Society Foundation's Open Society Institute (OSI) adjourned a meeting in Budapest of leading open access proponents. The goal of this meeting was to see how the many existing open knowledge initiatives could assist one another and how OSI could use its resources to help the cause. What came out of this meeting —the Budapest Open Access Initiative (BOAI)—is what we now recognize as the modern framework for open access in peer reviewed research literature. http://bit.ly/1x4anBg (BOAI: last updated 2012)
- How much open access is out there and how fast is it growing? This study by open access researchers Mikael Laakso and Bo-Christer Björk examines the recent adoption rates for OA. "Of the 1.66 million articles indexed by Scopus in 2011, 11% were published in full immediate OA journals, 0.7% as hybrid OA and 5.2% in journals that have a maximum OA delay of 12 months.Together, these account for almost 17% of the total article volume in the whole index. The figures for articles indexed by Thomson Reuters Web of Knowledge are comparable to those of Scopus, with a total publisher-provided OA rate of 16.2% for 2011." http://bit.ly/1KQHXHk (BioMed Central: Oct 2012)
- Bjork and Laakso also collaborated on this 2014 paper examining the current state of green open access—how widespread it is as a percentage of all published works, as well as the current state of institutional repositories, mandates, and embargo periods. http://bit.ly/1LiVTd2 (Personal archive: 2012)
- "One of the inconvenient truths that the OA movement prefers not to discuss," writes Richard Poynder, "is the fact that a large amount of the content in the circa 4,125 institutional repositories created by research institutions in order to provide open access to their research output is not actually freely available but on 'dark deposit', or otherwise inaccessible. In other words, it is not open access." http://www.richardpoynder.co.uk/Almost-OA.pdf (Richard Poynder: Dec 2015)
- This paper by Raym Crow looks at the income models for open access publishing. It's a little dated (2009), but still a good reference that documents options for the funding of open access. http://bit.ly/24tgfa9 (SPARC: 2009)

- What are some of the assumptions we make about the moral superiority of open access? This article isn't definitive, but it does a good job of summarizing some of the key issues and questions in this discussion. http://bit.ly/1TDVNhB (First Monday: Feb 2010)

OPTIONAL VIEWING

- What is copyright anyway? In this video from the American Chemical Society (which has also produced many other great instructional videos on scholarly publishing), Eric Slater describes what copyright law does and does not cover in scholarly publishing. https://www.youtube.com/watch?v=M793q08cSy0 (ACS: Mar 2013)
- In this 8-minute August 2011 interview, Brewster Kahle describes the goal of universal access to our cultural heritage. The current challenge is establishing the roles, rights, and responsibilities of our libraries and archives in providing public access to this information. http://bit.ly/1n1Zn8k (Democracy Now!: Aug 2011)

OPTIONAL READING

- Peter Suber's seminal 2012 book on open access is an easy read, and the most complete and authoritative description of OA available. http://bit.ly/1OS1LZO (MIT: 2012)
- Making clinical trial data more compete, open and immediate is a goal shared by many open knowledge advocates. But the road will be bumpy—and this is just the road we can see right now. http://bit.ly/1TDR8MD (NEJM: Oct 24, 2013)
- Is more open access the cure for Africa? Writes Williams Nwagwu, "In spite of the huge volume of information that is downloaded by African scholars on a daily basis, the real Africa and the real African contribution to global development can only emerge when Africa is able to create, store and disseminate, and sustain its own knowledge and technology, and contribute this to world knowledge stock. Presently, what is happening is that Africans are avalanched by scientific information produced elsewhere with the expectation that such information would help them produce their own information. This dissonance is not even recognized locally…. The extent and level of sophistication in modern science have probably intimidated African scholars from exploring their indigenous wealth of knowledge." http://bit.ly/1QixN2u (Journal of Academic Libarianship: January 2013)
- Article-processing charges alone are not enough to assess the financial impact of open access on universities. New hybrid arrangements consist of APCs in combination with subscription costs. Writes author Stephen Pinfield, "It is becoming increasingly important therefore that institutions understand the total costs for a given publisher's products to manage their resources effectively." http://bit.ly/1XQ1gST (Wiley: Feb 2015)
- In his 2008 "Guerilla Open Access Manifesto," Aaron Swartz said that sharing information was a "moral imperative" and advocated for "civil disobedience" against copyright laws pushed by corporations "blinded by greed" that led to the "privatization of knowledge." http://huff.to/121xRgZ (Huffington Post: Feb 2013)
- How do academic institutions manage an online open access research repository? What are the steps in this process? This tutorial from Stellenbosch University Library gives a good overview of the repository universe. http://bit.ly/garpir (Stellenbosch University).
- In this 2012 report from the DC-based Committee for Economic Development, the costs and benefits of increased public access at NIH are examined. For a quick review of the conclusions and recommendations, start on page 35). http://bit.ly/1LiXrUo (CED: 2012)
- What is some of the more important (and still active) legislation involving open access? The SPARC website provides a good summary of FASTR (http://sparcopen.org/our-work/fastr/) and the February 2013 White House directive on public access (http://bit.ly/1QlxkJy).

Tutorial 4: Evolving open solutions

The "evolving open" topic covers a lot of ground, much of which has been already discussed in previous tutorials. The following items are intended to fill in some of the gaps that haven't been covered yet, particularly in science and medical research but also with regard to some of the initiatives being undertaken by your OSI colleagues (particularly in your own workgroup):

SHORT VIDEOS (about 47 minutes)

- Last year, the Berkeley Institute for Data Science hosted a panel discussion on the future of open science and publishing. Three OSI delegates (Ann Gabriel, Jeff Mackie-Mason, and Andrew Tein) spoke at this event (37 minutes total), describing a wide range of evolving efforts and solutions. Click on these delegate's names to view their presentations. (BIDS: Dec 2015)
- Successfully confronting public health emergencies in the future will mean making biomedical research and data more available. Aside from the technical approaches being explored (see the "other projects" section, below), another approach is to try changing the culture of data sharing in research. In this 10-minute TED video by Pardis Sabeti, Dr. Sabeti speaks about her experiences on the front lines in Sierra Leone in 2015 fighting the Ebola epidemic. http://bit.ly/1T6TsfQ (TED: May 2015)

ARTICLES & REPORTS (to skim)

- OSI delegate Joyce Ogburn has authored a chapter in a forthcoming book about the future of scholarly publishing (*Extending the Principles and Promise of Scholarly Communication Reform: A Chronicle and Future Glimpse*) and has graciously agreed to share a preprint with the OSI audience. From the introduction, "This chapter reviews representative and influential documents and describes the principles and goals on which change has been based." ly/21MdLzx (Rowman & Littlefield: forthcoming)
- OSI delegate Mark Ware forwarded a link to everyone last week about a new report drawing on survey data from 40,000 respondents and detailing how readers discover content in scholarly publications and how these discovery patterns have changed over the last 10 years. http://sic.pub/discover (Simon Inger Consulting: 2015)
- Hybrid open access is growing but this approach is not without its critics. A report out this month by the Wellcome Trust (co-authored by OSI delegate Robert Kiley) notes that the quality of service and cost with hybrids does not compare favorably with fully open journals. Indeed, "Given the well documented problems associated with hybrid OA – most notably around high prices and poor levels of service – a number of research funders, including the German Research Foundation (DFG) and the Norwegian Research Council, have deemed that that their funds cannot be used to support this type of OA publishing." http://bit.ly/1MBPg0R (Wellcome Trust: Mar 2016)
- Fred Dylla (the emeritus executive director and CEO of the American Institute of Physics) has looked at the evolving impact of public access directives in the US. Click here for a video of one of his presentations on this topic (44 minutes), and here for the slideshow only (which can be skimmed faster).
- Are secret OA deals between publishers and libraries good for open access? With no pricing models and best practices to follow, some have suggested that more transparency would be healthy for the future of OA. Click here to read this recent Scholarly Kitchen article by David Crotty. (Scholarly Kitchen: Feb 16, 2016)
- Journal publishing is not diverse. In a recent study of 4 million peer-reviewed, scientific articles between 2008 and 2012, 70% of the authors were men. A lack of diversity in

publishing—not only gender but geography and race—affects who gets published and even what we research. http://bit.ly/1SjVYgu (ACRL: 2016)

OPTIONAL: PROJECTS & WEBSITES (to quickly review)

- OSI2016 is pleased to welcome delegates from a wide variety of organizations who are leading at the cutting edge of research access. Please take time to review the websites of the delegates in your working group. Here are a few other sites that may be of interest (not picking favorites—there are many groups that should be in this list, including publishers and universities who are also heavily involved in pushing the OA envelope): OpenAire, Chorus, the Center for Open Science, edu, the Mozilla Science Lab, Kudos, the Coalition for Networked Information, Authorea, The Winnower, bepress, Research!America, the Social Science Research Network, and the Australian Open Access Support Group,
- BioXiv is a recently created open access preprint repository that biomedical researchers hope will someday develop into a tool as important to biomedical researchers as arXiv is to high energy physicists. ASAPbio is an unrelated organization— "a newly coined rallying cry of a cadre of biologists who say they want to speed science by making a key change in the way it is published." This recent New York Times story about ASAPbio captures the rationale behind this effort: http://nyti.ms/1QVpYjt . Click here to view a 4-minute video about preprint servers, and here to view an 82-second video about the bioXiv preprint server in particular.
- As noted in the video section above, successfully confronting public health emergencies in the future will mean making biomedical research and data more available. The ContentMine solution is one of several such approaches to this challenge.
- OA2020 aims to accelerate the transition to open access by flipping more subscription journals to open access. See the OA2020 website at http://oa2020.org/about/ for more information.
- The CAVD Dataspace is a research product developed by Seattle's Fred Hutchinson Cancer Research Center (and architected by OSI delegate Dave Colgin from Artefact) that for the first time combines HIV/AIDS research data from the past 20 years into a single, standardized, user-friendly portal that researchers are currently using to help identify gaps in the data and new research insights. Click here for more information.

Tutorial 5: Information & society

Where are we going will all this? Why is it important in the first place? The following items focus mostly on the science side of these questions. There is some missing information here about big data and the quantities of information being generated in today's society, but these questions—while very interesting—are also a bit beside the more central questions (at least for our immediate purposes) of why and how we gather, publish and teach.

SHORT VIDEOS (about 31 minutes)

- In this 6-minute video, Duke Professor Cathy Davidson talks about the impact of education on society and about the changing nature of education—that education today isn't just about the facts, but about sharing what we know and realizing when we don't know enough. http://bit.ly/1VBe53X (Big Think: Apr 2012)
- In this 4-minute video, Charlie Rose interviews Bruce Alberts, Shirley Ann Jackson and Paul Nurse about the value of studying science and how we might improve our approach to teaching science in the future. http://bit.ly/1VbPS5i (Charlie Rose: Apr 2008)

- Society's attitude toward truth and science must begin with the voting public and not with our elected officials. In this interview with Slate magazine, Neil deGrasse Tyson talks about the importance of science to society and an informed democracy. http://slate.me/1VBaYsX (Slate: Oct 2015)
- What is future of information in society? In this 17-minute TED talk, Don Tapscott outlines the four principles of openness in the Internet world: collaboration, transparency, sharing, and empowerment. What changes will the Internet bring about, especially in the hands of the incoming generation of digital natives? http://bit.ly/1p9LlzM (TED: Jun 2012)

ARTICLES & REPORTS (to browse/skim)

- What are the biggest misconceptions that people have about scholarly publishing? This post by OSI delegate Ann Michael (and featuring commentary by several other OSI delegates) provides a good look at some of the conversation points that often come up. http://bit.ly/1Rk25RN (Scholarly Kitchen: Mar 23, 2016)
- Is our scholarly publication system distorting scholarship and misdirecting research expenditures? Writes author Neal Young (et al), "the current system abdicates to a small number of intermediates an authoritative prescience to anticipate a highly unpredictable future. In considering society's expectations and our own goals as scientists, we believe that there is a moral imperative to reconsider how scientific data are judged and disseminated." http://bit.ly/1SSZsqt (PLOS Medicine: Oct 2008)
- Are universities making an adequate effort to translate their research work for the greatest benefit of society? Are we dividing ever more scarce research funding appropriately? Is the pressure to justify research spending leading to suboptimal outcomes? Are private foundations with distinct agendas causing an unintended problem by driving project selection? These and many other issues are discussed in this recent article, "Is University Research Missing What Matters Most?" http://bit.ly/1NOF6ZZ (Chronicle of HIgher Ed: January 2016)
- In this recent interview with Marc Edwards, a Virginia Tech professor who studied the lead levels in Flint Michigan's water supply, the case is made that if our systems to support scientists do not allow them to speak out and be heard, then we are helping corrode the public's faith in science. http://bit.ly/1VHQV9U (Chronicle of Higher Ed: Feb 2, 2016)
- Transparency and reproducibility in science don't necessarily stem from deceit, but from a lack of clear understanding by scientists about what is required and expected. This NIH training module provides a useful summary. http://1.usa.gov/22fRPwT (NIH)
- The Internet has brought profound new benefits to society, but also profound new challenges. In this February 4 New York Times editorial, Thomas Friedman argues that achieving real change requires much more than just generating a big social media presence, and that in fact (contrary to the hypothesis of Don Tapscott in his TED talk, above), this kind of presence might also erect unintended barriers to change. http://nyti.ms/1X3brmT (New York Times: Feb 4, 2016)

ANNEX 6: OSI2017 WORKGROUP REPORTS

IMPACT FACTORS

Workgroup Question

> *Following up on recommendations from OSI2016, this team will dig deeper into the question of developing and recommending new tools to repair or replace the journal impact factor (and/or how it is used), and propose actions the OSI community can take between now and the next meeting. What's needed? What change is realistic and how will we get there from here?*

Introduction

The *Impact Factors Working Group* (IFWG17) convened at the second meeting of the Open Scholarship Initiative in Washington DC, USA, on April 18-21, 2017. Membership of the group was self-selected, although multiple stakeholders and viewpoints were represented within the discussion, including representatives from libraries, university administration, publishers, and not-for-profit institutions. Refer to the names and affiliation of IFWG17 included at the end of this report.

Perspective Summary

Membership from the OSI 2016 Impact Factors workgroup did not carry over to 2017, although several members had attended the previous year's conference as members of other working groups. Membership included multiple stakeholders and viewpoints, with representatives from libraries, university administration, publishers, and not-for-profit institutions. Members were knowledgeable about open and how the JIF is inadequate in terms of measuring impact.

Areas of Agreement and Disagreement

The Impact Factors Working Group report produced in 2016 (http://bit.ly/2pCN70G) was used as a foundation for our activities. Participants of in-person deliberations agreed that they would use the six points of consensus from *The Journal Impact Factor and its discontents: steps toward responsible metrics and better research assessment* (2016) to dig deeper into some of the core issues surrounding impact and how it is assessed.

The following four issues were identified:

- **Scholarly communication impact encompasses more than just articles and monographs.** This is consistent with OSI's overall focus of 2017 and with the IFWG work from 2016. While the 2016 action plan focused primarily on journal articles, the background section noted

"...open scholarship is about more than just OA, it also includes sharing research data, methods and software, the pre-registration of protocols and clinical trials, better sharing of the outcomes of all research including replication studies and studies with negative results, and early sharing of information about research outcomes." IFWG17 feels this is an essential construct as impact factor work moves forward.

- **Multiple metrics should be used as appropriate within the discipline to represent the breadth of the discipline and to encourage new ideas.** Impact factors should be applicable to the wide variety of disciplines that create knowledge including creative achievements such as films, art, and music. In order to recognize the paradigmatic diversity represented both within and across disciplines there is a need for more than one approach (and metric) to represent impact. Depending on one metric can have an inhibiting factor on the success of new journals, particularly those that are OA, and can limit the potential venues for new ideas and widespread dissemination of results. Measuring impact factor with alternative means could create fresh impetus for OA uptake and other ways for funders to support OA.
- **Diversity and inclusion is important when considering scholarly impact**. We are referring to intellectual diversity in all its dimensions and we champion the need for recognition of scholarship across disciplines and across institutions. We recognize that governance and business sustainability have influence as well in terms of OA uptake and impact factors are often used for decision-making during governance and sustainability practices.
- **There continues to be a need to transform and modernize the research evaluation process.** The 2016 report noted "There is both a perception and a reality that such processes (tenure and promotion) are influenced by the JIF, and so researchers who are subject to those processes understandably adjust their publishing behaviour based on the JIF." The tenure and promotion (T&P) process influences how we can identify and what we can promote as an impact factor alternative measurement.

The group was unable to come up with a united plan of action involving all stakeholders acting together. Rather, a list of action items for 2018 was presented, which calls for some stakeholder groups to work together.

In review of reports from other 2016 workgroups to glean what output may be pertinent to our activities, the group adopted the stakeholder definitions presented by the 2016 *Who Decides? Working Group (*http://bit.ly/2oMgEGV):

- **Funding agencies**, including, for example, government and non-government entities, have the power of allocating resources and the power to define policies.
- **Libraries** have spending power, as those who procure information resources, as well as the power of choice—that is, the ability to choose what to invest in.
- **Universities** have the power of policy-making and power of allocating their resources.
- **Publishers**, including learned societies, have the power emanating from their ownership of journals and the related publishing infrastructure.
- **Researchers**, of course, have the power of choosing what and where to publish.

Next steps for 2018

The 2016 report included an action plan which identified four intended changes and some specific actions to facilitate these changes. We discussed each of the four items to determine if the identified actions had been taken and if so were they effective. We then reviewed the current situation of the intended change, determined the best strategy to move forward given our level of time and resources. What follows are four products we identified as helping to move the mission forward. For each product we identified specific and discrete action items, the priority of the action item and some activities for implementation. What remains to be done is for individuals to adopt an action item and guide activities to completion. It is recommended that participants of the 2018 meeting review the product list and determine which action items may still need to be tackled and completed during the meeting.

Product 1: Follow-up on working paper discussions

Action Item	Priority Level	Activities
1.1 Examine the exceptions outlined in report where JIF did not impede the uptake of open practices (eLife, PLOS, Nucleic Acids Research)	High	• Open up dialogue with journal editors: what's working / what's not / what's missing? • Major output: Interview protocol and list of contacts
1.2 Update initiatives that take a more transparent approach to scholarship (Crossref Event Data service, Initiative for Open Citations etc.)	Moderately High	• Connect with various groups leading these initiatives to obtain updates. To be included in final report.

Product 2: Help facilitate implementation of DORA recommendations

As described on their website, The San Francisco Declaration on Research Assessment (DORA), initiated by the American Society for Cell Biology (ASCB) together with a group of editors and publishers of scholarly journals, recognizes the need to improve the ways in which the outputs of scientific research are evaluated. More information can be found at: http://www.ascb.org/dora/

As of April 26, 2017, Nature Journals publically announced their support of DORA, however, there are publishers who do not support this declaration in its entirety. While this report has a focus on DORA, other frameworks that express the same sentiments should be considered within this process as well.

Action Item	Priority Level	Activities
2.1 Develop landscape analysis from an environmental scan to better understand DORA committed organizations and their relationship to pertinent funding agencies. Use this environmental scan as an opportunity to explore if other frameworks exist or if they are in development	Moderately High	• Use list of DORA organizations and arrange by characteristics • At OSI: talk to participants to identify inroads available

2.2 Build resources (elevator pitch) that provide talking points on ways to improve the evaluation of research. To be shared with identified stakeholders. Use as an opportunity to discuss implementation solutions and roadblocks	High	• Use stakeholder groups identified in the 'What is Open' 2016 working group to start writing material • DORA website as major resource

Product 3: Support disciplinary ownership of assessment

Action Item	Priority Level	Activities
3.1 Identify guidelines for DORA inspired tenure and promotion frameworks	Medium	• Design template based on guidelines • Identify organizations to volunteer to pilot this approach and bring back next year for greater buy-in • How: outreach through COAPI
3.2 Enlist learned societies to help educate through events at professional meetings	Moderately High	• Design a template for panel content and suggest potential speakers • Use the Tiger Team approach: Where do we have a contacts so that we can get on the agenda

Product 4: Share information about JIF, metrics, their use and misuse

Action Item	Priority Level	Activities
4.1 Create and populate an information page containing metrics that are available and gaining foothold	High	• Communicate with Metrics Toolkit developers, with goal to collaborate after rollout at Force11 (Berlin, Oct 2017) • Identify and facilitate collaboration amongst stakeholders to drive innovation and solutions for aggregation of metrics data

Answering the Implementation Challenges Identified in 2016

The 2016 report identified three major challenges for moving ahead with impact factor activities within OSI. Our group provides strategies for addressing these in a realistic and collaborative way, however, they remain obstacles moving forward,

- How to continue to engage the OSI participants in this activity?
    - IFWG17 identified actionable plans. At this point individuals can adopt an action item to guide activities to completion.
    - Recommend ensuring continuity by having at least one member from current

workgroup at the 2018 workgroup meeting

- What channels and methods should be used to effectively extend the participation to represent fully all stakeholders from around the world?
    - IFWG17 identified the need for collaborations as evidenced by Metrics Toolkit (Force11: https://www.force11.org/tools)
- Given limited resources, how should the work that we have proposed be prioritized?
    - IFWG17 has created "work packets" that are clearly defined and which have been assigned priority levels

This report is submitted by the OSI IFWG17 Participants

Eric Brown	Division Leader, Explosive Science and Shock Physics, Los Alamos National Laboratory
Todd Carpenter	Executive Director, NISO -- Unable to attend (monitoring virtually)
Ali Andalibi	Associate Dean of Research, Science, George Mason University
Suzie Allard *	Associate Dean for Research and Director, Center for Information & Communication Studies, U of Tennessee
Patty Baskin *	President, Council of Science Editors (CSE) and Executive Editor, Neurology Journals
Marilyn Billings *	Scholarly Communication & Special Initiatives Librarian, UMass Amherst
Stephanie Orfano *	Acting Head of Scholarly Communications, University of Toronto Libraries
Brian Selzer	Assistant Director of Publications, American Public Health Association

*People at Wed morning meeting

GLOBAL FLIP & OTHER STUDIES

Abstract

In their Report, delegates of the "Who Decides?" workgroup of the OSI2016 conference, put forth three proposals in which key stakeholders might convene to enact an economically viable and sustainable transformation of the current scholarly communications system to one of open access.

The "Global Flip" workgroup of OSI2017 discussed the previous year's Proposal 3 in which "libraries, publishers, and funders, convened by an organization with global standing, come together to redirect subscription funding toward transforming existing journals to open access publication". Tasked with creating broad action plans for further research into the feasibility and impact of such a transformation, we identify a number of driving forces in the envisioned transformation which could be further developed to assure its ultimate success as well as possible barriers to its desired fruition and suggested actions to remove them.

OSI2017 Workgroup Question: Global flip & other studies

Following up on the research ideas proposed by OSI2016 delegates, this workgroup will create broad action plans for a variety of studies, beginning with the global flip, moving next to embargos, and also including publisher services disaggregation and an assessment of open impacts if possible—how fast, how even, systemic pressures and so on (referencing the OSI2016 workgroup papers on these various topics). Detailed study protocols aren't expected, but rather an outline of what to prioritize, and how to conduct this work without necessarily relying on large grants from neutral parties. With regard to the global flip, this research is needed to help answer the question of whether a flip using APC's is the right model to pursue (given concerns, for instance, about how this might affect access in the global south).

Focus of the 2017OSI Workgroup

The question(s) posed for this workgroup were broad and potentially too diverse to be covered during the course of the conference. For this reason members of the workgroup decided to focus on the Global Flip. While recognizing that there is some opposition to the concept of a global flip, members of the group further agreed to assume the possibility of a global flip, for the sake of discussion.

Global Flip Defined

In its Report, the OSI2016 "Who Decides?" workgroup describes the necessity for all stakeholders in the current scholarly communications ecosystem—Funding Agencies, Libraries, Universities, Publishers and Researchers—to come together in concerted efforts in order to achieve the overarching goals of enabling "an economically feasible, sustainable move to open access (OA), while preserving the quality and ensuring preservation and access" and to "improve the creation and dissemination of new knowledge". The Report outlines three proposals that "offer the opportunity of immediate concerted action and transformative results:

1. Evaluation: re-assessing criteria for academic tenure and promotion
2. Incubation: nurturing alternative, community-driven publishing models
3. Transformation: facilitating a "global flip" of research journals from subscription-based to OA."

The OSI2016 report further describes Proposal 3:

> In this model, libraries, publishers, and funders, convened by an organization with global standing, come together to redirect subscription funding toward transforming existing journals to open access publication. The idea is to serve the public good and the commons of information, by reusing the same funds that today are spent to provide access to a limited audience. Among the current examples are:
>
> - SCOAP3, which has established a global funding consortium of libraries and research funders under the auspices of CERN to convert a significant portion of the literature of high-energy physics to open access, at no burden to authors, at a cost-per-article considerably lower than existing open access "APC" arrangements[7]
> - A number of publishers and national-level library consortia in Europe are developing so-called offsetting pilot agreements in which, as part of the contracts to purchase access from providers to a portfolio of journals, and without significant additional cost, an institution's article output is published as open access.
> - The OA2020 initiative, recently launched by the Max Planck Society, is soliciting formal "expressions of interest" whereby libraries (on an individual or, preferably, national level) can publicly declare their intention to migrate from subscriptions to open access. [8] A likely mechanism for this is the offsetting model described above, although other methods could be explored, including combining offsetting with the cultivation of alternative models.
> - LIBRARIA is a collective of anthropology, archaeology and social studies of science journals and learned societies that have teamed with the Public Knowledge Project and the SPARC to develop cooperative alternatives that go beyond APC-funded open access. LIBRARIA aims to develop an economically viable approach that brings together libraries, journals, and learned societies to cooperate, seeking more efficient allocation of resources, while advancing open access and the quality of scholarship.

The OSI2017 "Global flip" workgroup brought together the perspective of various stakeholders and observers and rooted its considerations in the understanding that the proposed "flip" may be simply defined as a large-scale conversion of a critical mass of the current corpus of scholarly journals from a subscription economy to business models that would ensure immediate open access to the published research outputs.

The "Global flip" is therefore not, in and of itself, an open access business model; rather it is a means to open the path toward any number of OA publishing models and is viewed as a complement to existing and new open access initiatives.

Such a transformation is seen as immediately actionable in that, rather than requiring new infrastructure or investment, it makes use of the economic resources (i.e. library budgets) and scholarly communications infrastructure (publisher services) already in place, grounding the shift in terms of budgetary policy (repurposing existing funds).

In an effort to better evaluate what further research might be required to test the feasibility and impact of a large-scale conversion of today's scholarly journals to open access, the workgroup discussed and present here the driving forces of the envisioned transformation that might be further developed to assure its ultimate success, as well as possible barriers to its desired fruition and suggested actions to remove them.

Drivers of the "Global flip"

Momentum around the large-scale transformation of the existing corpus of scholarly journals from subscription-based ("paywall") to open access ("OA") is being driven by a number of factors:

- Public Good: Immediate access to knowledge is an overarching goal that serves the interest of Society at large and aligns with an increasing number of policies of philanthropic and governmental funding agencies.
- Speed of Implementation: Since launch of the Budapest Open Access Initiative in 2002, new, alternative open access publishing models (OSI2016 Proposal 2) have brought laudable but slow results with only around 15% of scholarly outputs available open access immediately on publication today; at this rate it will be decades before the goal of universal open access to the world's research will be achieved. Using current scholarly communications practices and infrastructure as leverage, ie article output and journal structure, the "global flip" represents an agile and rapidly-adoptable pathway to open access requiring no substantial new investment from the community.
- Sensitivity to current scholar behavior: While efforts in re-assessing criteria for academic tenure and promotion may be pursued (OSI2016 Proposal 1), scholars currently rely on the structure and services provided by publishers of "traditional" journals. Additionally, self-archiving mandates and practices ("Green" OA) are inconsistent and, as yet, ineffective for rendering versions of scholarly outputs accessible open access at scale. Rather than forcing changes in researcher behavior and practices, the "global flip" scenario leaves the researcher to continue publishing and disseminating their research according to their current practices and in the journals they choose.
- Global Momentum: Steps toward a "global flip" have already been made by various stakeholders and these experiences can serve as models for the global community. In Europe, a number of transitional offsetting agreements between national institutional consortia and publishers are already in place. The OSI2016 report suggests that organizations of global reach could act as convening authorities in the transition, and the OA2020 Initiative of the Max Planck Digital Library has already gained a significant level of consensus with over 80 signatories representing hundreds of institutions from 26 countries in 5 continents who have committed to making good faith efforts to convert resources currently spent on journal subscriptions into funds that support sustainable OA business models.
- Potential for Cost Savings: While the "global flip" aims to be, at the very least, cost-neutral for institutions, based on successful results of the SCOAP3 project and empirical data illustrated in the Max Planck Digital Library White Paper, there is evidence that the "global flip" has the potential to lower costs to institutions, with respect to current subscription expenditures, leaving the opportunity for innovation and investment in other, new open access publishing initiatives and services.
- Inclusiveness: In keeping with the premise that a path toward open access which involves all stakeholders will be the most effective, Proposal 3 recognizes the unique expertise and key role of all stakeholders in the scholarly communications chain, offering inclusive participation in the transformation.
    - Funders will have greater and immediate impact for their investment as research outputs would be immediately open for the benefit of society at large and not subject to embargoes.
    - Researchers retain their right to publisher where they choose and control over their copyrighted content.

    - Libraries will retain their area of responsibility further developing their strategic and organizational capabilities, and opening up their acquisition budgets to new forms of information and communication services.
    - Publishers retain their role in providing publishing services.
- Pressure of Piracy: The rise in alternative, and even illegal access options for researchers places growing pressure on the subscription model, which in turn may provide an incentive for publishers to collaborate with other stakeholders toward a scenario that safeguards the integrity of their journals while removing barriers to access.

Conversely, a number of potential challenges to adopting the "Global Flip" strategy were identified:

- Publishers and their journals are global, and approaches to Open Access must be adopted on a global scale in order to be effective. To be achieved, the "Global Flip" requires consensus across borders, particularly in regions with a high level of research outputs.
- Some regions – China, for instance – are particularly difficult in the context of a global flip. There are fears that journals involved in the flip could lose researchers from these regions.
- Whereas the proposed pathway would not require new funding or infrastructure, it would require a certain level or reorganization and redirection of revenue streams and workflows.
- Publishers may not be incentivized to embrace such a transition for fear of losing revenues, in particular from markets not directly involved in the production of research output, ie corporate subscriptions.
- Changes in economics may also lead to a general sense of uncertainty, for example with regard to job security.
- Certain members of the community propose that self-archiving (Green Open Access) of pre-print versions of research outputs is a sufficient response to the societal demands for open access. This focus on Green can bring with it a reluctance to consider Gold or enter into discussions on how to achieve it.
- There is concern over the potential for an ensuing "pay to publish" model which would be prohibitive to researchers of under-funded institutions as well as the fear of overall cost increases among research-intensive institutions.
- There is a certain amount of distrust between the academic and publisher communities. For example, smaller publishing entities are wary of embarking on a flipped path without having some level of medium-term commitment from Institutions. Some in the academic community, on the other hand, seek new scholarly communications models that omit the need for publishers entirely.
- Differences across subject areas and research types can also pose a challenge to the flip, particularly when considering a business model based on article processing charges (APCs), in light of the relative paucity of grants available in the humanities and social sciences with respect to the STEM fields, and the lack of support for secondary research such as review journals.
- Societies' fears of losing income derived from subscription sales, as well as the loss of a key member benefit contribute to holding back Open Access generally, and therefore a global flip.

Finally, the question of what impact a "Global Flip" would have on the so-called Global South raises both challenges and opportunities. The greatest outcome would, of course, be immediate access to the world's scholarly outputs, but subsequent measures would need to be put in place to ensure researchers from these regions and local publishers would have the means to contribute their outputs.

Recommendations

In order to improve the understanding of the proposed "Global Flip" and its potential impact on goals of the Open Scholarship Initiative, we recommend the following actions:

- Enable further development and dissemination of tools such as the UC-Pay-It-Forward-Calculation-Tool to increase understanding of the potential impact of a Global Flip on library budgets.
- Commission a third-party study to analyze the financial and scholarly implications of the flip on both publishers and the academic community, starting with an analysis of current research outputs and their costs of publication, dissemination and subscription.
- Propagate results and best practices of key players already involved in the transitional offsetting agreements as part of the "Global Flip" strategy. See, for example, the ESAC: Efficiencies and Standards for Article Charges and OpenAPC initiatives as well as Open Access 2020.
- Identify and support cooperative models that align with the Global Flip strategy to increase trust and transparency among stakeholders and serve as best practice.

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STANDARDS, NORMS & BEST PRACTICES

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Background

Standards improve efficiency by reducing the number of times in which one is expected to alter their normal workflow. Researchers who use standard practices in dissemination quickly learn how to navigate through the process. Journals, editors, and publishers who use standard practices quickly become more efficient at decision making, evaluation, and then dissemination.

However, in order to prevent the stifling of innovation, standards creation requires planning for iterative improvement. Furthermore, there is no "one size fits all" that can reasonably accommodate diverse and decentralized communities. Scholarship, both the process of systematic knowledge creation in the sciences and humanities, and the process of knowledge dissemination, both relies on current evidence and is highly decentralized, which presents particular challenges for the creation and adoption of standards within this community. Organizations such as the National Information Standards Organization (NISO) exist to address this particular challenge and will perhaps be required to in order to achieve the goals presented below.

The purpose of this working group and its report is to identify existing relevant standards, evaluate areas of overlap or perhaps conflict, which can be used to foster increased collaboration, and areas where relevant standards do not yet exist, which can be used to focus future effort.

Open Scholarship: Idea Generation to Dissemination

As a threshold matter, the Standards Workgroup approached the concept of "open scholarship" as much broader than a focus on open access to scholarly articles alone. Instead, the Workgroup conceptualized open scholarship as applying transparency to all applicable aspects of the research lifecycle: idea generation, research design, data collection, data analysis, early dissemination, peer review, contributorship, funding sources, and dissemination of research products such as journal articles, research data, and software codes. Though some stages of the research lifecycle are not applicable to all fields of scholarship, increasing transparency into any relevant products will engender similar benefits to those disciplines as transparency does to every other discipline. More openness is necessary at all stages, with appropriate protection for sensitive data and with the associated costs fairly shared among stakeholders in the interest of mutual benefits.

Making all aspects of the scholarly workflow more transparent is increasingly necessary in order to foster trust and collaboration in the process of knowledge creation and sharing. Society demands and deserves accessible insight into the foundation of knowledge because of scholarship's central role in policy-making, among other areas. Creating a more transparent scholarly ecosystem requires rethinking how each individual and institution is rewarded and recognized for their roles in knowledge creation and dissemination, so that transparency becomes a key metric of success and accountability. Furthermore, it requires careful attention in order to design a system that is sustainable, just, and responsive to new evidence.

Need to Align Standards

Competing standards threaten to derail their benefit. Just as learning how to use a new piece of software takes time, competing standards threaten to confuse the wider community. However, as stated above, overly rigid standards stifle improvement, and so in many cases the best practice is to standardise a framework of policies and actions so that each stakeholder can quickly ascertain their meaning. In this sense, the wider community can "speak the same language" while permitting necessary diversity in actual policy.

A reasonable example of this need are the four Data Sharing Policy Types used by Springer Nature and the relevant data transparency policies presented in the Transparency and Openness Promotion (TOP) Guidelines. While similarly structured, the four specific "types" or "levels" described are slightly unaligned. While realignment may be difficult, it could provide immediate benefit to a wider community.

Possible areas of contention in such an alignment could be the use of specific terminology. "Type" does not convey value, rigor, or potential challenges with a particular policy, whereas the term "Level" does. Depending on one's point of view, it could be either beneficial or detrimental to convey such values in policy types. Perhaps simple labels that describe the essence of each type or level would alleviate this tension (e.g. Encourage, Disclose, Require, and Verify), though that is slightly more challenging to convey than a simple numbering system.

Proposed OSI Guiding Principles

In order for OSI to continue to make progress and generate action items that advance its mission, while still being able to function with a consensus model among stakeholders who have very diverse interests, we must agree on a set of principles to use when making future decisions. The "What is Open" Workgroup[1] from OSI 2016 laid out most of the salient principles and we propose that OSI endorse it as a collective. When future proposals are considered, this common set of principles will guide OSI and enable its members to judge the potential effect of any action. In brief, those principles highlight that openness can be considered as a spectrum across four dimensions: Discoverability, Accessibility, Reusability, and Transparency (DART). Any proposal can be assessed on its (estimated) impact on the openness of the practices along the research lifecycle, e.g., idea generation, knowledge creation, interpretation and analysis, dissemination, and evaluation.

We propose that one additional dimension be considered: Sustainability. While not directly related to open scholarship, financial sustainability is necessary for any proposal to be adopted or for any adopted proposal to be implemented for medium- and long-term use. Since persistence of a research output is an unmentioned but essential element for later discoverability, accessibility, and

[1] http://osinitiative.org/osi-reports/osi2016-reports/report-from-the-what-is-open-workgroup/

reusability, adding Sustainability to the DART principles (hereinafter referred to as "DARTS") aligns with the underlying principles proposed in 2016.

The principle of Sustainability requires that proposals consider the method by which content will be hosted and curated and services be supported. In some cases, proposals could include sustainability plans that rely on existing funding sources (e.g., government, foundation, or NGO support) but without incurring an increase in such reliance (or ideally with a decrease in such reliance). Alternatively, proposed projects could be sustainable if a reasonable business plan be created that increases any dimension of DART.

This proposal needs to be assessed by key stakeholders present in OSI. As of now, there is no decision-making framework adopted by OSI. As such, the natural course of action is to either 1) propose that the following motion be considered "adopted" only after affirmation from every delegate who chooses to participate in a vote conducted by the planning committee or 2) the proposal be shelved until a governing and decision-making framework is adopted.

> **Proposed**: The Opens Scholarship Initiative envisions a scholarly community where all parts of the research lifecycle are openly available. In order to achieve this vision, OSI adopts the following principles in order to evaluate policy proposals and actions: research products must be made more Discoverable, Accessible, Reusable, Transparent, and Sustainably supported. Policies that increase openness among one or more of these dimensions, while having no net decrease on any other, are aligned with the mission and purpose of OSI delegates and member institutions.

Making DARTS a Reality

One way of approaching this challenge, and what we're proposing herein, is to encourage widespread adoption of the DARTS framework. Connecting the entire research workflow will help to ensure that the body of work, from idea dissemination, data collection, interpretation, dissemination, and evaluation increase along every dimension of DARTS.

The Open Science Framework (OSF https://osf.io) is designed both for those scholarly activities and for the DARTS dimensions. As a key to its utility in connecting a preserving a complex research workflow, it's open source code and APIs allow for connections to other research tools. The fact that it is open source and its endowment for 50 years of maintenance address important sustainability questions. Its public content is discoverable through the SHARE initiative (https://share.osf.io/), which not only makes work on the OSF Discoverable and Accessible, but also makes research outputs from other repositories connected.

Utilization of this and related tools will help make a truly open scholarly community happen. This will take additional education, marketing, and coordination between players.

Open Standards Matrix

The Standards Workgroup envisions that a fruitful path forward to operationalizing this proposal is to build upon a draft "open standards matrix" initiated by the Workgroup in 2017. Still in the nascent stage, the matrix aims to identify potential standards and best practices that can increase openness. (It is to be evaluated in accordance with the DARTS principles.) The matrix lists stakeholders across columns (i.e., funders, researchers, universities, libraries, societies, and publishers) and stages of the research lifecycle across rows (i.e., idea generation, knowledge creation, interpretation and analysis, dissemination, and evaluation). See the complete matrix here.

Standards, Norms, or Best Practices to Promote Openness in Scholarship

	Funders	Researchers	Universities	Libraries	Societies	Publishers
Idea generation	Registries.	Open data. Registries.			Networking & ECR creation. Topic & discipline specific standards. Registries.	
Knowledge creation			Institutional recognition/rewards for collaboration and/or sharing, Increase transparency			
Interpretation & analysis		Use of tools to address bias and motivated reasoning.				Versions; Open licensing to enable reuse and innovation. Open peer review. Best practices proposed by COPDESS http://www.copdess.org/copdess-suggested-author-instructions-and-best-practices-for-journals/
Dissemination	Open Science linked to ROI & societal impact; Funder expectation of open access	Pre-prints	Data repositories & archiving; Open Access; Recognition of researchers' roles (contributorship); Open Science linked to ROI and societal impact	Repositories connected through open APIs. Taxonomies. Workshops and training for dissemination		SSO, SEO, DOI, portable submission, device agnostic, PDF, JATS, OAI-PMH, machine read, common standards for interoperability, taxonomies, mineable.
Evaluation	Standards and metrics that align w/ scientific ideals	Post-pub peer review	Hiring & promotion based on open practices	Surface metrics created by funders & societies		Surface metrics created by funders and societies. Data citation.

The Standards Workgroup began to identify potential "standards," "norms," and "best practices" to populate the cells of the matrix.[2] For example, to increase openness, funders may require Creative Commons licensing of works at the dissemination stage and publishers may make research outputs machine-readable. The Standards Workgroup expects that with additional time and input from

2 https://docs.google.com/presentation/d/1Yk_tu4blfkJpPHyfIt9uuCF8jVXvoNDhdmhjTNSnTGM/edit?usp=sharing

stakeholders with a wider range of expertise, this open standards matrix may prove a useful starting point to indicate areas where individual stakeholders can contribute to increasing the openness of research products.

One area that requires additional development is the creation of standards in knowledge creation. In particular, researchers, societies, and publishers can work together to start to address current needs, such as those that relate to open data.

Open Data

Mentioned above, both Springer Nature's Data Policy Types and the TOP Guidelines lay out modular data sharing policies and provide some examples and resources for each level. There is still need, however, to increase standardization of the operalizational of each of those types/levels.

Standardised data disclosure statements would help researchers quickly select the statement that applies to them, and aid in later meta-analytic work in evaluating openness.

Standardised exceptions to data sharing mandates would have similar benefits (though would likely still require free response, "other reasons"). Reasonable ethical constraints, the use of intellectual property concerns may or may not be a reasonable exception to some funders and publishers, and inability to share massive data sets could all be considered.

The meaning of peer review is still not well defined when it comes to any object that is not a traditional paper. Setting standards or options for such review practices is needed. As a suggestion, various tiers of data peer review could be used: verification of the data's existence, verification that reasonable meta-data or a "data dictionary" are included, basic assessment that the data set is complete, and finally the ability to computationally reproduce the results are different tiers that could be applied

Other members of the Open Scholarship Initiative should address the missing standards presented in this gap analysis and highlight known gaps as they are identified.

Summary and Next Steps

The use of standardized best practices for making scholarship more Discoverable, Accessible, Reusable, Transparent, and Sustainable will help to make the vision of OSI a reality. The following actions, described above in detail, are the recommended next steps toward this process:

- Adopt a unifying policy goal in order to evaluate future proposals at OSI.
- Coordinate alignment between closely related open data policy frameworks.
- Facilitate the creation of best practices and specific policy frameworks for detailed actions relating to open data.
- Solicit help in identifying existing standards within the Open Standards Matrix so that gaps represent truly actionable items.
- Coordinate with stakeholders who are working on similar standards alignment within the open science community, for example the Data policy standardisation and implementation interest group at the Research Data Alliance
- Advocate for tools that make every part of the research workflow more connected, efficient, and preserved, such as the Open Science Framework.

FUNDING MODELS

I. Charge & Members

The 2017 Funding Workgroup Question as proposed in the conference program: Following up on a proposal from OSI2016, this workgroup will identify and/or design new funding models for open, such as a venture fund that can allow more support for joint efforts, or propose ways to improve existing funding by improving the flexibility of library budgets (e.g. by examining the efficiency of "big deals"). After reviewing the challenges with funding open access, the group focused on the second part of the question to propose new ways to improve existing funding opportunities by finding flexibility in library budgets.

Representatives in this group included:

Kris Bishop
Carrier Calder
Karla Cosgriff
Celeste Feather
Alex Kohls
Nick Lindsay
Christine Stamison

One delegate, Michael Zetner, was assigned to our group but unable to attend the meeting.

II. Assumptions

The workgroup felt it was important to agree on some underlying assumptions for the discussions. These assumptions included:

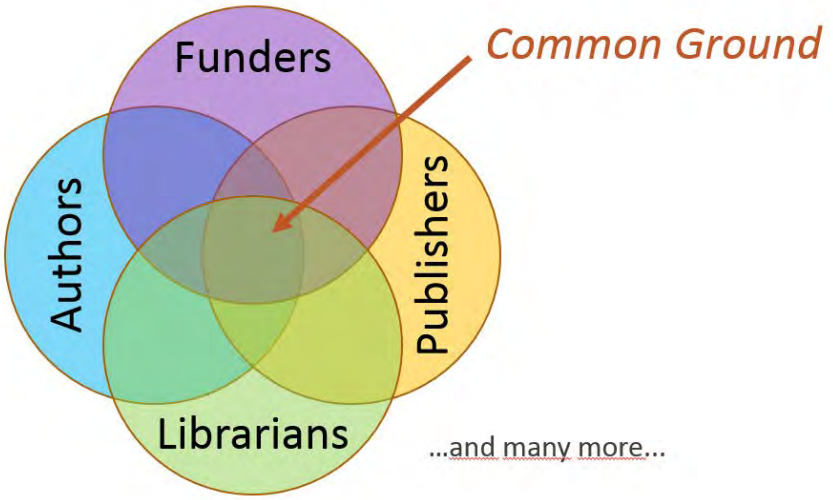
- Open isn't free; there is a cost to publishing. Major costs include the technology infrastructure needed to submit, review, accept, and post papers online, preservation, as well as the people required for peer review, shepherding content through the process, and marketing.
- Breaking big subscription deals may not solve all problems but libraries need to play a key role in the open access movement.
- For open access to be successful, we need further education about its value and quality and how open can positively impact the author.
- There are several models with an open end-product:
    - gold open access
    - platinum open access
    - hybrid open access
    - green open access
    - collective action
    - crowd sourcing
    - compact
    - submission fee
    - open access packages

The group primarily focused on moving toward gold and platinum models.

III. Challenges To Address

Several problems and questions related to funding open were identified:

- Right now, it doesn't seem there is enough money in the system to support a global flip to open. Libraries will not be able to take on the full burden of open and just change subscription budgets to pay for APCs.
- There is an inherent imbalance between subscriptions and research outputs at universities. Those who do not produce research ers, i.e. those (consumers)do not have to pay APCs, versus universities/labs/institutes with high research output. This mirrors the current free rider problem within the industry of university presses that publish money-losing monographs for faculty at institutions that do not have university presses.
- All stakeholder communities have to be interested in moving to open and not every community wants to do this for a variety of reasons, ranging from values to economics. To move this conversation forward there has to be more transparency.



- There is a lack of socialization about open that is going to prevent research from publishing more in this area.
- Many editors benefit financially from this system in terms of significant stipends and have no incentive to move to an OA system where such payments may not be available.
- Grants to fund open access are not sustainable; need to move to a sustainable business model that generates revenue.
- No incentive for authors to move to open access; the jury is still out on whether open translates to increased citation, more notoriety, and general impact of work.
- Technology is another big challenge for open, as with any publishing model, as there are so many platform and discoverability options and it is difficult to determine which ones are going to exist in the long-term. And as open relates to data, how are communities going to choose standards and ensure uniformity so open data is useful and accessible in the future? How will publishers work with federal and funder mandates for open data?
- In the sciences, there is a fundamental disconnect between the academic communities and corporations who will not cite or publish but they need content to advance their work, improve their products, further innovation, and create new markets.

- There are varying mandates and funds available in different regions around the world to advance toward open. For example, in Europe and in the U.S. open mandates are being enforced now and many grants come with a separate fund to pay APCs. This, however, is not the case everywhere and can widen the gap with the Global South.
- There is not a lot of competition with the big deals so there is less flexibility and creativity with library budgets. Additionally, some libraries are required to carry certain journals to allow their community to get certain certifications (FDA approvals, etc.).
- Promotion and tenure track often puts pressure on researchers to publish in non-OA journals because of higher impact factor. Until the tenure system is overhauled and/or quality open access journals are favoured more than quantity

IV. Potential Funding Sources

There are several sources of funding that the group identified for moving towards a more open paradigm. Finding money in these budgets and shifting perspectives is going to be an educational exercise:

Academic/Labs/Institutes: while the libraries at institutions cannot cover all of the costs for APCs, they could be a source of income in the short-term. Researchers could also look to departmental funds, or organization-wide APCs pots, although currently the latter is exhausted quickly at the 100+ institutions that have this system.

Governments: as mentioned previously, many governments are providing separate funds (outside of research grants) to pay for APCs to meet open mandates.

Private Foundations/Philanthropists: members of the research funding group and other individuals wishing to move the needle on scholarly publishing to be more open and accessible can play a big role in this transition. Whether they will fund a central pot for APCs or other programs/services on the research spectrum is yet to be determined.

Industry: especially in science, industry could play a role in funding the move to open as a virtual R&D lab for their products.

Collective Arrangements: SCOAP3 type of collaborations and other collective action programs for libraries could be an option for some communities. Additionally, cooperative publishing could help fund more open journals, i.e. Knowledge Unlatched, Open Library of Humanities.

V. Recommendations

It is obvious that one model of open is not going to be appropriate for all research communities and we cannot expect that APCs will bring in the same amount of revenue as the subscription model does.

We should, however, expect that lessons can be learned from different stakeholders and research communities, and those lessons should be shared to be replicated or tweaked for each circumstance. What is good for anthropologists may not work entirely for microbiologists but there is likely to be components that can adapted. A key part of the success of open is going to be education and socialization programs that not only secure early adopters but also breed ambassadors to make sure that quality, peer-reviewed open journals are the gold standard and that predatory OA journals do not continue to taint the open access movement. This will help direct more funding towards open as the standard. Other recommendations include:

- Finding the total amount of money that institutions, governments and private funders currently spend on APCs
- Publishing case studies on open journals, i.e. collective actions programs, platinum, etc.
- Identify where there are opportunities in the scholarly publishing system to generate income. Right now it's a binary revenue model: subscriptions or APCs. Could there be additional opportunities looking at research from cradle to grave?
- Identify where there are economies of scale that could decrease the cost to publish, especially for independent, nonprofit publishers.
- Encourage institutions to set OA goals every year and increase funding from various areas of the organization to fund those costs.

INSTITUTIONAL REPOSITORIES

Geraldine Clement-Stoneham, Najko Jahn, Catherine Mitchell, Jake Orlowitz, Dave Ross, William Simpson, and Andrew Tein (alphabetically)

Summary

Our task in the second OSI convening of the repository working group was to propose a way forward for repository and infrastructure solutions -- detailing what's needed before action can be taken, what this action should look like and what actors should be involved.

Our main recommendation is directional: repositories must evolve and move towards *interoperability* and *sustainability.*

- Repositories should be diverse, decentralized, interoperable networks across the world.
- It is time for repository staff to shift focus more towards interoperability (policy-driven, research-relevant and standards-based) and less on supporting content.
- The scholarly communications community should be incentivized to make choices related to repositories that are more sustainable.

The scope and power of OSI lies in clarifying what this means and coordinating (or suggesting coordination) among existing stakeholders. OSI is not currently in a position to sustain, support, or itself build the solutions.

Background

Institutional repositories are not a new phenomenon in open scholarship; they have been in use at academic institutions for nearly two decades. According to Peter Suber's seminal work on Open Access, institutional repositories are online databases of open access works, which aim to host the research output of an institution. This includes, but is not limited to, self-archived copies of peer-reviewed journal articles, books, book chapters, technical reports, theses, digital collections, research data or scientific code from all subjects represented at an academic institution. Institutional repositories, thus, differ from disciplinary repositories such as ArXiv or PubMed Central, which serve research outputs from particular academic fields. They also vary from output-specific repositories such as research data repositories.

Today, institutional repositories can be found worldwide. In April 2017, more than 3,000 institutional repositories were listed in the Registry of Open Access Repositories. In total, we were able to identify 109 countries with institutional repositories. Although nearly 20% of the institutional repositories are operated in the US, our data suggest that institutional repositories are global phenomena in use throughout Asia, Australia, Europe and the Americas (see Figure 1).

To position institutional repositories in open scholarship is difficult because there are multiple stakeholders in the repository ecosystem leading to a diverse landscape of repository implementations in general, and various conceptions about the role and perspectives of institutional repositories in particular. More specifically, we mapped the following repositories stakeholders:

- Governments
- Funders
- Publishers
- Institutions
- Libraries
- Disciplines
- Scholars

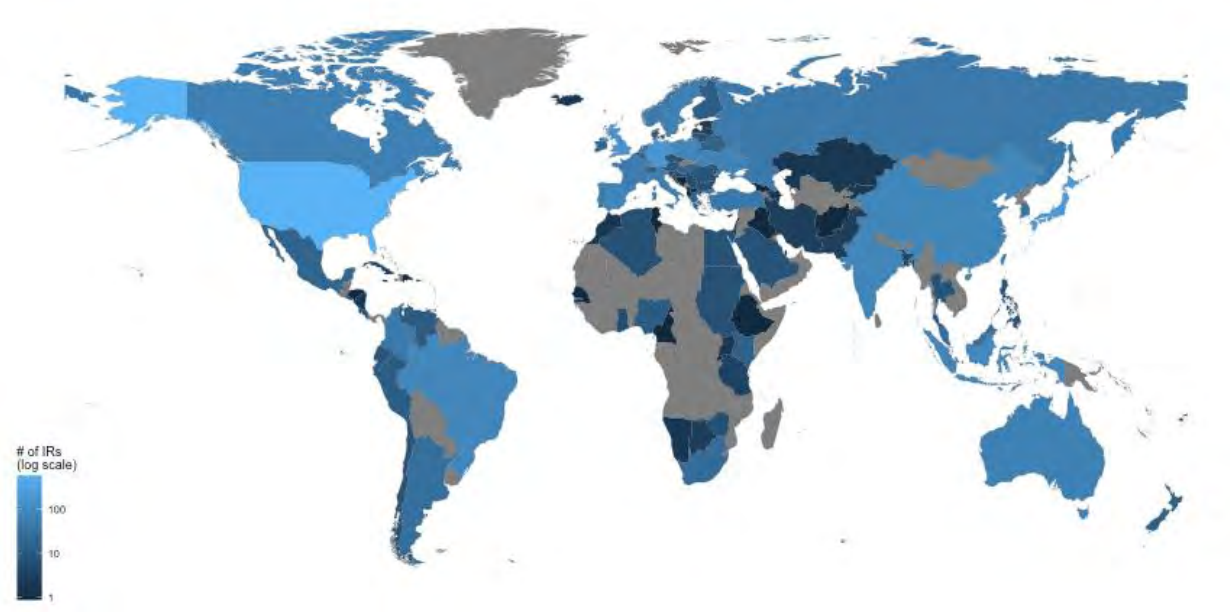


Figure 1: Global distribution of institutional repositories per country. For countries colored grey, no institutional repository could be found. Data were gathered from the Registry of Open Access Repositories (ROAR), April 19, 2017.

Crucially, the incentives that drive decision-making by these stakeholders vary by group and often don't even overlap. Even the repositories themselves are not homogenous or monolithic; there are multiple different types of repositories, as evidenced in the rough typology below:

- IR (campus-based, research org based, consortial)
- Subject Preprint (arXiv, SocArXiv, BioaRxiv)
- Discipline (Humanities Commons, MLA Core, PMC)
- Funder (Gates Open Research, Welcome Open Research)
- National (CRIStin - Norway National Library)
- International (SciELO)
- For-profit (Academia.edu, ResearchGate - interdisciplinary)
- Long-tail (Zenodo)
- Data (Dryad - multidisciplinary)
- Networks (SHARE, OpenAire, LaReferencia, HAL)

Current motivations and challenges for institutional repositories

During our workshop, we determined that the several, sometimes conflicting motivations for institutional repositories discussed in the literature and among practitioners and policy makers must be clarified: Institutional repositories not only vary by type, but also by the function they have in open scholarship. Accordingly, institutional repositories contain a multitude of goals:

Shop window

Since the advent of institutional repositories, one of the rationales for these archives has been to provide a single point of access to the intellectual output of an academic institution. Many institutional repositories therefore aim at demonstrating the unique value of the institution by providing unified access to the scholarly publications of their faculty and students. Consequently, operators of institutional repositories often share metrics about activity, media coverage and usage. One example is MIT's institutional repository that prominently presents media coverage of discussion papers and other open access content being made available via DSpace@MIT. Harvard's DASH repository shares user stories and usage statistics online.

Preservation

An essential role of institutional repositories is to preserve publications and thus the intellectual output of an academic institutions. Standardized technical and organizational means for making content available in the long-term exist both within and across institutions. In the latter case, national libraries as well as lightweight preservation networks based on the LOCKSS technology, such as the international SAFE-PLN network, address at scale institutional repositories‘ mission for long-term preservation.

Open Access Policy Implementation and Assessment

Open access policies from academic institutions often require the deposit of publications in institutional repositories, and also funders‘ mandates often rely on these online archives to make research outputs freely accessible. One prominent example is the European Union’s (EU) research and innovation framework HORIZON 2020, wherein grantees are not only required to deposit their EU-funded publications into eligible repositories, but the EU also funds the *Open Access Infrastructure for Research in Europe* (OpenAIRE). OpenAIRE is a network of repositories and other scholarly communication services aiming at the implementation and assessment of EU’s open access policies. Institutional repositories also participate in this network on the basis of shared standards and services at the European level. Another is the UK’s Higher Education Funding Council for England (HEFCE), which from April 1st, 2016 requires that all research artciles published by UK based researchers be deposited in the relevant IR and made OA (respecting any embargo periods) with discoverable metadata if they are to be considered for periodic Research Assessement Framework exercise.

Alternative publishing platform

Institutional repositories can provide faculty with alternative means to publish their research. The most common examples of primary publications via institutional repositories include robust OA journal publishing programs, as well as working paper series. The journal programs provide support for publications that don’t fit neatly into traditional publishing venues – those within emergent fields, cross-disciplinary domains, disciplines that include non-academic practitioners, etc. – as well as publications that seek local control of the editorial process and are, frequently, committed to Open Access. The motivation behind working paper series is, additionally, early and rapid dissemination of research findings in lieu of the long time lag from submission to journal publication.

Discoverability

Because institutional repositories are globally distributed, a growing number of mechanisms have been developed to unify access to open access works deposited in these repositories. The Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH), first introduced in 2002, has had a huge impact within the repository community for sharing metadata about repository collections. It has motivated national and continental repository networks as well as global discovery solutions such as the Bielefeld Academic Search Engine (BASE) that indexes more than 100 million scholarly records from open access sources. In recent years, it has become more important for institutional repositories to adapt new web technologies in order to make content discoverable through large search engines. Google Scholar, for instance, indexes institutional repositories when they satisfy technical as well as content-related criteria. Recently, open data collections of repository collections have enabled new discovery solutions such as the Open Access Button and Unpaywall.

Data sharing

Against the background of the increasing call to share and archive research data and code, some institutional repositories have also started to provide services for these research outputs. These services mainly address long-tail research data, i.e., data that may not be covered by existing disciplinary data repositories or data within disciplines that have not yet established domain-specific data repositories.

Research Corpus

Given the various content types and multidisciplinary coverage of institutional repositories, well-curated, standardized and interconnected institutional repositories have the potential to become a research corpus for a broad range of scholarly studies. These coordinated repositories could complement existing literature databases with selective indexing coverage such as the Web of Science or Scopus as well as full-text corpora for text and data mining. However, so far little evidence about the coverage of institutional repositories in comparison to these databases exist.

Our proposal to move forward!

The repositories working group explored the ideal mode of institutional repository interoperability, given the worldwide distribution, broad group of stakeholders, and sometimes disparate goals of these repositories. In thinking through these challenges to interoperability, we borrowed a framework from network theory to envision what the future interconnectedness of libraries might and should look like. Imagine a spectrum: on one end is a fully *centralized* network with a single main node to which all others connect; on the other end is a fully *distributed* network where no node has any more connections than another. In between is a *decentralized* network in which their are multiple key nodes, which have more connections than others, and which connect among themselves as well.

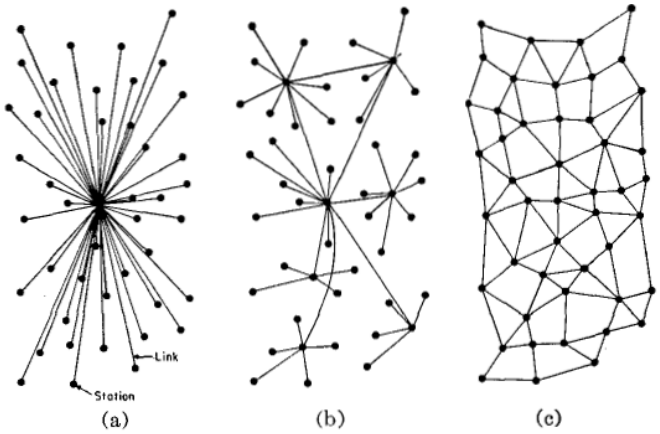


Fig. 1—(a) Centralized. (b) Decentralized. (c) Distributed networks.

Illustration from *On Distributed Communication Networks*, Paul Baran (1964).

We view a centralized repository network as politically and technologically difficult, not to mention a single point of failure. Alternatively, the fully distributed network lacks centers of influence and dissemination, and requires full interoperability. Our "Goldilocks" version is the decentralized model with hubs and spokes that allow for some efficiency while still recognizing the importance of quasi-local forms of centralization. Given this proposed model, it is essential, we believe, for the Open Scholarship Initiative to identify the potential (sub-) networks as well as the nodes in a network of repositories. The next step, which we advocate for, is to „convene the conversation" with major stakeholders at the table: e.g., COAR, HathiTrust, Publishers, Libraries, Funders, Researchers, etc.

This convening needs to address key questions:

- What problems are repositories trying to solve?
- What repository behavior would we like to see. Why? How can we work together to incentivize it?
- How can we attend to different scholcomm needs across different fields?
- How can we make everyone accountable: publishers, libraries, funders, researchers?
- How can we achieve a sustainable, decentralized, networked system while gaining efficiency through higher levels of aggregation?
- How do we minimize waste and maximize value in the repository ecosystem?

We thus recommend that a meeting of the willing be held, under UNESCO's authority, to which umbrella organizations (e.g. COAR), publishers (commercial and scholarly), academic library consortia, and non-academic information producers (e.g. Wikimedia, Open Knowledge) are invited. We also assert that geographically diverse research organizations such as the Global Young Academy and representatives from the Global South must be involved in order to reflect the expansive landscape of repositories.

Such a meeting seems a necessary first step in affecting change within the world of repositories, many of which languish individually with insufficient resources but could, in concert, create a powerful and efficient worldwide hub of openly discoverable and accessible information.

PEER REVIEW

Members: Lorena Barba, Ann Gabriel, Richard Price, Nancy Davenport, Mark Newton, Lacey Earle, Abel Packer

The charge of this workgroup was as follows: "Building on the peer review workgroup's proposals from OSI2016, this workgroup will develop a broader and clearer description of peer review that takes into account the different needs for different stages of review, as well as discuss possibly emerging issues such as the need to promote uniform interpretation and enforcement of peer review definitions, and will develop proposals for moving forward.

Desirable Properties

In thinking through the future of peer review, we considered four properties that would be desirable in a peer review system:

Moving from a 2-person-system to a many person system

Currently academic papers are peer reviewed by ~2 people: a journal editor will send out a submission to two peer reviewers to solicit their thoughts.

It would be good if there was a peer review system, both pre-publication and post-publication, that encouraged readers to share their thoughts and evaluations of the paper. This is what we mean by a 'many person system'. This system is normally called "post-publication peer review", though it's worth noting that getting feedback from readers will work in fields where preprints and drafts are shared.

Peer Review of code and data-sets

Historically the only form of scholarly output that gets peer reviewed is the paper. Since peer review, and venue of publication, is one of the primary means for academic promotion, there is not an incentive to share data-sets and code. It would be good to have a system that did peer review these items, as that would incentivize academics to share them.

Closed vs open; anonymous vs signed

We discussed the question whether peer reviews should be kept private, which is the norm, or whether it would be good for them to be open. We also discussed the orthogonal distinction between the peer reviews being anonymous, which is the historical norm, or whether they should be signed (non-anonymous).

Discoverability of all peer reviews on a paper throughout life-cycle

We discussed the fact that if you are looking at a published paper, it would be nice to know if there are comments and peer reviews on a prior version of the paper, say a public pre-print.

Case Studies

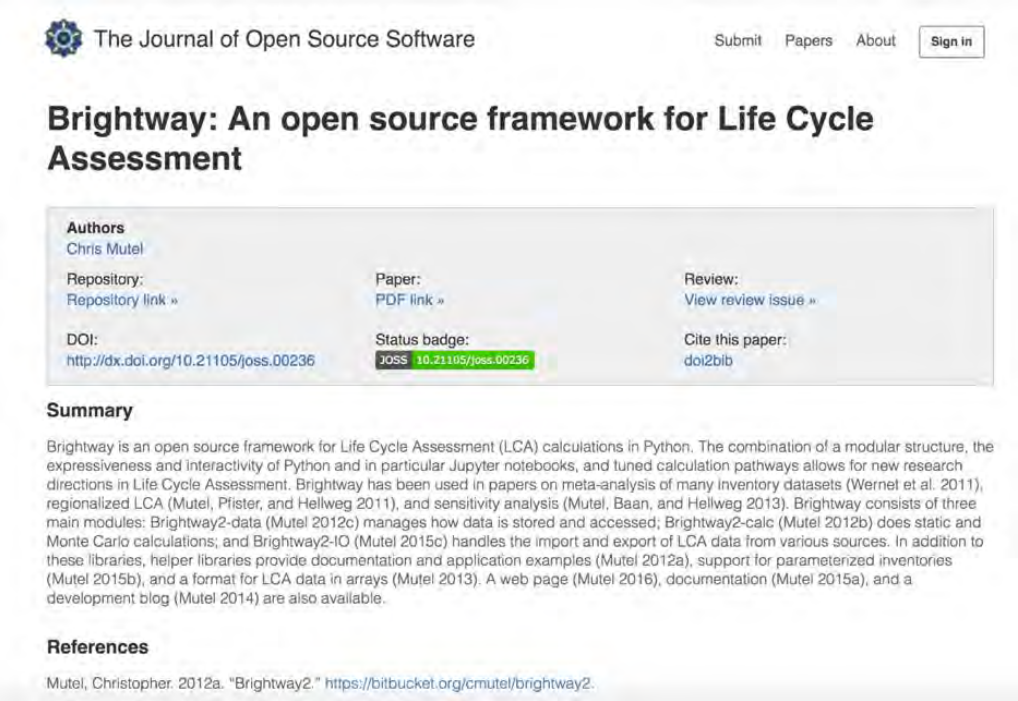
We discussed some case studies of developments in peer review. These case studies are mentioned here only by way of acknowledging they were part of our discussion, not by way of endorsement.

Journal of Open Source Software

The Journal of Open Source Software was co-founded by one of the members of our group, Lorena Barba.

The way it works is that authors submit some code, and a one-page write up of what the code does. The code is then peer reviewed by people familiar with the relevant programming languages.

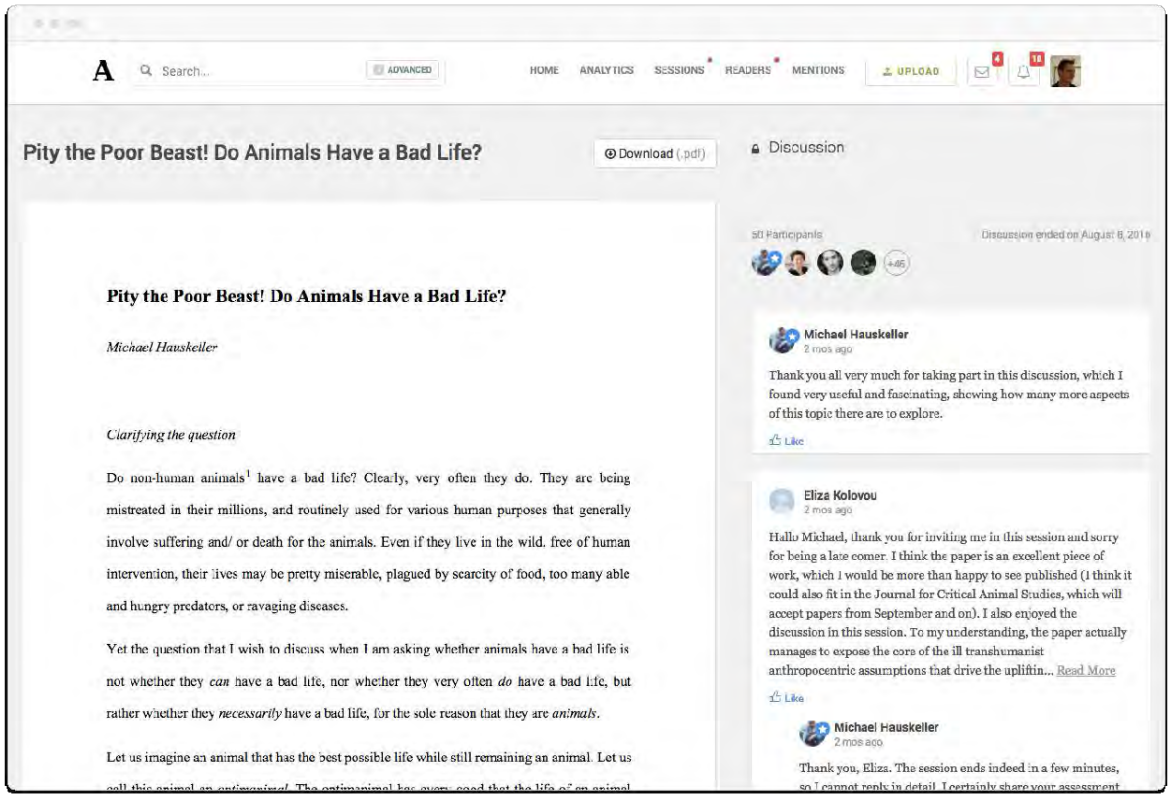
Here is what the one-page write-up looks like:



And here is what the list of publications looks like:

Academia.edu

Richard Price, the founder of academia.edu, was also part of this group, and Richard described cademia.edu's Sessions feature. Sessions are a way for authors to crowd-source peer review on their draft papers. Sessions last 20 days, and the feedback on the paper appears on the right-hand margin of the paper.



At the end of the 20 days, the session is closed, and no further comments are possible.

Survey on Open/Closed and Anonymous/Signed

Ann Gabriel was in our group, and she shared some survey data that Elsevier had gathered on experiments around open and closed peer review.

Elsevier tried open peer review for five journals: what this meant is that peer reviewers are told in advance that their peer reviews will be published openly, alongside the paper. Furthermore, peer reviewers will have the choice whether to sign their public peer reviews, or keep them private.

After the experiment, peer reviewers were surveyed for their opinions. There were 40 respondents:

- 95% said publishing review reports didn't influence their recommendation.
- 45% provided consent to reveal their names.
- 98% said they will accept further review invites for the journal.

Other data included:

- 10 out of 14 peer reviewers thought that publishing of peer reviews should become common practice.
- 70% of editors said the reports are more in depth and constructive.
- 40% of editors said that the peer review reports are more helpful to make their decision.

<u>Further Questions</u>

Some questions that we thought warranted further discussion were:

More modern formats like HTML to allow more seamless commenting

When papers are published in HTML form, in-line comments are possible, which are not possible with formats like PDF.

Formalization of open peer reviews: citable via DOIs

When open peer reviews can be cited, there will be incentive to want one's peer reviews to be open.

TOP-like framework to think about open/closed spectrum

The TOP framework is a series of standards that correspond to greater degrees of data transparency guidelines that a given journal might have. E.g. level 1 means that a journal will state whether data is available for a given paper; level 2 means that data is posted to a trusted 3rd party data repository; level 3 means that the study has been replicated by an independent 3rd party prior to publication.

There was a question about whether a similar set of steps could be drawn up for levels of open-ness for peer review.

Areas of agreement/disagreement

Nearly everyone agrees on the importance of peer review. It is so important, in fact, that questionable journals and unscrupulous researchers can invest considerable time and effort in fake peer review. Alternatively, some "predatory" journals forego peer review, yet claim to apply it.

Most will also agree that reviewers are fatigued with requests and that it's increasingly difficult for journals to secure reviews. This contributes to the long delays for publication.

Some disagreement persists about what *is* peer review: e.g., does it count if the review is completed by the editor(s) only? Some say that's not peer review, others say it is.

A fundamental disagreement between publishers and some researchers refers to whether peer review itself is enough of an "added value" to justify journal subscription costs. Dissenting researchers hold that it's all accomplished by volunteer labor; publishers claim the administration of peer review is laborious and costly.

Within the researcher community, there is disagreement about the value of anonymity in peer review, the need for transparency, and how reviewers could be rewarded for their labor. A detectable trend towards double-open peer review has started but remains fringe (refers to authors and reviewers identities being known to each other). On the opposite end, some communities are going to great lengths to implement double-blind peer review. Transparent processes may include fully open review reports, published alongside the article.

Finally, broader adoption of open peer review—where reviewer reports and author responses are published alongside the article—could offer an antidote to shady journals claiming to do peer review, when they in fact do not. It may also offer an opportunity for reviewer recognition (if, for example, review reports themselves get a DOI and are citable). But delicate issues remain to be confronted: e.g., how to deal with rejections? Probably, neither reviewers nor authors want the review reports of *rejected* papers to be public. Also, some have legitimate concerns about early career researchers suffering future reprisals for critical reviews of senior or established authors. Some fields have small communities, where non-anonymity of peer review could damage professional networks.

Recommendations

Peer review is an active area of reform in scholarly communication. It would be premature to endorse any one solution or best path forward. Rather, the best course of action for this community will be to support continued investigation and experimentation with new methods and weigh the pros and cons of each. This recommendation is consistent with the conclusions of the OSI2016 peer review workgroup, which also encouraged continued study and experimentation.

More tangibly, what can help with this approach is the following: (1) Work as a community to define more clearly what is and isn't peer review, in order to impose an accepted standard that all journals will need to follow; and (2) Support or conduct studies that investigate the effectiveness of different modalities of peer review (open vs. closed, two-person vs. many, etc.) to help provide support and direction to the scholarly communication community as it experiments with different peer review systems, and (3) Aligned with the recommendations of the "What is Publishing" workgroup one from OSI2016, investigate the feasibility of publisher services disaggregation, whereby peer review (and other services such as editing) can be offered as a discrete services. Doing so would provide room for competition in the marketplace—in this case, room for other peer review systems to evolve (including those offered by publishers) while also potentially lowering the costs of subscription packages."

CULTURE OF COMMUNICATION

I. Charge & Members

The Culture of Communication working group ("CoC") expands upon a recurring theme of OSI 2016 to have the OSI community work together to improve the culture of communication around Open Access inside academia, particularly inside research.

As part of this effort, it may be important to clarify the message surrounding the benefits and impacts of Open. It may also be important to determine what resources and information are needed before this messaging can be effective, including showing the benefits of Open to a skeptical research community; addressing the many concerns of stakeholders; clearly explaining the pros and cons; and demonstrating the case for why the transition to Open is worth the trouble.

Delegates to this working group are:

- **Barbara DeFelice**, Program Director for Scholarly Communication, Dartmouth College Libraries
- **Susan Haigh**, Executive Director, Canadian Association of Research Libraries
- **Barrett Matthews**, State Authorizations Coordinator, The George Washington University
- **Dan Morgan**, Digital Science Publisher, University of California Press
- **Eric L. Olson,** Community Engagement & Support Specialist, ORCID
- **Leslie J. Reynolds**, Senior Associate Dean, University of Colorado Libraries
- **Rachael G. Samberg**, Scholarly Communication Officer, UC Berkeley Library
- **Jason Steinhauer**, Director, Lepage Center for History in the Public Interest, VIllanova University
- **Mary Yess**, Deputy Executive Director, The Electrochemical Society

II. Overview & Summary of Proposal

Fifteen years following the Berlin Open Access Initiative, the academic publishing community continues to encounter challenges in describing and discussing what Open Access ("OA") is, and what benefits and impacts it carries. The messages conveyed between and among stakeholders vary widely, and often conflict. To some librarians, for instance, OA connotes a particular funding model—contingent upon replacing subscriptions with article processing charges or memberships. To others, OA may be perceived as a means of conserving collections budgets by eliminating subscriptions. To certain academic authors, OA might carry the perception of favoring STEM disciplines for which more OA journals (and thus OA publishing opportunities) currently exist. For some academic publishers, OA may appear to threaten the scholarly publishing's prestige in the face of journal proliferation.

These examples are oversimplified characterizations of stakeholder opinions. Yet they underscore the important notion that we have not yet solved how to communicate effectively about OA. Indeed, these equivocal and complex conceptions of OA have yielded a culture of communication in which scholarly publishing stakeholders effectively speak different languages when trying to discuss their needs and concerns. This has resulted in tension, misunderstanding, interdisciplinary differences in experiences, and a maintenance of status quo. More than two decades into the OA movement, universal OA is far from realized and the current reality of OA has not lived up to our vision.

By simplifying how we communicate about OA, its benefits and impacts become easier to evaluate and discuss. **In its simplest form, Open Access is an outcome: scholarship may be accessed online without cost or other barriers to access and reuse by readers other than what is needed to access the Internet itself.** In its simplest form, OA is unencumbered by the pathways that could be invoked to achieve it or the resulting landscape of OA journals. By paring down the way we describe and understand OA in this fashion, we can more easily identify and address where stakeholder needs diverge and overlap, and collaboratively forge concrete pathways forward. To make progress towards OA, therefore, we must address how we have come to describe and discuss OA itself.

This OSI workgroup, the "Culture of Communication" (CoC), was tasked with addressing this very problem. Following OSI2016's common thread about conflicting messaging around OA, this workgroup was asked to develop partnership proposals for this community to work together to improve the culture of communication inside academia. As discussed more fully below, we set out to accomplish these aims by articulating the needs to:

> **Clarify** the message about OA. Identify what OA is, and what it is not. OA is simply an outcome—the scholarship is freely accessible online, and freely reusable. OA is not a funding model, a peer review system, or a resulting landscape of particular journals.
>
> **Create** the message for particular communities. Simplifying the message to its core values it reflects and the societal effects it enables. Specifically, open access: promotes innovation and progress; benefits the public good by promoting social justice and democratization, and; supports professional impact for all academic publishing stakeholders by reducing barriers to accessing scholarship.
>
> **Communicate** a simpler message. One vehicle to facilitate communication of simpler, tailored messages is storytelling. Stories are ways to communicate about OA impact and incentives, and are particularly effective as they harness the speaker's own language in doing so.

Partnerships are essential to facilitate these three changes in the culture of communication. Partners can help create the resources, guidance, and tools for stakeholders to clarify and tailor their own messages and streamline their OA storytelling. Partnerships can also promote national rewards and incentives to celebrate OA successes. The CoC working group offers recommendations below about the types of partnerships to be formed, and the specific work product and rewards these partners can create.

III. Need for Improvement

The CoC working group identified numerous examples of misunderstanding and miscommunication regarding OA from our varied experiences. Although much has changed in the past fifteen years, the misunderstandings that remain prohibit progress and limit the potential for wider ranging collaborations. The culture of communication is not so different from 2012, when Peter Suber noted:

> "My honest belief from experience in the trenches is that the largest obstacle to OA is misunderstanding." (Peter Suber, Open Access, MIT Press 2012)
>
> "Nobody is surprised when cultural inertia slows the adoption of radical ideas. But cultural inertia slowed the adoption of OA by leading many people to mistake it for a more radical idea than it actually is." (Peter Suber, Open Access, MIT Press 2012)

The culture that has developed is marked with:

1. Tension
2. Misunderstanding
3. Inter-disciplinary differences in experiences
4. Maintenance of business models that don't work well anymore
5. A reality doesn't match the ideal

Many stakeholders are involved in the global shift to a more open dissemination of knowledge, and communication challenges are intrinsic given the diversity of interests. However, many of the stakeholders encounter misunderstandings within their own institutions, across different disciplines and from those with different statuses in the research and scholarly enterprise. We must develop better ways to communicate across all these stakeholders, and develop a range of tools for those who speak from vastly different backgrounds and with different concerns. To improve the current culture

of communication, we need to hear a wider range of stories and to also give a wider range of stakeholders the knowledge and authority to speak for the changes they want to see.

IV. Addressing the Message

1. Clarifying the Message

Ultimately, Open Access is simply an outcome for a scholarly object (article, book, etc.) whereby it is freely accessible online, and freely reusable. Always using this simple clarification as the basis of your message enables you to create the most appropriate message for your audience.

While Open Access may be aligned (or not) with the following notions, OA should not be defined or explained using any of them: a specific business model, peer review criterion, cost-cutting strategy, or a resulting landscape of particular journals.

2. Creating the Message

Using the above clarification as the basis of your message enables you to more effectively create communications targeted for particular communities. For example, if your message requires you to try and enable more OA publishing at your institution, you can make it clear that you, e.g., never intend that an author has to write a *different* type of book, or a *lower-quality* journal article. It is the same book and the same article because OA is simply an outcome that enables free access and reuse.

Simplifying the message first not only helps address any preconceived notions that may prevent appreciation of it, but enables you to effectively add the more complex specific and contextual information that your audience is expecting. For example, if your aim is to promote innovation and progress with your message about OA, you can clear up any doubts that people sacrifice quality, or attribution, by enabling reuse and easier building on the work of others. If your aim is to promote social justice and democratization, then you can prevent any concerns that the content that is democratized is of any lower quality.

3. Communicating the Message

While the creation of messaging is a challenge, an equal challenge is how to communicate it. How do we communicate the essence and benefits of OA? What are the ways we can do so? There are a few overarching considerations.

Communicating the message must:

- Engage in a fresh way those we ask to do the communicating
- Reinforce that it's in everyone's self-interest to push for OA
- Make the case for why this is all worth the trouble
- Provide easy, practical tools to publish OA
- Move easily along a continuum of nano-engagement to macro-engagement (engage with individuals, engage with groups)

Who should be communicating? Everyone! All stakeholders should communicate and become OA ambassadors: authors, librarians, provosts, communication offices, professional societies, funders, and publishers. Different stages in the OA publishing process and audiences for the message require different communicators and vehicles.

Should we trust researchers to tell their own OA stories? Absolutely, we should trust the entire community, individuals and groups. But we must provide tools that easily build clear and consistent OA messaging into everyone's DNA. Responding to OA should be like responding to ORCID: "Oh, that's interesting and highly beneficial; what do I need to do to take advantage of this?"

What are the vehicles we all can use? One effective vehicle is storytelling. The stories do not need to be grand, they simply must convey what resonated with the storyteller and tell the story in his/her own words. There are many benefits of using stories: they can ease communicating with the carrot of "narrative" rather than the stick of "mandates."

Scale is important to keep in mind when telling stories: one should move fluidly from the small and the personal to the large impact on the scholarly community as a whole. Advisors can lead by example and encourage their students to follow. In telling the story, sometimes it's necessary to deflect the premise ("burying the lede")—focus on the human side of the story rather than a message of "OA must happen."

Being an advocate for OA, and publishing OA, has additional benefits—it can lead journalists to write about the storyteller. Storytelling can help encourage community building by sharing stories. It trusts and empowers communicators, enables ambassadors.

There are a number of good resources for examples of storytelling and actual stories. These include:

- Impact Stories
- Your Story Matters
- Open Access: 100 Stories of Impact
- Open Access Success: Be Inspired by over Thirty Compelling Stories
- Global Reach: Open Access Stories Available
- Open Access Success Stories
- Open Access Success Stories Blog
- 100 Stories: The Impact of Open Access
- Telling Open Access Stories

Workshops are practical tools to provide top-down education and support to individuals. They can take a variety of formats and themes. A nice example is the University of California-Berkeley's "BRII and Brie" event. Here the library recognizes open access publications funded by the Berkeley Research Impact Initiative (BRII). The February 2017 event included remarks from the university librarian and BRII-funded faculty members about their scholarship, and the impact of BRII and open access; a lightning round of publication intros by attending BRII recipients in attendance; and a display and discussion of BRII-funded work.

Other examples of workshop topics include increasing impact as a researcher, how to do peer review, how to publish your dissertation, benefits of an ORCID number—all of which can carry "background" messages about OA and give options for being a good "OA citizen." Here are some examples of what others are doing and some resources to get started in creating a workshop:

- Open Access & Scholarly Communications @ UC San Diego: Open Access Workshop Resources
- Open Access Directory's Conferences and Workshops Related to Open Access
- Electronic Information for Libraries Open Access Programme
- Frontiers Data Services Workshop in an Open Access World
- OpenAIRE Workshops

Community-based social marketing revolves around the idea that sustainable change in the behavior of members of a community has the most effect when it involves direct contact with people and is carried out within communities (moving from nano-engagement to macro-engagement). Planting seeds with individuals can help to socialize the message within a community. Social-based marketing is another complex field and there are many resources to help gain an understanding as well as to start putting together a plan. While most of what has been written revolves around environmental issues, the articles can be used to extrapolate from and create a plan on socializing pro-open access behavior. Some good starting points are:

- Your Quick Guide to Community-Based Social Marketing
- What is Community-Based Social Marketing? (And What It Means to Me and You)

Open Access Week is also an opportunity to engage on all levels and to partner with scholarly societies and open access organizations.

V. Recommended Partnerships to Effectuate Change

Moving Forward

The "Culture of Communication" workgroup parallels the direction and intentions of the OSI mission. A diverse group of stakeholders met around the same table and topic with two broad goals: analyze the well known "wicked problem" of communicating the essence and benefits of open and recommend a path forward that extends analysis into action.

OSI and scholarly communication more broadly are community efforts, so almost any new developments or progress in these spaces are somewhat dialectic in nature. Communication throughout the various "camps" is essential, but this has, somewhat ironically, been a challenge within and between many of the layers of the scholarly communication process.

Our recommendation for taking the first steps toward a resolution is twofold:

1. **Provide resources that can help users better understand, anticipate, and respond to the scholarly communication needs of their community;** and
2. **Use high-profile partnerships to institutionalize certain communication and visibility elements within scholarly communication.**

Help You Tell Your Story

Throughout this report, and fully agreed upon in our workgroup, is the need for clarity when communicating about OA, as well as several broad strategies that can help make these communications successful. Obviously, this is not enough to be the foundation of a robust communication strategy. We propose that a centralized "hub" of resources be developed as a collaborative exercise, which would feature elements beyond simply the specifics of messaging surrounding issues of scholarly communication.

We describe a number of strategies for "scholarly storytelling", but there are resources required to implement these strategies. This hub will contain ready-made and adaptable tools for these activities, such as registering for an ORCID iD or increasing impact. It will also contain guides that help users integrate discussions and recommendations about open into presentations or web guides. At the start this hub can be populated with limited resources, but the various stakeholders that utilize it can add their adapted or unique elements. With appropriate curation, this can be an easily discoverable, searchable index of tools by and for a variety of users.

Mapping the Culture of Your Institution

Even with the abundance of available resources, the task of communicating and contextualizing Open is not without complication. As we describe in the "Addressing the Message" section, most messages are not intended for, and will not succeed with, all audiences. A researcher will not respond to information or appeals about OA the same way that a dean will, and researchers in Biology may respond differently than their counterparts in English. Crafting messages for your community involves first determining who you need to communicate with and which strategies are more likely to result in

behavior change for that particular audience.

We have already discussed some of the ways that this can be achieved, such as finding the best person in each department to serve as a node in the open conversation. But how do you get to these steps? How can you determine how the various cultures within your institution interact with each other and with the concepts of open? There is no easy answer to these questions, but we propose the development of a new tool that rests between the quickest and ideal solutions.

There are some elements of scholarly communication that can fall back on a "checklist" tactic. When dealing with people and communities, this is not likely to succeed. There is not one set of practices that apply to all communities or even all communities within a specific area of interest or practice. They are all different, and their relationship to the culture around them varies. Given the complicated nature of determining these interactions and forming a communication plan based on them, the ideal solution would be to collaborate with someone who is an expert in ethnography or organizational communication. They would know how to draw out and evaluate these relationships in a detailed, responsible fashion, but such a collaboration is unlikely given the already stretched resources that scholarly communicators often have at their disposal.

One solution would be an ethnographic or interviewing tool that would give users guidance on how to engage their community and draw out the information that they would need to develop a communication plan. Like the resource hub, the tool can augment its effectiveness through use and evaluation. As it is employed in various contexts, successes and adaptations can become part of the tool.

As far as our group knows, there is not a tool like this being used currently, though there have been limited ethnographic approaches to visualizing scholarly communication environments.[1] We recommend at least exploring the viability of such a tool, and perhaps soliciting communities who would be willing to pilot test the method.

Institutionalized Collaboration

OSI 2017 re-implements the model that was utilized for OSI 2016, but with the an additional objective: propose partnerships that connect the vital strands within the scholarly communication landscape. Our workgroup conceived several ways that institutions within scholarly communication can work together improve the culture of communication around OA.

OSI as Fulcrum Event

OSI has undertaken the responsibility to bring representatives of all stakeholders in the scholarly communication community together for the annual meeting and online forums. While there is an impressive diversity of organizations and nations included, there is a need to include more authors and researchers. This responsibility can also be an opportunity for partnership. Some cross-discipline academic conferences now partner with smaller, discipline-specific meetings that help to bring attention and attendance to both that they may not be able to obtain separately. OSI could reach out to research communities to propose synchronous meetings that could provide increased researcher participation in the meeting.

OSI as Partnership Catalyst

OSI's interstitial position can make it an ideal partnership catalyst with scholarly communication. As identified by several workgroups in OSI 2016 and OSI 2017, one of the challenges of communicating between the "silos" of scholarly communication is that the "producers" like researchers are unfamiliar with the cultures of "providers" like publishers and vice versa. A fellowship program that facilitates an exchange of individuals between these silos could provide valuable insight and experience to begin bridging these cultural gaps.

An "Open Access Nobel Prize"

Visibility and recognition is vital to behavior change, and scholarly communication is a prime example. Recognition is focused most strongly on paywalled, premier journals, while there has been a lack of incentive to publish in open access environments. Such an award would provide this incentive, and scholarly communication institutions like funders, publishers, communities, and more could collaborate to create and maintain it.

NOTES

1 Lanclos, Donna. "Ethnographic Approaches to the Practices of Scholarly Communication: Tackling the Mess of Academia." *Insights* 29, no. 3 (November 4, 2016). doi:10.1629/uksg.316.

PROMOTION & TENURE REFORM

Stacy Konkiel, Altmetric
Cheryl Ball, West Virginia University
Kim Barrett, University of California San Diego and the *Journal of Physiology*
Peter Berkery, Association of American University Presses
Jessica Clemons, University of Buffalo
Sheree Crosby, Cabell's International
Holly J. Falk-Krzesinski, Elsevier and Northwestern University

In this report, we unpack how professional advancement practices—including and beyond promotion and tenure review standards—can be realigned to encourage researchers' adoption of open access, open research, and open educational practices.

The remit of the Open Scholarship Initiative 2017 "Promotion & Tenure Reform" working group clearly connected researchers' personal publishing choices to the oft-traditionalist system of promotion and tenure in the United States, wherein researchers feel compelled to publish in toll access journals or monographs if they wish to achieve tenure, win grants, receive awards, or otherwise advance professionally. Other professional advancement systems worldwide, such as university hiring and contract renewals and government and foundation grantmaking processes, similarly reinforce the primacy of toll access research formats. Hiring practices were of particular concern for our working group, given the increasing "adjunctification" and precarity of university posts in the United States. Due to these parallels, the Reform working group expanded our charge to consider hiring, grants, and other professional advancement scenarios common to researchers' concerns worldwide.

Here, we set the scope of the current problem, discuss the reasons why professional advancement scenarios should be realigned to reward open research practices, identify challenges to reforming professional advancement scenarios wholesale and worldwide, recommend concrete actions for beginning the reformation process, and share resources related to professional advancement and open access.

Setting the scope of the problem

The workgroup initially grappled with the scope of the assigned problem. We were asked to develop a "*widely-accepted and inclusive model....to help reduce the influence of journal publishing on promotion and tenure decisions and help make these decisions broader, more transparent, and less reliant on publishing and impact factor measures*"•. To a greater or lesser degree, not all workgroup members agreed with the underlying premise of this assignment as stated.

For example, in many disciplines, it is likely not desirable to reduce reliance upon publishing in journals• *per se*, because peer-reviewed articles as a vehicle for reporting will almost certainly, and appropriately, remain the coin of the realm for academic advancement.

Instead, academia needs:

1. A closer reading of research by committees charged with evaluation, rather than relying on the surrogates of publication venue and impact factor;

2. A broader view of the types of scholarly outputs that committees should consider as evidence of productivity and impact;
3. An explicit acknowledgement of the benefits of publishing in open access venues; and
4. Incentives that encourage openness.

The final issue has relevance and benefits not only for the faculty member in question (greater visibility, increased opportunities for collaboration, and so on) but also for their host institution (particularly with respect to demonstrating the collective impact of its scholars, as well as fulfilling a commitment to making that work available to society at large -- this may be particularly important for public universities).

Early on in our discussion, our workgroup agreed that our work should simply be a starting point for exploration, as we were a small cross-section of stakeholders in academia. More stakeholders need to be at the table for developing full recommendations for practice. OSI is well-equipped and positioned to undertake exploratory research that can bring together a broad sample of researchers, funders, and chief academic officers to advance this agenda, as discussed in the Recommendations below.

We also wrestled with "mission creep"•. Though many of the issues relating to openness are tangled up in other profound challenges in academia (e.g. What metrics do we use to evaluate research? How do overworked evaluation committees reward research quality over quantity? How does a researcher's gender affect his or her ability to commit to collaboration, open research practices, and so on?), OSI must be careful not to get sidetracked in itsmission to *promote openness*. On the other hand, we must be mindful that the issues inherent in infusing a culture of openness into academic advancement scenarios are likely highly dependent on discipline and culture, and some gains will be easier to achieve than others.

For example, this issue extends well beyond journal articles and/or STEM fields and the impact factors that almost exclusively apply in these settings, and yet it may be far more challenging to implement principles of openness in promotion and tenure practices for faculty in traditional "book disciplines" (i.e. the humanities and social sciences)•. The University of California's open access mandate for work produced by their employees (including graduate students) is focused on "scholarly articles"• and thus implicitly excludes books and monographs.

We should also consider the influence of changing norms and government mandates with respect to so-called "interim products of research"•. For example, the NIH has recently revised its grant application guidelines to encourage reference to work that has not yet been published in a peer-reviewed venue, but that nevertheless can be made publicly available, such as pre-prints deposited to a public server. This change, which in part is intended to enhance rigor and reproducibility in research findings, could well impact the extent to which promotion and tenure, hiring, and other funding agency committees likewise consider pre-prints and other interim forms of scholarly communication in their deliberations.

Open practices, on all sides of the table

As our working group considered "openness" as a virtue in professional advancement scenarios, we quickly realized that open practices should be encouraged by all actors in the system.

Some examples of open practices that might be encouraged are:

- **Open researchers** can publish their work open access, license their in-progress and completed work in ways that allows others to adapt and reuse it with attribution, "work out loud" to share their findings earlier on in the research process, share all of the outputs of their work (including research software, data, notes, presentations, and other "non-traditional" formats), and commit to public engagement, to connect other researchers and the public with their work. Due to their relative career security, senior researchers are especially well-positioned to be advocates for open research, as well.
- **Open educators** can share their educational resources openly, use others' open educational resources in their curriculums, collaborate in the open to develop teaching materials, and encourage their students to develop in their own right as open researchers.
- **Open employers** can offer transparent hiring and retention guidelines for faculty, share the benchmarks and metrics by which faculty and departments are evaluated, be explicit about professional advancement expectations, and make their promotion and tenure evaluation guidelines freely available in open formats, so that other institutions might learn from their examples.
- **Open funders** can similarly create transparency in the evaluation process, freely sharing the guidelines used to evaluate funding proposals, encouraging researchers to share their grant proposals (both accepted and rejected), and (where appropriate) releasing more information on the review process used by their committees.

These various examples boil down into two main facets of openness: openness in expectations and evaluation practices, and openness in the production of research.

Challenges to large-scale change

Our workgroup also cataloged barriers to increasing openness in P&T review processes, both with respect to the openness of the process itself, and with respect to encouraging and rewarding faculty for following publishing practices that increase the accessibility of their work. Many of these challenges also apply to making changes to the way annual review and reappointment processes are managed, hiring is done, and grants are awarded. The challenges discussed could be categorized as both structural and cultural. These identified challenges inform our Recommendations below.

Academic freedom is by far the largest issue to consider in promoting change, especially in the United States. Changes to P&T criteria that are intended to reward openness should not infringe on the rights of an individual faculty member to decide where his/her work should be most effectively published. At the same time, academic freedom can protect researchers' rights to make their work open access, even where review committees and other researchers disagree.
There is also an acute need to understand the level at which the P&T process is controlled at various institutions. For example, does a department or other academic unit regulate who can go up for tenure and what the tenure requirements look like, or is this centrally defined by the Chief Academic Officer, faculty senate body, or Board? Do faculty have a right to be reviewed at given checkpoints in their career, or little or no independent agency with respect to presenting their credentials? What are the various institutional levels of evaluation (departments, schools/colleges, provost, etc) and are they simply advisory or determinative in the process? Answering these questions across a range of institutions will define the locus at which efforts to increase openness must be directed.

There is also a need to define the landscape for openness in P&T and other academic advancement processes. The extent to which openness is already supported beyond institutional OA mandates is unknown. P&T documents that were reviewed were found to be largely opaque with respect to the

extent to which openness and accessibility are valued for professional advancement (with a few notable exceptions as referenced below).

There is also a hurdle to be overcome in defining how best to reach faculty to help them describe their impact through openness. Disciplinary bodies or societies could play an important role in codifying researcher norms and expectations, which in turn could guide the policies of academic institutions with regard to rewarding openness.

These researcher education efforts would also inform those who are asked to supply outside letters in support of professional advancement. Because such letters carry disproportionate weight in most P&T processes, it is important that no researcher should ever again have their professional advancement endangered• by a letter from an individual who focuses unduly on the "quality"• embodied by a given publishing model or venue (especially those who incorrectly conflate open access journals with low quality).

There are also cultural and resource issues that may limit faculty enthusiasm and even practical ability for making their work open, such as gender, the digital divide, and variable access to both financial resources and the technology required to fully open one's scholarship.

Faculty working in disciplines that offer ample support (e.g. staffing, time allowances, financial resources) and/or which explicitly value or even require openness are likely to progress more rapidly towards developing professional advancement scenarios that reward openness. But many others work in areas or institutions with neither the funds nor the technological infrastructure to support such openness. Realigning institutional support with openness goals will be crucial to allowing researchers the ability to make one's work open.

For example, in most institutions with which workgroup members were familiar, institutional funds set aside to assist faculty in paying APC's have been woefully disproportionate to the size of the research enterprise. Likewise, even within disciplines that are well-funded overall, these funds are by no means evenly distributed. Moreover, some types of research are inherently more costly, leaving faculty with little in the way of discretionary resources to underwrite OA publication or cover deposit fees for data archives, or even for institutions themselves to support OA, "free to researchers" initiatives like ArXiv or the Open Library of the Humanities.

Recommended work moving forward

Over the coming months and years, we recommend that OSI take forward the following projects to better meet community needs and increase stakeholder buy-in.

Research the existing landscape to better understand open research recommendations and requirements in professional advancement materials (P&T guidelines, job advertisements, university contracts, annual appraisal guidelines, etc) at leading universities worldwide. Estimated 2-3 months completion time required.

This might include research into:

The extent to which open access publishing and other open research practices (data sharing, public scholarship, etc) are encouraged and encoded in existing promotion and tenure guidelines and job

advertisements.

The University of Illinois at Urbana-Champaign convened a workshop on the University of the Future with a focus on open scholarship in March 2017. Group 1 focused on issues of credit & attribution. The group's preliminary report states, "Much of the discussion focused on the need for the reform of assessment systems and respect for a diverse range of outputs products and activities. It also became apparent that there are different types of credit; we need to understand how credit and attribution is different for distinct open scholarship communities." Partnering with this and similar groups to explore attribution as applied to the research evaluation process will be important to the development of a framework for promoting openness across all academic disciplines and sectors.

It will also be important to investigate how current evaluation practices stack up against our vision for a more open Academy. Juan Pablo Alperin (Simon Fraser University, Canada) and Erin McKiernan (National Autonomous University of Mexico) is currently investigating the former topic and has indicated that he would be happy to advise OSI on his findings, once complete. OSI 2017 keynote speaker Keith Yamamoto (University of California San Francisco, USA) indicated that his university was in the process of radically revising their P&T guidelines to incentivize better research practices; OSI might use Yamamoto's efforts as a case study, recommending certain practices to similar universities, or feature other universities like the University of British Columbia or IUPUI, who have already enacted more "open" P&T guidelines (see the Resources section for more information). OSI could also research—or fund independent researchers to investigate—the extent to which openness is addressed in academic job listings.

How universities might increase transparency in promotion and tenure process. Our group agreed that openness works on both sides of the hiring and review table, and that many institutions and departments suffer from a lack of clarity and transparency for what is expected of promotion and tenure candidates. By making the process more transparent—and by explicitly including encouragement of open research practices in promotion and tenure preparation and evaluation guidelines—we can make it easier and more appealing for researchers to practice open research.

How bibliometrics and other metrics used in research evaluation can encourage (and discourage) open research practices. For example, rather than relying on rather than relying on journal-level metrics as proxy for understanding research quality, one might rely upon article-level metrics, including citations and altmetrics. Similarly, counting data and software citations towards promotion and tenure might encourage more researchers to share their data and research software, especially in ways that encourage reuse.

Engage scholarly societies and high-level university research administrators and provosts to learn more about the challenges of promoting openness in promotion and tenure from their perspective. Estimated 18 months or more required. Areas for investigation include:

1. Which scholarly societies already promote openness in their best practices for promotion and tenure (similar to the Modern Language Association's recommendations for evaluating digital scholarship, see below);
2. Pressures that drive chief academic officers/provosts at leading universities worldwide. In turn, we expect that this information will help us position any future OSI programs that encourage changes in university-wide promotion and tenure practices that are decided by senior academic administrators;

3. Articulating the benefits of Open Access to decision makers who would be in a position to adopt Openness in promotion and tenure principles (department heads, provosts, etc);
4. The feasibility of incorporating policies that encourage open research practices into university and department accreditation processes;
5. Development of model policies and guidelines, which societies, universities and departments can easily adopt (akin to the use of model legislation in the United States, where groups promote a law or policy that is vetted by experts and adopted by state legislatures—e.g., Uniform Electronic Transactions Act, which makes voting via email legal for non-profit boards).

By actively engaging with powerful stakeholders at universities and scholarly societies worldwide, we can better address concerns over the costs and benefits of adopting policies that encourage openness. Through the development of model policies and guidelines that encourage open research practices, we can also reduce the friction of developing and passing local policies and guidelines.

Most debate around open research practices and professional advancement only address STEM use cases. OSI delegates should conduct a thorough literature review and interview and survey faculty from across all disciplines, career levels, and institution types to understand:

- Where are the pain points for researchers with respect to Open Access and open research practices?
- How many researchers worldwide are beholden to OA and open research mandates? What are the pain points for those researchers?
- How do institutional OA policies impact tenure-track faculty that are also required to follow promotion and tenure requirements that disincentivize open research practices?
- Do funder requirements for Open Access positively affect open research practices in the tenure and promotion process, where such P&T requirements weigh research funding into P&T cases?
- What can we learn about researcher evaluation from research institutes or academic libraries that don't have tenure (e.g. Scripps or HHMI)? What are the best parts of research evaluation practices worldwide, which we can borrow from to promote openness? What are the worst evaluation practices that should be avoided?

Estimated 6 months completion time required.

When enough intelligence is gathered from all stakeholders to make concrete recommendations, we suggest that OSI develop a plan for the following:

- Presenting recommendations and model policies and guidelines to senior academic administrators and department chairs of all disciplines, from a cross-section of universities worldwide. OSI should clearly articulate both the potential benefits and challenges of introducing such recommendations.
- Gathering and incorporating initial stakeholder feedback into recommendations.
- Assembling a pilot program for enacting revised recommendations, in partnership with scholarly societies, senior academic administrators, and department heads worldwide;
- Developing a final set of recommendations that offers concrete plans for encouraging adoption among various disciplines, scholarly societies, and universities worldwide. OSI may wish to engage the change-makers (e.g. department heads and Chief Academic

Officers) and precedent-setters at organizations like Association of American Universities and Association of American University Presses.

Resources and Guidelines

Promotion & Tenure
Here are known promotion and tenure guidelines that address open research practices:

- Indiana University Purdue University Indianapolis
- University of British Columbia

Other universities and institutes that have endorsed open research practices in other ways include the Montreal Neurological Institute and Hospital at McGill University and Université de Liège (which requires the deposit of research into an open access repository as a precondition for evaluation and has elsewhere publicly endorsed Open Access). The Open Access Tracking Project collects resources related to openness in promotion and tenure.

Job Postings
A number of job postings in the sciences that are explicit in their desire for open researchers can be found on the Open Science Q&A website. The Open Access Tracking Project also collects job postings that are related to open access or that consider open research practices. A group of researchers is also developing an Open Hiring Policy rubric, which institutions can use in their own hiring practices.

Funding Agency Policies
In many disciplines, the ability to win research funding is linked to one's promotion and tenure evaluation. Here are some funding agencies that explicitly call for open access or other open research practices in their granting guidelines:

- Wellcome Trust
- Research Councils UK
- National Institutes of Healthhttp://grants.nih.gov/grants/policy/data_sharing/(US) data sharing policy

MIT also maintains a list of US federal funding sources that have open access or open data policies.

Precedents from the realm of "digital scholarship"
The committee recommends that any guidelines on openness look to precedent guidelines on the recognition of digital scholarship and "non-traditional" research formats:

- Modern Language Association guidelines for evaluating digital scholarship
- Conference on College Composition & Communication Work with Digital Technology
- American Historical Association guidelines for evaluating digital scholarship
- PraxisWiki's Resources for Evaluating Digital Scholarship includes many more links to institutional and scholarly society guidelines on evaluating digital scholarship

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Writing – Original Draft Preparation: SK and KB
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UNDERSERVED POPULATIONS & INFO UNDERLOAD

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This Open Scholarship Initiative workgroup is a new one, partly as a follow up from the second section of the "Overload" group in the OSI conference of 2016. The 2017 Underserved workgroup members celebrated the creation of a dedicated workgroup for exploring, and hopefully improving, the Lower and Middle Income Countries' (LMICs) particular challenges and opportunities in the journey towards greater openness of scholarship. (Workgroup membership overlapped substantially with the Journal Editor Stakeholder Group, and some discussion points and recommendations of the two groups are complementary.)

The workgroup report of 2016 defined information underload as "the condition of the *under* delivery of meaningful information caused by barriers of both access to and entrance into scholarly dialogue."

Please note that full input from all workgroup members was unfortunately not obtained by the submission deadline, so this document may be edited and re-posted.

This document focuses primarily on Open Access in formal scholarly publishing, rather than other areas of openness, such as open data, open monologues, open educational resources, and national policies, etc. We recommend that these aspects be explored further by additional workgroups being added to OSI 2018 to more optimally and fully address LMIC openness and related development issues, and to improve representation globally in the OSI.

The 2017 group first discussed the challenges researchers from LMICs have in gaining "researcher as reader" access to Northern research content, and "researcher as author" difficulties in getting content published by High Income Countries' (HICs) journals; these two factors together are often considered the primary challenge for Southern scholars. While researchers from LMICs definitely do need access to HIC-published research content (Research4Life is notably doing excellent work in this regard), this should not imply that researchers and publishers in LMICs should necessarily try to exactly emulate the system of highly commercialized research journal publishing that characterises scholarly communication in the developed world (open or subscription-based), when a different and arguably more appropriate model is already evident in LMICs. There is often an implicit assumption that the Northern publisher system is the only correct one, and that Southern scholars and journals need to assimilate into and replicate the Northern system. This group agreed to articulate research publishing's substantial systemic differences in most LMICs as compared to that of HICs, and then explore and analyse challenges and opportunities and recommendations for increased openness from developing country regions' norms and perspectives.

Significant time was spent critiquing the challenges and flaws of the Northern system of scholarly publishing, for researchers in both the Global North and South. The fact that publishing is so heavily commercialized in the North, dominated by a handful of giant companies receiving content and peer review for free (albeit co-ordinated by publishing company staff) and selling the very expensive published version back to the institutions whose research staff created the content is a peculiar business model. Commercial publishers obviously adding some value in layout editing and proof-reading, plagiarism detection, content tagging, metadata generation, DOI registration, generation of a variety of impact metrics, depositing content and data into key repositories like PubMed Central,

reference linking, hosting and archiving, but it is noted that there are ways that this can be done much more affordably. Many HIC publishers that provide Open Access (OA) journals or "hybrid" options charge astonishingly expensive Article Processing Charges (APCs) to maintain their high profit margins. APC's are usually paid for out of research funding, often from public funds, as are subscription fees (or "big deals") via public university library budgets. The extremely high profit margins attained by the HIC giant commercial publishers are largely derived from public sector (taxpayer) revenue. The group suggested that a more efficient use of public sector funds for research publishing could be developed by the North American and European governments that are ultimately funding the research and paying for content, before or after publication.

The Clarivate (formerly Thompson Reuters) Science Citation Index (SCI), also known as Web of Science (WoS), and its Impact Factor (IF), have well-documented problems as the primary de facto measure of journal quality in the North, but it is actively detrimental to developing country research ecosystems. The IF has been historically biased against inclusion of developing country research journals, and entrenched a condescending false dichotomy between so-called "international" or "mainstream" journals (usually those published in the HICs), and "local" or "peripheral" journals (often meaning those published in LMICs). Quoting a passage from page 8 of the article "*Open Access and the divide between 'mainstream' and 'peripheral' science*" by Jean-Claude Guédon [i] (http://eprints.rclis.org/10778/)

"In 1982, a meeting was held at the Institute for Scientific Information (ISI), the home of *SCI*, where the issue of the presence, representation and impact of 'peripheral' or 'Third-World' countries was debated. Some statements illustrate clearly the way in which the issues were cast. For example, D. J. Frame was described as approaching the issue in the following manner:

'If the purpose of the bibliometric indicators is to help in the building of a national scientific inventory, telling us what kind of research is being performed at different institutions, then coverage of local as well as mainstream publications would seem important. On the other hand, if one is primarily interested in investigating Third World contributions to world science, then publication counts taken from a restrictive journal set would seem most appropriate.'

In brief, two very different tasks that both apply to developing nations are contrasted here: a national inventory of scientific activities on the one hand, and their 'contributions to world science' on the other. The first task, clearly related to issues of national policy, is ultimately dismissed, presumably as a provincial exercise of no interest to the rest of the world. Without justification or analysis, a distinction is then drawn between 'local publications' and 'mainstream' or 'world science', as if it were an evidence. Publications are either 'local' or 'mainstream' and there is a definite gap between the two sets. The restricted set of 'mainstream publications' is also brought forward without question: it is used to investigate 'Third World contributions' to 'world science' and is thus "most appropriate". The simplistic nature of the argument is clear. Indeed, what is "world science"? If it is indeed the science publications selected by *SCI*, it is not difficult to point to the bootstrapping move that allows *SCI* to claim it is doing just the right thing."

According to anecdotal evidence provided by one of the workgroup members, some developing country-published journals that have actually been included in the Web of Science, and assigned IFs, have experienced different and biased treatment compared to those from developed countries.

The prevailing nomenclature distinguishing HIC journals (as international / mainstream / world science) from LMICs journals (as local / peripheral) should not remain in common use for three main reasons:

1. This terminology reinforces the misguided assumptions that journals published in developing countries contain only poor quality or unimportant research and developed country journals publish only high quality, high impact research

2. It ignores the fact that the system of publishing in the developing world is different from that in the developed world, ascribing this to journal quality differences instead of to a different type of journal publishing
3. It is overly simplistic, ignoring the fact that there is a continuum of journal quality in every part of the world, and the importance and impact of research depend on the community, conditions, and circumstances to which it applies

Another negative consequence of the IF and other Northern indexes excluding most journals from developing countries is that the statistics on the number of journals and articles published by developing countries quoted in the literature are usually drawn from these exclusionary Northern indexes, and thus developing country research volumes are systematically under-estimated.

However, the most pernicious effect of establishing journal prestige via the commercially-owned WoS that favours journals published in Europe and North America is that university tenure and promotion criteria in developing country universities have emulated those in the developed countries, heavily rewarding 'researchers as authors' from developing countries for having their research articles published by IF journals in the North. This results in intellectual property brain drain of research outputs from the LMICs research ecosystems to those of HICs, further exacerbating inequalities. Another unintended consequence is that developing country researchers are rewarded for choosing research questions that are of interest to the commercial HIC publishers in the hopes that their articles will be accepted for publication there; this incentive skews research globally towards developed country topics and away from developing country issues. It exacerbates regional inequality and inequity of power over the global research agenda and visibility, rather than improving them. These unintended consequences of reliance by developing country institutions on the IF undermines research into ways to mitigate the disease burden, poverty, and other challenges that are more prevalent in or in some cases specific to developing countries.

Those working to increase open scholarship to benefit global scholarly communication and particularly to promote the more equitable role of research and journals in developing countries should also acknowledge and constructively address the skewed incentives produced by the prevailing Northern publishing system and the primary use of the Impact Factor as a proxy for prestige and quality of journals.

An unfortunate unintended consequence of charging APCs for Gold OA journals has been the emergence of fake journals (journals that claim to peer review content and adhere to journal standards, but do not) that scam unsuspecting researchers as authors. There is a widespread and often incorrect perception that these so-called "predatory" journals are generally published in LMICs. The net of the now-defunct Beall's list was cast too wide and incorporated new or stand-alone journals that are striving to publish legitimately. Legitimate OA journals need to be incentivized to improve, rather than blacklisted. Blacklists have included as criteria some publishing practices that are a function of the developing country publishing milieu, rather than intent to scam. For example, Beall's former Possibly and Probably Predatory Journals list included the criterion of authors and editorial board members listing Gmail, Yahoo or Hotmail email addresses for their contact information. It is standard practice for authors in developing countries to use these types of email addresses professionally, because some university IT support does not adequately support institutional email addresses and institutional servers may be unreliable. In addition, authors may find a personal email address facilitates a publishing track record, even if job changes result in multiple moves from one university or research institute to others over time.

To more constructively address the problem of fake journals, this workgroup agreed that more appropriate, equitable methodologies of establishing trust in journal quality need to be developed. It was noted that work has long been underway to handle this imperative with objective standards and validation (examples are INASP and AJOL's Journal Publishing Practices & Standards (JPPS) framework www.journalquality.info, SciELO's indexing systems, South Africa's journal lists, and Latin American countries' journal ranking systems, as well as DOAJ and other open access indexing systems).

Publishing in LMICs vs HICs has several fundamental differences. Rather than large commercial and professional publishing companies with tens or hundreds of journals in their "stables", journal publishing in the developing world is characterised mainly by stand-alone journals, which are often owned and run by scholarly societies, or are published by faculty collaborations between universities or by university departments https://www.ajol.info/public/Scholarly-Journal-Publishing-in-Africa-Report-Final-v04c.pdf page 26. Such journals may have difficulty finding the resources to meet technical publishing standards established by publishers in developed countries. A solution to this in several LMIC regions has been the development of regional journal hosting platforms that apply economies of scale to reduce costs for developing country journals, while establishing standards that journals must meet to use their services. Examples include SciELO in Latin America and African Journals Online (AJOL) in South Africa. These platforms are based on free, open source software, placing the services that usually require the proprietary platforms of commercial publishers within financial reach of journals in developing countries. They also provide various "meta-publishing" services to the journals accepted to the regional platforms for free or at a low cost, including software and software maintenance, search engine optimisation and higher online visibility due to aggregation, online hosting and back-ups, Digital Object Identifiers (DOIs), article usage metrics, peer-to-peer training facilitation, etc. By providing these hosting and online publishing solutions using affordable solutions, negotiating discounts, and absorbing various costs, these regional platforms help significantly to make quality OA based on a combination of international and regional publishing standards a viable option for stand-alone journals from their regions.

This workgroup recognised that many issues and challenges of publishing and openness are shared globally, but some are unique to LMIC regions and will require different approaches. Challenges specific to the developing world include:

- extreme resource scarcity and resulting ills, including unpaid editors, few or no staff, little journal infrastructure, and inadequate funds to pay for costly journal standards
- the existence of research fields that don't exist in the North
- loose legislative and policy environments and infrastructure
- absence of OA and science policies at a country level in many countries in the developing world
- disconnected and sometimes weak institutions
- a need for extensive support and mentoring of authors and reviewers by Editors of journals publishing in developing country contexts.

While there is no doubt that these challenges can and do impact the quality and extent of research and research publishing in developing countries, robust research of global import is being conducted and published in LMICs, contrary to stereotypes and bias. Even higher volumes of research on contextually and regionally important topics relevant to developing countries is conducted and published by LMIC journals, with real world impact in-country and regionally.

However, the Global South is not homogenous, within and between countries and regions; in fact, heterogeneity is the norm. Considerations include the need for multiple publishing languages for different readerships (simultaneous accessibility of indigenous language research outputs, and a need for articles in major international languages for the sake of global sharing) – in Brazil for example, 40% of medical articles are published in more than one language (Abel Packer comment during the meeting).

Progress towards OA in the Global South is being made. An important step has been the Dakar Declaration on Open Access in the Global South in 2015 (http://wiki.lib.sun.ac.za/images/5/50/Dakar-declaration-2016.pdf), which now needs implementation. The Indian Citation Index http://www.indiancitationindex.com/ and new African Citation Index by CODESRIA https://www.codesria.org/spip.php?article2669&lang=en are advances. The nascent formation of SPARCAfrica, to advocate for Open Access throughout the African continent including OA student advocacy movements, is positive. Also, many OA journals publishing from the developing world do not charge APCs, and operate cashlessly, made possible primarily by expert volunteerism and assisted by

regional platforms. Donors are beginning to mandate OA for research conducted in developing countries, just as they are elsewhere in the world.

A study of journals in the DOAJ suggests that 65% of Open Access journals globally do not charge authors for publication https://sustainingknowledgecommons.org/2017/02/22/oa-journals-study-2016-65-free-to-publish/. This information should be more widely shared and the means of operating successfully without charges of any kind detailed and publicized.

Recommendations for future progress:

A member of this underserved communities workgroup suggested as a global resource a large-scale project that details all author charges of all kinds by all journals (including Subscription, Embargo, Hybrid, and various forms of OA) – an endeavour that would be non-trivial work, but that could well be useful for understanding and shifting the entire global system of formal research output exchange.

This workgroup underscored that public sector policy change for openness is of critical importance. One major difference between regional journal hosting platforms is that SciELO in Latin America, and more recently in South Africa, has been supported by Latin America's government policies on Open Access and government funding to cover the costs of the journals and the hosting platforms supporting them (SciELO, Latindex, and a network of repositories). In many other developing countries, governments are NOT prioritizing higher education and research itself, let alone funding journals, platforms, and OA policies; as a result there is a need for an upward advocacy in Africa and South East Asia for OA policy and allocation of public funding. This is one such example of the identification of best practices in developing country regions for others to advocate for and emulate.

Universities in developing countries need to create incentives to increase faculty research publishing in developing country-based OA journals, in order to strengthen Southern rather than Northern research ecosystems.

Donor mandates could support OA regional publication of developing country research to maximize regional change and impact, and support the proposed university policy shift. This would usefully include strongly voiced and financial support by UNESCO, World Bank, WHO, etc., to encourage developing country governments to prioritize and fund the strengthening of developing country journals, research networks, and journal platforms.

For LMIC governments, there is a need to link OA with their scientific knowledge agendas that stemmed from the SDG processes and which were reiterated at WSIS review in 2017 https://www.itu.int/net4/wsis/forum/2017/#outcomes. Lack of policy frameworks (or desire to have one) and appreciation of OA publishing at the highest possible level in LMIC governments were noted by this workgroup as being major concerns for openness in the Global South. It is suggested that LMIC governments develop appropriate mechanisms to support internal policy development and initiate actions for capacity development at various levels. It is noted that UNESCO offers financial support for OA national policy development (announced in 2015 in Nairobi), but only a few LMICs have actually come forward requesting this support from UNESCO, so this availability of funding support might need reiteration and wider dissemination.

LMIC regional aggregator platforms should ideally expand to include more developing country journals in order to give stand-alone journals an advocacy voice, a cost-saving means of attaining technical requirements, and increased discoverability. Increasing numbers of journals in these regional platforms may help develop a viable model to increase openness, strengthen developing countries' research ecosystems, and permit research agendas to be defined more by needs and researcher interests of developing countries and regions than by the currently dominant publishing priorities of the North.

Southern librarians, science academies, scholarly societies, research institutions, and universities need to intentionally work together (including changing the promotion and tenure criteria!) to increase

regional platforms. Donors are beginning to mandate OA for research conducted in developing countries, just as they are elsewhere in the world.

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This workgroup underscored that public sector policy change for openness is of critical importance. One major difference between regional journal hosting platforms is that SciELO in Latin America, and more recently in South Africa, has been supported by Latin America's government policies on Open Access and government funding to cover the costs of the journals and the hosting platforms supporting them (SciELO, Latindex, and a network of repositories). In many other developing countries, governments are NOT prioritizing higher education and research itself, let alone funding journals, platforms, and OA policies; as a result there is a need for an upward advocacy in Africa and South East Asia for OA policy and allocation of public funding. This is one such example of the identification of best practices in developing country regions for others to advocate for and emulate.

Universities in developing countries need to create incentives to increase faculty research publishing in developing country-based OA journals, in order to strengthen Southern rather than Northern research ecosystems.

Donor mandates could support OA regional publication of developing country research to maximize regional change and impact, and support the proposed university policy shift. This would usefully include strongly voiced and financial support by UNESCO, World Bank, WHO, etc., to encourage developing country governments to prioritize and fund the strengthening of developing country journals, research networks, and journal platforms.

For LMIC governments, there is a need to link OA with their scientific knowledge agendas that stemmed from the SDG processes and which were reiterated at WSIS review in 2017 https://www.itu.int/net4/wsis/forum/2017/#outcomes. Lack of policy frameworks (or desire to have one) and appreciation of OA publishing at the highest possible level in LMIC governments were noted by this workgroup as being major concerns for openness in the Global South. It is suggested that LMIC governments develop appropriate mechanisms to support internal policy development and initiate actions for capacity development at various levels. It is noted that UNESCO offers financial support for OA national policy development (announced in 2015 in Nairobi), but only a few LMICs have actually come forward requesting this support from UNESCO, so this availability of funding support might need reiteration and wider dissemination.

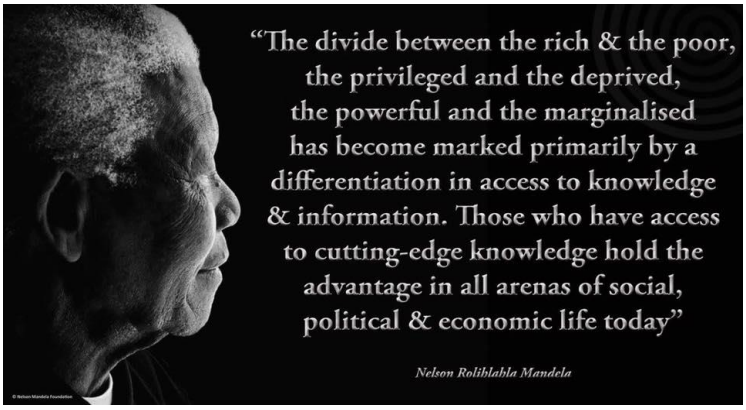
LMIC regional aggregator platforms should ideally expand to include more developing country journals in order to give stand-alone journals an advocacy voice, a cost-saving means of attaining technical requirements, and increased discoverability. Increasing numbers of journals in these regional platforms may help develop a viable model to increase openness, strengthen developing countries' research ecosystems, and permit research agendas to be defined more by needs and researcher interests of developing countries and regions than by the currently dominant publishing priorities of the North.

Southern librarians, science academies, scholarly societies, research institutions, and universities need to intentionally work together (including changing the promotion and tenure criteria!) to increase

connections and networking between institutions and researchers, for a robust, open, research-sharing network, within regions as well as South – South networking.

A mechanism to enhance Southern collaborative research is needed to increase Southern researcher connectedness, rather than current North-South research collaborations that currently almost invariably lead to publication in HICs.

Development of visible displays of verified, appropriate, and objective standards is needed to showcase excellent journals from developing countries and mentor young emerging ones, dispelling stereotypes and excluding fake journals.



Our working group defined underserved communities in the context of the Global South. However, we also briefly discussed expanding our focus to address the impact of OA on women all over the world. Given additional discussion time in the future, it might be worth exploring this topic further.

We reiterate our recommendation that substantial efforts be made by the OSI to be more inclusive of LMIC participants going forward, and that additional workgroups be added to OSI 2018 to more optimally and fully address LMIC openness and related development issues, and to improve representation globally in the OSI.

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[i] Guédon, Jean-Claude "Open Access and the divide between "mainstream" and "peripheral" science" http://eprints.rclis.org/10778/1/Brazil-final.pdf accessed 7 July 2017

ROGUE SOLUTIONS & NEW OPEN RESOURCES

Introduction

The Rogue Solutions group, new to OSI in 2017, was tasked with responding to this charge:

> What are the impacts of Sci-Hub and other rogue solutions on open access and what is the future of this approach, which may be gaining new mainstream support (noting for instance Wellcome's recent funding of ResearchGate). What new resources should the scholarly community develop (and how) that would be useful and legal additions to our progress toward open (a new blacklist for instance, or new repositories)? This group will also integrate (to the extent possible) ideas raised by the information overload workgroup from OSI2016.

Our membership was as follows:

Paul Peters, CEO, Hindawi
Tom Reller, Vice President Global Corporate Relations, Elsevier
Bryan Alexander, President, Bryan Alexander Consulting
Hillary Corbett, Director of Scholarly Communication & Digital Publishing, Northeastern University
Christopher Erdmann, Chief Strategist for Research Collaboration, NCSU Libraries
Meg Oakley, Director of Copyright & Scholarly Communications, Georgetown
Morgan Stoddard, Director of Research Services, George Washington University
Nancy Gwinn, Director, Smithsonian Institution Libraries
Lars Bjørnshauge, Founder and Managing Director, DOAJ

We began our session by discussing the definition of "rogue" in terms of etymology and practice, teasing out positive and negative connotations. The term suggests opposing established authorities, which really cuts across a wide value spectrum.

The workgroup agreed that Sci-Hub and any other service that acts in blatant violation of copyright laws, does not fall within the definition of open access and is not a solution to be considered by the workgroup. To get away from the solely negative connotations of "rogue," we decided to coin a more expansive term and asked, what can we learn about scholarly communication from the rise of New and Entrepreneurial Approaches to Open or...NEATOs? NEATOs are not "rogues" in the legal sense because they operate within the boundaries of the law and are not associated with illegal acts or dishonesty.

Projects discussed included: databases of materials and/or links (LibGen, Sci-Hub); social media venues for sharing articles (r/Scholar on Reddit, #ICanHazPDF on Twitter); social media in general; web browser extensions (Unpaywall, CanaryHaz, the OA Button). During our meetings we also touched on Researchgate, CHORUS, repositories (institutional + otherwise), DeepDyve, arXiv + other –Xiv projects, Academia.edu, OpenMinted, Unlatched, and Dissem.in.

Part I: Why do NEATO solutions exist?

We then explored the question of why rogue of NEATO solutions exist, building on the hypothesis that their proliferation might reveal challenges in the scholarly publication ecosystem. We determined that the reason NEATO projects exist is because readers experience a number of pain points in trying to access published research and scholarship. NEATOs attempt to address these impediments. As Lars Bjørnshauge of the Directory of Open Access Journals (DOAJ) put it, "We are stuck in a system we want to leave."

Pain points identified by members of the workgroup are:

1. Difficulties in discovering and accessing content
2. Restrictive licensing agreements
3. The diversity of users needing yet unable to obtain access (citizen scientists, global south, etc.)
4. Workflow challenges (navigation, complexity)
5. Digital divide, the gap between the global north and south, the divide between those affiliated with an institution providing access to the full record of scholarly publication versus those who are not, and "the informationally disadvantaged"
6. The sustainable business model challenge
7. Quality vs quantity of materials (following Vint Cerf's opening keynote address)

The workgroup identified several NEATO/rogue solutions (access methods outside of the publisher's traditional distribution channels) that work to improve access and reduce costs. It's important to recognize that a number of NEATOs, including Unpaywall, OA Button, Dissem.in, arXiv.org, Sci-Hub, et al., occupy different points across a spectrum of legality.

Part II: How can NEATO solutions help?

The workgroup then explored and discussed how these projects could contribute to a solution space. At this point we only considered NEATO solutions that do not violate copyright laws. This led us to several possible models:

Pay-per-view reform: a/k/a "iTunes for research papers". This is a recognizable business model, and one that guarantees payment and quality control. However, it may not actually be open in many senses of the term. Publishers might not see an economic incentive to migrate to such a system, given their current business model's success; indeed, publishers might lose some control.

Subscription access reform: a/k/a "Netflix for scholarly publication." There are some examples of this already in play, such as DeepDyve. However, there are cost issues, as the price point can still exclude audiences. Low adoption levels can also render projects inviable.

Open access gateway services: projects like 1Science and ScienceOpen organize OA content in one spot. They are also legally sound. However, their value proposition isn't necessarily clear to purchasers, and adoption rates remain low.

Niche projects based on open: there are a number of projects grounded in narrow scholarly communities that use open access to serve them well, such as the Biodiversity Heritage Library (Smithsonian Museums) and the SAO/NASA Astrophysics Data System (Harvard University and the Smithsonian).

Artificial intelligence: the workgroup also looked at new, emerging or potential NEATO examples that employ artificial intelligence, like Meta, recently acquired by the Chan Zuckerberg Initiative. The potential advantages of solutions incorporating AI are greater efficiency and accuracy in addressing quality issues and enhancing the user experience.

> Meta… hopes, by bending artificial intelligence to the task, to identify important papers from the 2m or so produced every year. The firm's computers have attempted to recognise features of widely cited papers that contributed to their success. Sam Molyneux, Meta's boss, claims that as a result the firm's software can now predict the impact of newly published work.
>
> "Assessing the importance of scientific work", The Economist, March 23, 2017
> http://www.economist.com/news/science-and-technology/21719441-alternative-metrics-extend-concept-citation-beyond-journal

To aid the accuracy of the algorithms, increasing available OA content will be critical. Using AI to assess research, however, also raises potential concerns for authors and others, including:

1. Is it possible or desirable for a black box algorithm to replace scholarly expertise?
2. Faculty are likely to be resistant to AI due to fears of possible ulterior motives or data manipulation (predictive analytics warping output, downplay low-scoring materials unfairly, and suspicion of the Zuckerbergs-Facebook connection)

Additionally, we considered the possibility of someone creating an automated scholarly content quality assessment tool, in order to at least help libraries and readers avoid fake journals.

Global OA flip: another entrant in the solution space was the possibility of a global flip to a gold OA paradigm, particularly in light of the recent of Harvard Library report studying this option in depth. Like our other NEATO solutions, a global flip raises several questions::

1. Will those scholars who cannot pay APCs be disadvantaged in getting their work published? (i.e., access remains an issue)
2. What will be the incentive for researchers to change?
3. Will the scholarly workflow become more complex?
4. Will this present a challenge to librarians' roles in selecting and making available materials?

Journal Master List: the final entrant the workgroup considered for the solution space was the creation of a Journal Master List, which would improve knowledge of what users and institutions already have access to and could be a short-term fix in a transition towards Gold OA. This NEATO solution, possibly in combination with automated assessment tools, could address information overload and quality issues. The Journal Master List could include both a journal whitelist and a journal blacklist.

Conclusions

The bottom line is that there is no "killer app" that will magically solve the problems outlined in Part I. NEATOs/rogues are indeed instructive in identifying pain points and possible, if limited solutions. However, when it comes to addressing large scale problems in scholarly publication or advancing the cause of open, these NEATOs point to the necessity of massive, cultural transformation, rather than the promulgation of marginal projects. We acknowledge that some NEATOs, like SciHub, are too dangerous/illicit to be supported. Others have great potential but require individual action (installation of browser extensions) or are limited to what's already freely available to read. The one wild card to follow in this space is AI.

Presentation slides: http://bit.ly/osi2017neato
Storify of Tweets: https://storify.com/bryanalexander/rogue-solutions-for-scholarly-publication

PATENT LITERATURE

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Topic Assignment: Patent Literature

As a new issue for OSI2017, this workgroup will look at patent literature, research reports, databases and other published information. OSI by design has a university-centric and journal-centric bias to the perspectives being considered. Patent literature, research reports, and databases are also important sources of research information – more so than journals in some disciplines (although these still reference journal articles). As with journal articles, this information isn't always free or easy to find and is suffering from some of the same usability issues as journal articles.

I. Framing and Scoping

From the beginning of our workgroup discussions, we realized that the scope of our assigned topic, *patent literature*, was too narrow in comparison to the range of intellectual property specified in the topic assignment. With patent literature, research reports, and databases in mind, we looked at the topic as a broader continuum of intellectual property (IP). Our group began by defining *intellectual property* as the set of objects comprised of artifacts created or otherwise contributed by researchers that either potentially or presently are part of the scholarly record. This broad definition led us to rethink our topic and, in keeping with the conference theme of open scholarship, rename it as *Open IP*. Further workgroup discussion revealed that many types of IP beyond patents lacked information on existing models, structures, workflows, or standards, exposing the need for more time-consuming exploration and concept development. Despite the expanded scope of interest and due to time constraints, our workgroup concentrated our efforts on developing recommendations relevant to improving the discovery, access and use of patent data and closely-related IP.

II. What is Open IP?

In the context of our discussions, the concept of Open IP could certainly relate to ideas of open innovation; however we recognize that intellectual property, especially when operating within scholarly domains, can far exceed its role as a foundation for commercial innovation. The patenting process is itself a tradeoff between publishing and protection. To be granted a patent requires the invention to be published. Patent files are maintained as a public resource, by national and transnational organizations. The group agreed that one of the major challenges is that while the patent files are openly accessible, they are not easily used due to structural issues in the way the data is collected and the file is constructed and presented. This makes it difficult to understand who inventors and assignees are, which in turn has an impact on our ability to track innovation and develop policies to better support innovation.

Given that patent files are openly accessible, another discussion thread was how Open IP might be practiced. This relates to but is different from licensing of IP. It is possible to for organizations, as Tesla and NASA have demonstrated, to implement open patenting practices. A US federal government agency, NASA has a public domain collection of IP available to users, and has created a website to

facilitate the transfer and translation of their open technology portfolio.[3] In private Industry, Tesla has opened the licensing of their patents, citing greater advantage to find engineers already familiar with Tesla's tech over restricting use of their patents. Tesla claims they innovate much too quickly for infringement of their patents or patentable technologies to harm their firm in a substantive way.[4] Both organizations argue that opening their patentable research accelerates knowledge production that simultaneously serves the interests of the individual organizations, educational and training institutions, individual workers such as scientists and engineers, and the broader public interest. While opening patent licensing, in the ways such examples illustrate, may have a number of advantages concurrent with the goals of open scholarship, the scope of our interest is currently limited to the opening of IP related data.

III. Discussions

Several ideas and frameworks emerged very soon after we started that helped us shape and hone our discussions and potential recommendations. These centered on the accessibility of documents rather than on licensing, and include content types, principles, standards, stakeholders and incentives. We talked briefly about recent literature regarding the content of scholarship and the scholarly record, referencing the OCLC report on The Evolving Scholarly Record,[5] and NISO's work on standards and best practices.[6]. We also determined that we were talking about all digital formats of scholarship.

Our working group first identified a set of principles and values appropriate for making and evaluating recommendations, leading to an effort to create an inventory of contemporary or potential types of intellectual property. These two initial discussions led to a greater discussion of scholarly communications, stakeholders, incentives, standards and practices, setting the path for making recommendations.

A. Guiding Principles and Values For Open IP

The group quickly agreed that the elucidation of fundamental Open IP principles would be an important first step toward exploring this topic. The group thought that a combination of open and public domain principles should apply both to content as well as the computational analytics developed to understand such content. For one reason, content is increasingly valuable for use in discovery and content creation applications in medicine, the pharmaceutical industry, engineering, and even in the humanities and arts. Moreover, we observed that analytics are becoming essential for critical computational analysis tasks such as disambiguation, text structuring, and basic bibliometrics, scientometrics, infometrics, and alt-metrics. In response to these ideas, we developed the principles noted below in Figure 1.

Figure 1. Guiding Principles

[3] https://technology.nasa.gov/publicdomain

[4] https://www.tesla.com/blog/all-our-patent-are-belong-you

[5] Lavoie, Brian, Eric Childress, Ricky Erway, Ixchel Faniel, Constance Malpas, Jennifer Schaffner, and Titia van der Werf. 2014. The Evolving Scholarly Record. Dublin, Ohio: OCLC Research. http://www.oclc.org/research/publications/library/2014/oclcresearch-evolving-scholarly-record-2014-overview.html

[6] See for example *Outputs of the NISO Alternative Assessment Metrics Project. NISO RP-25-2016*. Baltimore, MD: National Information Standards Organization, 2016. http://www.niso.org/publications/rp/rp-25-2016

Accessible
Discoverable as academic content
Interoperable
Machine-readable optimization for non-consumptive use
Text and data mining
Persistent, i.e., long-term availability in the scholarly record
Pragmatic
Global in scope and perspective
Generalizable
Multidisciplinary
Stakeholder commitment to Open IP
Anticipatory, forward looking toward new developments and concepts

B. Open IP Content Types, Intellectual Outputs and Creative Activities

We enumerated types of intellectual property and added them to either of two groups: *proximal*, i.e., those objects not only more likely to be thought of as IP but also more likely to be within the scope of this working group; and *distal*, i.e., objects less likely to be equated with patent-centric notions of IP, and hence more challenging to make recommendations for openness. Figure 2 below contains a list of intellectual property types we identified.

Figure 2. Types of IP

Proximal types of IP	**Distal types of IP**	
Patents (including design)	Archives	Simulations
Patent-related specimen and materials repositories	Artifact and biological collections	Tweets and other social media posts
Databases and datasets	Art installations	Games
Software	Blogs	Interactives
Clinical trials	Court testimony/opinions	Algorithms
Research reports	Expert panel	Trade secrets
Regulatory government filings	Peer review	Copyright
Grant abstracts/proposals	Analytics	Trademarks
Technical specifications	Music	Virtual and augmented reality

C. Differences between Patent Literature and Scholarly Research Literature

Scholarly research literature is generally digitally well-structured, and such structures are becoming widely standardized, greatly aiding discoverability, utility, and interoperability. Both content and standards are often distributed by digital means, thereby making them at least potentially more readily discoverable than other types of scholarly outputs. Although technological improvements could be made to digital formats, the content therein would become increasingly discoverable with further standardization of digital publication document structures.

Patent literature, however, can be structurally complex. The diversity of patent granting offices results in diverse patent literature structures. Although the adoption of WIPO XML standards (e.g., ST.36) by patenting agencies reduces structural complexity, the fact that metadata fields are largely manually entered text strings means that patent-based discovery remains difficult even for patent prosecutor and the patent examiner's offices.

Variations in naming conventions and classification standards within and between patenting agencies only add to these significant challenges. Combining patent and research literatures poses even greater complexities. For example, although both scholarly publications and patent records are easily citable, in filing patent applications and writing research papers alike it is often difficult to integrate and incorporate resources from both types of literature.

Widening adoption of both metadata standards and discovery technologies, such as open crosswalks, open APIs, persistent identifiers, and controlled vocabularies, helps stakeholders connect to siloed information and data types. Improvements to open crosswalks and APIs between literature and

patents would lead to a more complete discoverability and utilization of journal and patent literature alike.

D. Stakeholders

Any conversation about IP requires identification and engagement with stakeholders, of which there are many. Stakeholders are those groups or classes of people or organizations who have an expressed interest and and/or concern with regards to the accessibility of patent data files and other IP.

To begin, there are individual stakeholders who create or manage research and the resulting IP - librarians, inventors, research scholars, scientists, artists, performers, and the like. Other stakeholders are organizations or institutions, such as publishers, database owners, governments, patent and technology offices (governmental and academic), research parks, corporations, and business startups. The members of the general public have a stake in the application of IP, and may have specific cultural ideas regarding research property. A good example is the different views and values that indigenous peoples may hold in regard to IP.[7] Professional groups also have a stake: small business advisors, patent attorneys, investors, and incubators. A trickle-down effect also occurs for groups and individuals who, while not directly involved, are impacted by IP policy and assignments. This stakeholder group might include downstream licensees and subcontractors, real estate developers, city and regional planners, architects, designers, environmental impact managers and potentially more. We need to remember that stakeholder groups can transcend states and nations and that IP can be both legislated and negotiated in treaties, contracts, and licenses.

E. Incentives

Along with other topics, we explored the incentives that might apply to Open IP. In some cases they may be associated with a particular stakeholder group and in other cases they may cross multiple groups; however, all stakeholder participation and behaviors are influenced by incentives, rewards and motivations. Generally speaking, Open IP can greatly enhance new discoveries, further research, improve upon existing intellectual property, advance and stimulate education – and otherwise enrich the world and our daily lives. Specific deliverables from and incentives in support of Open IP may be conceived to include:

- Increasing numbers of citations or references for a disseminated work
- Increasing economic gain or revenue – academic organization, grant funding, researchers, publishers, software and service providers, university spin offs, and the like
- Achieving higher impact it in terms of citations or the public interest
- Increasing reputation and visibility
- Acquiring more funding for research and development, provided by both individual donors and corporate entities
- Supporting state and regional economies via innovation, diffusion or translation of research into practice

In addition, we discussed core values and drivers that could make IP more open:

- Sharing so others can build on results
- Mitigating or reducing risk
- Making systems and content interoperable to improve access to data across institutional silos ("Circle of gifts"/Open data)

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[7] See for example Anderson, Jane. (2010) *Indigenous/Traditional Knowledge & Intellectual Property*. Durham NC: Center for the Study of the Public Domain Duke University School of Law. http://web.law.duke.edu/cspd/pdf/ip_indigenous-traditionalknowledge.pdf, and the Nagoya Protocol. https://www.cbd.int/abs/about/.

- Supporting monetization, cost recovery, and return on investment (ROI)
- Serving the long-tail public good, wherein a small population/underserved/narrow band of people benefit[8]

F. Standards and identifiers

Standards took our attention as one means for easing or enhancing use of the patent literature, particularly by assigning unique identifiers – much like DOIs and other identifiers are deployed. Possibilities for new standards include the "who, what and where" of the patent or other IP resource. We agreed that such standards and identifiers should be persistent, global, and applied to academic, governmental and private entities alike. There is a rich set of examples and cases from which to draw inspiration for developing effective standards and with which new standards could be integrated or related.

G. Acceptance as scholarship

Patents and other forms of documentation of commercializable or otherwise translatable technologies are being recognized as forms of scholarship in so far as they are increasingly being incorporated into promotion and tenure reviews, practices and guidelines. Texas A&M, University of Arizona, Virginia Tech, and a few other universities have incorporated these products in their efforts to improve and modernize promotion and tenure guidelines. An excerpt from the Iowa State University's faculty promotion and tenure guidelines serves as an example:

> Scholarship results in a product that is shared with others and is subject to the criticism of individuals qualified to judge the product. This product may take the form of a book, journal article, critical review, annotated bibliography, lecture, review of existing research on a topic, or speech synthesizing the thinking on a topic. Also falling under the umbrella of scholarship are original materials designed for use with the computer; inventions on which patents are obtained; codes and standards; art exhibits by teacher-artists; musical concerts with original scores; novels, essays, short stories, poems; and scholarly articles published in non-research based periodicals, newspapers, and other publications; etc. In short, scholarship includes materials that are generally called "intellectual property.[9]

The continuum of scholarship our working group has proposed in Section B is reflected in the Iowa State guidelines. As other universities begin to expand the scope of scholarly artifacts to include forms beyond research publications, they are likely to become ever more inclusive of the full set of scholarly intellectual property objects enumerated by our working group.

H. Public Access and Taxpayer-funded Research

We want to note that patents and inventions are protected as IP but are also intended to support the public interest. Their protection is more limited in time than that of copyrighted materials. Although somewhat different, it is worth commenting that directives and policies for public access to articles and data promote the dissemination of ideas and to stimulate innovation. Sources of funding (such as the U.S. taxpayer) and the public interest have become factors in deciding whether IP should be open or restricted for a specified period.

IV. Recommendations

We perceived overlaps with the discussions and recommendations of other workgroups: Standards/Interoperability, Infrastructure, and P&T. We should ensure that overlaps are addressed

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[8] See, for example, Open Prosthetics. https://openprosthetics.org/

[9] Iowa State University. (2017) Faculty Handbook, 58-59. http://www.provost.iastate.edu/faculty-and-staff-resources/faculty-handbook

and look for commonalities and differences. In direct response to our work, we recommend that OSI delegates do the following:

- Affirm and/or add to the guiding principles as they relate to all forms of Open IP.
- Establish internationally recognized standards, including persistent IDs that establish name, organization, citation (the who, where, and what referred to above); promote the widening adoption of both metadata standards and discovery technologies, such as open crosswalks, open APIs, and controlled vocabularies that help stakeholders connect to siloed information and data types. Improvements to open crosswalks and APIs between literature and patents would lead to a more complete discoverability and utilization of journals and patents alike. Engage with WIPO in these efforts.
- Define the IP continuum as a first step in providing a larger context for Open IP issues and seeding future conversations. Then, shift focus from patents to other IP and scholarly products, including software, databases and reports that require consideration of standards, identifiers, and other structures that would facilitate their discovery and use (see Figure 2).[10]
- Explore licensing patents as an alternative means of use, and discuss applications of "Open patenting" or "patent-left". To enforce the principle of transparency, ensure that license details are published. Discuss whether open licensing creates an incentive to researchers to take otherwise "dead" outputs and revive them. [11]
- Speak more to the public good to encourage a different understanding of IP and how it can be deployed. Assess the impact of investments in patents that are tied to grants.
- Identify stakeholders and gain a better understanding of incentives that have meaning for them.
- Create a sandboxing and source control infrastructure for testing and sharing computational analytics implementations (e.g., code examples for scientometric-based applications).
- Provide education and IP literacy for undergrads through senior scholars, e.g., by developing an IP boot camp for anyone outside the legal profession who needs to keep up to date with the always-changing policies, rules, conventions, and software.
- Promote clear language in patents. Some aspects of the language may be construed as the reserve of the legal establishment and IP managers. However, as part of our mission we are equally responsible for providing clear language on how to exercise standard formats that we will recommend. As an example we might recommend, "there is a two letter and only two letter code for countries and these letters are used in upper case font", rather than referring to any particular country code table.
- Determine what "published" means in the context of "prior art" for patents and how it plays out in various places around the globe. Is something published if it has a DOI, an abstract and title, or other markers that have been or could be determined?
- Identify the risks of Open IP in a world where resources (computational and labor power) are unevenly distributed and best methods are frequently not open.

V. Summary

In considering our discussion topic, patent literature, the workgroup took the opportunity to expand further upon an understanding of intellectual property. In defining a keystone concept, Open IP, we developed initial recommendation sets concerned with guiding principles and values with respect to Open IP content and types, intersections between patent literature and scholarly research literature,

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[10] Effective January 2013, the NSF Proposal & Awards Policies & Procedures Guide (PAPPG) specified revised content for biographical sketch information for senior personnel participating in NSF research grant proposals by deleting the publication references requirement and substituting a requirement for research product information. See http://seqanswers.com/forums/showthread.php?t=22559. This research product requirement for research personnel is currently in place at NSF as stated in the PAPPG bulletin of 2017. https://www.nsf.gov/pubs/policydocs/pappg17_1/nsf17_1.pdf

[11] There are semi-open venues where this information can be deposited and discovered, e.g., flintbox, http://www.flintbox.com/.

stakeholders, incentives, and motivations. As a major point of consensus, we affirmed the role of standards development, especially the implementation of unique identifiers, which would benefit greater access to patents, as well as other intellectual property products moving forward. Our discussions have illustrated, for the first time, a collective, open public face to all dimensions of IP and we expect our current and future recommendations to address this continuum of Open IP as OSI further examines this topic.

HSS SCHOLARS & SCIENTISTS

Members

- Shira Eller – George Washington University
- William Gunn - Elsevier
- Diane Scott Lichter – American College of Physicians/AAP/PSP
- Joan Lippincott – Coalition for Networked Information
- Aimee Nixon – Emerald Publishing
- Concetta Seminara – Routledge / Taylor & Francis
- Roger Schonfeld – Ithaka S&R

Summary of Work

The HSS and Scientists group was convened in recognition of the diverse dynamics and requirements of different research communities, in particular within the Humanities and the Social Sciences (HSS). Within these disciplines, there are significant differences in research culture, practices, and quite crucially access to funding, highlighting that a different approach may be required to embed an open science environment.

The fundamental fact that bears repeating is that HSS scholars in the United States simply do not receive the level of funding or government-mandated support, similar to grant funding received by STEM scholars. Without that key funding infrastructure in place, we cannot realistically hope for further OA progress in HSS in the US.

Unfortunately, 'thoughtful conversations' alone among earnest academic librarians and publishers are not able to solve this serious funding gap—-at least in the immediate future. A strong lobbying force needs to approach the US Congress and organizations such as the National Endowment for the Arts for more OA funding in the Social Sciences and Humanities. However, as anyone who follows current US politics, Education funding is not priority of the current Administration. If anything, there is talk of de-funding the NEA and other major academic funding bodies.

On a brighter note, sales professionals for academic publishers are trying to find creative ways to promote open access by offering special APC rate packages to universities.

The approach of the working group was to map out the publishing environment for the following four areas, first looking at publication practices and preferences (Table 1)

- Clinical Medicine
- Other Sciences
- Social Sciences
- Humanities.

The group then sought to document both the challenges (Table 2) and also the opportunities (Table 3) for each area (note for this further analysis we combined Clinical Medicine and Other Sciences under one classification – STEM).

Analysis

Analysis of challenges and opportunities highlighted that there are more areas of convergence than initially anticipated, suggesting that some issues / opportunities could be tackled on a more universal basis. Examples included raising awareness and understanding, and incentivising behavior.

Analysis did however highlight that some of the areas of divergence remain significant i.e. access to funding, fundamental differences in publishing practices. This highlights a need for a bottom up approach from within individual subject communities.

Recommendations

Mapping out the characteristics of these different research communities proved a valuable exercise, as it helped us to assess where universal solutions could be applied. One key recommendation from the group was a drive on education and awareness, focusing particularly on the benefits and incentives of an open science environment.

The main recommendation from the group was that in recognition that there remain a number of areas of significant convergence, disciplines need to find their own approach and solutions need to come from within. Some of the most successful implementations of an open science environment have come from within individual communities i.e. Physics. It was suggested that a research community within Social Sciences or the Humanities could be encouraged to act as a test case, working cohesively to suggest and trial new approaches.

Table 1: Publishing Environment for Core Research Areas.

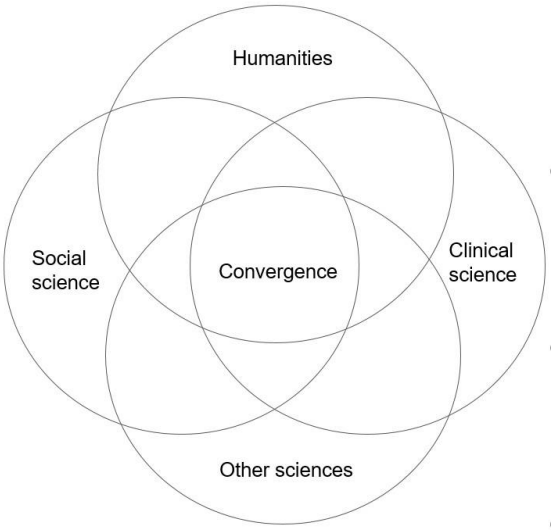
	Clinical Medicine	**Other Sciences**	**Social Sciences**	**Humanities**
Publishing environment	• Journals: Vital for tenure; Strong OA models yielding broad transition • Books: Generate royalties	• Journals: Vital for tenure • Strong OA models yielding broad transition • Books: Generate royalties	• Journals: Vital for tenure • OA models may not be all that strong.	• Monographs are the gold standard for tenure and promotion • Journals secondary

Table 2: Challenges of achieving an Open Science Environment.

	STEM	**Social Sciences**	**Humanities**
Challenges	• Pressure to publish • Few incentives for openness beyond mandates. Perceived COI by some. • Confusion about licenses • Societies - some groups/vendors resist loss of revenue stream • T&P slow evolution of assessment practices, incentives need expansion • Global South researchers lack funding • Little incentive to publish negative data or replications • Large multigroup works to agree • Lack of global norms/standards to expand joint collaborations • Increasing specialization inhibits coordination • Weakened journal brand as search engines have become the entry point to the literature • Privacy/regulation issues inhibit data sharing. Who owns the datasets to be mined varies.	• Perception of low- quality scholarship • SocSci societies see OA as cannibalizing content/cutting journals' revenue stream • Market confusion about predatory publishers • No author funding in most Soc Sci disciplines • Not enough OA activity (i.e. critical mass) to support full conversion to OA in most areas • Very little cohesion among the Soc Sci discipline communities • Not the same drivers, motivations, mandates to publish OA	• Gold OA is confused with vanity publishing, which has a much worse rep in humanities • No mandates • Ethics policies doesn't address openness • No author funding in the A&H disciplines • Perception of low-quality scholarship • No indexes like PubMed • Idea that 'Open' = larger risk of being plagiarized or copied • Slow evolution of assessment practices at institutions • Permission issues with visual arts (artwork) can be obstructive

Table 3: Opportunities for creating an Open Science Environment.

	STEM	Social Sciences	Humanities
Opportunities	• Better engagement of public --more secure funding, better policy/health • Improved discovery • Data and pubs mining • More timely access to research • Potential to Identify and establish standards, efficiencies, areas for building on research • Support future researchers and caregivers regardless of funding source, geo, resources • Effective linking adds historical tracking and adds responsibility and assigns credit • Supports new business models based on reuse/analytics • Construction of field-specific factbases (chemical material properties, antibody properties, geophysical characteristics, etc) • Easier to make assessment more comprehensive, including public impact and other scholarly products like data & software	• Providing opportunities/publication venues and much-needed access for scholars from the Developing World/Global South • Integrated interactive tables / datasets • Integrated simulation • Meta-analysis of large bodies of accessible work increases confidence in individual reports • Interdisciplinary collaborations are easier to find/undertake • Encourage a community within Soc Sci to act as case study / trail blazers for Open Practices	• Scholars are recognizing the advantages of openness (ex. MLA Commons) • Scholars working in the Digital Humanities are on board with openness • Early-stage scholars' monographs • Multi-media / non-text content • GLAMs are opening up images and other content • Access to digitized vulnerable cultural heritage artifacts



Convergence

+ Visibility
+ Public engagement
+ Preservation
+ Text and data mining
+ Interdisciplinarity

- Lack of understanding
- How to assess
- Incentives
- Lack funding/business model
- Trust (brand weakness/vanity press)

Divergence

Humanities	Social science	STEM
• Rights acquisition is harder • Reputation of author-pays • Funding • Content half-life • More monographs/books	• Patient privacy • Funding	• Patient privacy • Journal-based assessment • Funder mandates

ANNEX 7: OSI2017 STAKEHOLDER GROUP REPORTS

INFRASTRUCTURE

Provided by Lars Bjørnshauge, DOAJ (lars@doaj.org)

Definition: infrastructure |??nfr?str?kt??| (noun)

– the basic physical and organizational structures and facilities (e.g. buildings, roads, power supplies) needed for the operation of a society or enterprise. – New Oxford American Dictionary

Infrastructures In the context of Open Scholarly Communication:

standardized communication protocols, data exchange formats, metadata standards, harvesting protocols, APIs, identifiers (DOI, authorID (ORCID), organizational ID, funderIDs) and facilitating services – list far from complete

Background

The stakeholder group agrees that

- infrastructures, standards etc. are crucial for making open possible,
- that the drivers for infrastructures, standards, identifiers and other bits and pieces of infrastructure in scholarly communication have (and still are) originated from the North/West
- that new bits and pieces of infrastructures needs to be developed – example: bits and pieces to facilitate handling and monitoring of APC-payments

Major issues

- Global implementation/adoption of infrastructures
- Governance and sustainability of open infrastructures to support Open

Global implementation/adoption

In so far as OSI aspires to be facilitating a **Global** Open Scholarly Communication System, we have to realize that

- much of the bits and pieces of infrastructure has been developed without sufficient consultation with the Global community
- this has serious implications for the implementation/adoption of infrastructure

- this in turn means that today we cannot really talk about a Global Open Scholarly Communication System
- there are serious barriers: languages, geography, cultures

Governance and Sustainability of Open Infrastructures to support Open

Given that research transcends disciplines, geography, institutions and stakeholders, the infrastructure that supports it needs to do the same.

Infrastructures should

- be stakeholder governed
- have transparent operations
- have sufficient resources have to be available to secure global adoption

Inspiration for this discussion can be found here:

Principles for Open Scholarly Infrastructures - "Bilder G, Lin J, Neylon C (2015) Principles for Open Scholarly Infrastructure-v1, retrieved [date], http://dx.doi.org/10.6084/m9.figshare.1314859"

What OSI should do

- scan the current bits and pieces of infrastructure and evaluate their adoption on a global scale
- engage with the "owners" of the infrastructures to push for measures that can secure global implementation/adoption

If infrastructures are not implemented/adopted on a global scale we cannot really talk about a Global Open Scholarly Communication System and the flow of research outputs (papers, data and software) on a global scale will continue to be broken!

——

Work in progress on the sustainability of Open Infrastructures:

Knowledge Exchange (http://www.knowledge-exchange.info/) has done a lot of work on this

Latest report: Putting down the roots - http://www.knowledge-exchange.info/event/sustainability-oa-services - A study to improve the extent that infrastructure and content services required to support OA can be sustained

Continuation of the work is facilitated by SPARC Europe - http://sparceurope.org/global-sustainability-coalition-open-science-services-established/

AOASG, CAUL), EU Comm: DG Research & Innovation, ERC, EUA, LIBER, Science Europe, and SPARC Europe among others

JOURNAL EDITORS

Journal Editors Stakeholder Group:

Kim Barrett, Editor-in-Chief, *The Journal of Physiology*; Past-President of the American Physiological Society
Patty Baskin, Executive Editor of the Neurology Journals; President, Council of Science Editors
Susan Murray, Managing Director of AJOL
Abel Packer, Co-founder and current Coordinator, SciELO
Margaret Winker, World Association of Medical Editors (primary author)

Introduction

The OSI journal editor stakeholder group was diverse in terms of geography and specialty field, with various backgrounds as either editors or in roles working closely with editors. Based on interests that aligned with the majority of the group at OSI2017, we decided to focus primarily on issues facing editors in the Global South. (While the use of the term "Global South" implies nonexistent homogeneity across the diverse countries, peoples, and cultures that comprise the Global South-- the countries of Africa, Latin America, and developing Asia, including the Middle East – their editors and journals share issues across borders and continents, so the designation is useful.) OSI should convene a stakeholder group that explicitly comprises active editors at its next meeting to address their issues and concerns related to open. For this summary, "editors" refers primarily to editors who make decisions on research manuscripts submitted to journals, although managing editors face many of these issues as well.

Regardless of where they are located globally, editors share a number of common issues and concerns. Responsibilities and expectations of all journal editors continue to increase as publishing becomes more complex. New guidelines and best practices are important for improving the quality of reported research, but they also require additional editors' time to ensure that journals, authors, and reviewers follow the guidelines. Editors not only have the traditional responsibilities of considering which manuscripts are appropriate for peer review, selecting reviewers, and carefully considering the revisions of authors and editing manuscripts accordingly, but editors also must evaluate and handle the conflicts of interest of the authors, reviewers, and themselves; the authors' authorship criteria; the ethics of the research conducted; screening for plagiarism or self-plagiarism; and the possibility of research misconduct, including fabrication and falsification. They must require from authors complete reporting of research, and review (in addition to manuscripts) the research protocols, reporting guidelines, study registration, and sometimes raw data. Editors are expected to identify errors and authors' attempts to deceive, even as some authors pay third party organizations to circumvent peer review.(1) Some researchers are paid thousands of dollars if they are able to get their research published, creating huge incentives that encourage deceiving editors. Each new way authors find to manipulate research, peer review, and publishing has meant that editors must find a way to identify problems and prevent problematic research or reporting from being published, or risk having their journals called out in the international spotlight when articles must be retracted. Journals that are unable to afford the tools required to meet some standards risk being labeled as predatory.(2) Institutions and funders have been slow to accept responsibility for the authors they support.

The members of the journal editor stakeholder group believe in the importance of open access. However, owners of journals that are open access may expect more efficiency from their editors because of resource constraints, and nearly all editors are expected to do more work than in past decades, often with fewer resources. Many editors are not paid and do their work as a passion and calling, after their "day jobs" and academic responsibilities are over. Editors of open access journals that do not charge article processing

charges (APCs), usually because their authors cannot afford them, may face even more substantial resource constraints. Some may face pressure from their journal owner that risks challenging editorial independence.

As stated in the Guardian, "...although digital technology and the internet have created a new terrain in which the ideals of open access have begun to germinate, they have yet to produce a cost-effective and reliable harvest of accessible knowledge." (3) Without devoting more resources and/or technological efficiencies to help editors fulfill their obligations, the growth in journal requirements and editor responsibilities is not sustainable. The research community needs to develop better ways of motivating and enforcing the ethical behavior and appropriate research of its academics, rather than relying on editors as the final common pathway

Editors of the Global North and South share the challenge of having to do more with the same or fewer resources, the need for screening tools to identify issues efficiently and accurately, and the need to be able to prioritize, rather than simply adding, tasks. Editors in the North and South are also acutely aware of the need for academic institutions and funding organizations to share responsibility for promoting ethical behavior and complete and reproducible reporting of research.

Editors in the Global South

Stakeholders across OSI tend to think of journals in terms of the high visibility titles often featured in the news media. Their editors are usually paid, may be full time, and have sufficient staff, resources, and influence for their journals to meet the requirements of indexers and achieve high(er) impact factors. However, editors of Global South and other small journals are often unpaid with few staff and little funding.(3) Many have no publisher and therefore must assume responsibilities that the publisher normally would undertake. These editors often have little or no training, and no funds to pursue training. Many Global South journals are open access or free; only a few charge APCs because their authors cannot afford them. Many are supported by public funds, institutions, or societies. Unlike most journals in the Global North, Global South editors may play an informal role in mentoring authors and peer reviewers, since their regions lack the academic infrastructure and faculty to mentor authors and peer reviewers. Editors may provide substantive language editing because authors often lack language skills and do not have funding to hire professional editing services. These characteristics are not entirely unique to Global South journals; some small journals in the Global North share these challenges as well. However, the vast majority of these journals are from the Global South.

An April 2017 survey of medical journal editors who are members of the World Association of Medical Editors, conducted by Margaret Winker in advance of OSI 2017, highlighted several issues. First, while Global South editors reported improved internet and computer access (compared with a similar survey in 2013), access to research articles continues to be a challenge, with a third or more of Global South editors reporting that they did not have access to most of the research articles they required. Second, many journals in the Global South published their journals free or open access and did not charge APCs, instead depending on institutions or societies for support. Some published using CC-BY, but many required the author to transfer copyright, and some prohibited authors from depositing their final accepted manuscript or publishing their article in third party or institutional repositories. Third, many journals reported not having a data policy; of those that did, most required only that the author share data with the editor on request, not with researchers. Even so, some editors reported that some authors did not share the data on request or stated that they no longer had the data. Such data policies and experiences further challenge the reproducibility of the research literature and suggest the need for standards regarding data preservation and sharing. Fourth, journals in the Global South were consistently less likely than Global North journals to be indexed in Medline or Web of Science or to be found in PubMedCentral. When asked about barriers to indexing, some editors reported that they did not have the resources to meet the indexing requirements, did not understand the indexing requirements, or never heard back from the indexing organization. Finally, some editors were concerned about the impact of

predatory or deceptive journals on their own journals, including being wrongly identified as a predatory journal. One journal wrongly identified lost so many author submissions that their indexing was revoked; another journal's name was deceptively appropriated by a predatory journal. These results highlight some of the challenges that editors face, particularly in the Global South.

Journal Standards

Journals around the world and particularly those in the Global South, and the quality of the research they publish, could benefit from clear, achievable, evidence-based journal standards. Such standards help editors focus their efforts on improving quality. Standards should not focus on mimicking the appearance of high cost, high impact factor journals; instead they should facilitate complete and transparent reporting, reproducibility, and discoverability of research. Furthermore, standards should not perpetuate and worsen the North/South journal divide by implementing standards that Global South journals are unable to afford. Standards should have few out-of-pocket financial requirements, or address how journals will meet them. For example, some standards have no direct costs (although they require person-hours to implement and maintain), such as the reporting standards for specific study designs, animal research, and the like, available on the EQUATOR Network. Other standards, such as DOI and archiving via sites like CLOCKSS (Closed Lots Of Copies Keeps Stuff Safe), have direct costs that journals must pay. While publishers and hosting organizations may have the opportunity and clout to negotiate reduced costs, individual journals do not have such opportunities. Journals unable to pay the costs of implementing standards should have the opportunity to do so at reduced cost.

Furthermore, some standards, such as data preservation and sharing via an institutional repository, require institutional infrastructure and knowledge of issues such as patient privacy concerns that the author's institution may lack. Journals and authors should not be penalized for lack of infrastructure or expertise they have no control over. To help the research enterprise move forward in the Global South, affordable repositories should be encouraged. Options such as Figshare should be encouraged and guidance on preserving research participant and patient privacy should be available to help all researchers achieve these goals.

Finally, while journals initially may achieve standards necessary to be indexed, some journals' adherence to standards declines over time, reducing their quality and jeopardizing their indexing. The reasons for such declines should be evaluated and ways to prevent declines determined, to help journals continue to support quality publishing standards.

Journal Indexing

Small journals and journals in the Global South chronically face a lack of exposure to and discovery by readers. Lack of visibility can be related to Google search algorithms that require knowledge and investment to exploit (4), as well as to lack of journal indexing. Indexing is part of the virtuous cycle of better visibility attracting higher quality papers. While regional indexes exist in some parts of the Global South that help a subset of selected Global South journals gain visibility in their regions and internationally, such indexes may not give the journals the same degree of exposure as the traditional Global North indexes. This sub-optimal international exposure not only limits the journal's growth but also prevents international readers from discovering research presented in journals that might be relevant to them. Limited research dissemination wastes research effort and funding as well as predisposes to needless research redundancy. Indexes that claim to be international should be truly international and make journals in the Global South easily accessible in the North, rather than invisible. If international indexes do not do so, alternatives must be found to ensure that search engine-based indexes such as Google Scholar identify individual articles and journals in the Global South and make them available via search results.

Language Access

Another barrier to "open" is language. If the open access movement focuses primarily on English language literature, much of the world will not benefit. Scholarly communication should encompass multilingualism in its standards, procedures and evaluation, to reflect the research context and purpose and to target the intended audience (including the public). Regardless of the discipline or type of research, most journal articles should be available in the language in which the research was conducted and for whom the research is intended. Journals may choose to publish in English in the hopes that they are more widely recognized, but that makes them less accessible to the audience with the most to gain. One solution is bilingual publication, but translations of research, for both researchers and the public, should take into account cultural and idiosyncratic contexts. Unfortunately, free electronic translation tools such as Google Translate are inadequate for translating the research literature. (5) Also, many journals and authors cannot afford professional translators. Therefore, until translation tools are improved, journals could ask authors to provide at least a translated abstract (after peer review and revision) to enable their research to be identified in at least the languages in which they have fluency. The journal may wish to add a disclaimer indicating that the translation was provided by the author.

Importance of Journals to the Research Culture

Editors don't just select articles for publication—editors help develop academic scholarship, by working with authors, reviewers, and editorial boards. The research culture includes researchers conducting peer review and serving on editorial boards. Editors help researchers acquire a more detailed understanding of academic publishing and the process of editorial evaluation and standards, including the issues that arise such as authorship, conflicts of interest, and research conduct and reporting. Institutions should encourage publication in their country's journals and provide academic recognition for the services that reviewers and editorial boards provide.

Impact Factor

Impact factor, and the emphasis that national research evaluation systems and academic promotion and tenure committees place on publishing in high impact factor journals, discourages Global South researchers from publishing in journals in their own countries. These policies pose several challenges for Global South journals and the recognition and progress of research oriented to local problems or of local interest. First, because the impact factor relies on indexing in Global North indexes, Global South journals are at a disadvantage when competing on the basis of impact factor. Second, because Global South journals are more difficult to find in Global-North dominated indexes and in search engines that prioritize search results based on web traffic, Global South journals may be less likely to garner citations for their articles, thereby undermining the impact factor. Third, and most importantly, the impact factor is a poor substitute for measuring the impact of research, as set out by the Declaration on Research Assessment (DORA) and other initiatives. Promotion and tenure committees that prioritize impact factor over more accurate measures of article-level impact further undermine the journals of their own regions, and thereby the research culture. Their incentives promote research being removed from the region where it could have the most impact on cultural, social and economic development, especially the health, environmental protection, and well- being of the people through public health, clinical care, and public policy, to one where its relevance may be less tangible.

As Vint Cerf remarked in his keynote address, changing behaviors requires examining incentives. Funding agencies and institutional promotion and tenure committees should use metrics other than impact factor to evaluate the work of researchers. They should recognize the high value of publication of their research in journals located where the research was conducted and in the language of the research and those who would benefit from it. For example, they could use the approach of RCUK/MRC, evaluating the impact of research in

the area where research is conducted, e.g., through influencing guidelines and/or policy. Article metrics are another approach to evaluating the impact of research without resorting to the impact factor. Finally, they could adopt the suggestion by Keith Yamamoto that researchers be evaluated on their most impactful 5 or 10 works, be they research articles, data, or even code, without regard to impact factor or even the journal in which they were published.

Importance of Mentorship

Mentors (local or otherwise) are an important resource for authors and editors.(6) However, rather than mentors from the Global North informing authors and editors of the Global South regarding how they should best execute their work, mentoring should take into account local practices and approaches. Just as the most effective solutions in Manhattan may not apply in Mississippi, issues should be assessed and solutions developed using local perspectives. Furthermore, any behavior change requires buy-in from stakeholders -- including in the Global South. Local incentives must be evaluated to determine how to change behaviors most effectively.

Networking and collaboration depend on identifying researchers and others working in related areas. However, unlike the Global North, the Global South has fewer such networks. Increasing the participation of Global South researchers in these networks and the promotion of Global South networks of researchers could facilitate collaboration in the same continent, country, or language. Global South research networks could aid the role of mentors and help identify appropriate peer reviewers for completed research.

Not all efforts need to be local. Professional specialty societies in the Global North and South could partner to share information and experiences. For example, a US ophthalmological society could pair with a comparable ophthalmological society in Malawi to discuss how to further academic activities in both locations, including cross-appointed editorial board members and peer reviewers, joint conferences, etc. The program would promote learning for both North and South.

Learning from the "South"

Sharing information is a two-way street. The Global South traditionally has taken a different approach to scholarly publishing, being based more on necessity than earnings. Therefore, rather than developing expensive solutions that support publisher profit, the lower expense solutions developed in the Global South may help the research enterprise in general reduce the cost of publishing, thereby making universal open access more feasible. Some Global South non-profit indexes also provide "meta-publisher" services to journals they accept to the platforms. For example, SciELO Latin America provides a common publishing platform and solutions to journals, using a version of the free or low cost open source Open Journal Systems (OJS), developed by the Public Knowledge Project (PKP), that was modified in-house. SciELO is developing an editing tool for authors to tag their own XML and generate a PDF. Even if a review of the final product were required to ensure accurate tagging, such a tool could help distribute the work of article markup and reduce the expense of publishing. African Journals Online (AJOL) – also based on OJS and amended in-house – similarly provides free aggregator hosting of journals' content, the option for free hosted online publishing, and free DOIs to its approved partner journals.

These, and similar organizations not only support and index, but will also evaluate journals, providing education for editors to help them achieve higher standards. Using solutions from around the world will benefit all of us.

“Open” questions

Several “open” questions remain regarding the future of editors in general, as well as the future of Global South journals, editors, academic institutions, and the research culture. These include:

1) Editors increasingly must identify research misconduct and prevent unethical behaviors on the part of authors and reviewers. How can responsibility for enforcing ethical research standards be shared more equitably with institutions and funders?
2) How can those in the Global South publish open access journals that meet quality standards when their authors cannot afford APCs? Who will pay for publication – government, institutions, funders? How can sustainability be preserved? How can conflicts of interest be avoided?
3) What are the most effective ways to change academic culture to value openness and to value publishing regionally, in the research language?
4) Can automated translating tools be improved sufficiently to provide reliable translations of research (particularly medical research)?

ACTIONS

Standards:

- Establish (with global representation) clear, achievable, evidence-based journal standards focused on improving the quality, transparency, and reproducibility of research, rather than the appearance of the journal. Standards should have few out-of-pocket financial requirements and means for journals to pay for them should be addressed.
- Contact CrossRef and CLOCKSS regarding how to achieve (markedly) reduced costs for Global South and other small under-resourced journals
- Develop (with global representation) data policy standards regarding authors’ retaining and sharing data
- Identify free or nearly free data repositories such as Figshare for author and editor reference
- Develop (with global representation) standards for data privacy for Global South authors, institutions, and editors to use
- Develop (with global representation) approaches for Global South institutions to develop institutional repositories – funding and best practices
- Study why some journals may cease to adhere to standards and determine ways to prevent declining standards

Indexing:

- Catalog requirements of major indexes for editors to easily reference; synthesize requirements into standards to improve likelihood of indexing; identify issues with Global South journal practices that impede indexing, and causes and ways to alter their practices
- Identify liaisons at major indexing organizations to turn to when editors have questions
- [Until truly global indexing is available] Strengthen regional journal indexes that national research evaluation systems, institutions and researchers (including systematic reviewers) can use to ensure that they are capturing all relevant research
- Evaluate standards of “international” indexes to determine why Global South journals are preferentially not indexed
- Approach indexing organizations regarding requirements that may not be essential and inequality practices that may introduce bias against Global South journals

- Approach Google Scholar re: increasing the likelihood that Global South journals and articles will appear in search results

Language Access

- Identify (with global representation) ways to encourage journals to publish in the main language of the country (with English abstracts provided by the author if the journal cannot afford professional translation)
- Convey (with global representation) the importance of publishing in the country's language to academic institutions within the country
- Convey to Google (with global representation) the importance of improving automated translations of research (particularly medical research) to at least improve the first pass of research translation before professional translators or authors refine translations.

Importance of Journals to the Research Culture

- Convey to academic institutions and funders the importance of journal editors to the culture of academic scholarship
- Encourage institutions to recognize the services that peer reviewers and editorial boards provide as important academic achievements

Impact Factor

- Convey to Global South academic institutions and funding organizations the problems that use of impact factor and publication in Global North journals as criteria for research impact create for Global South journals and the fostering of academic culture in the Global South; explain the limitations of the impact factor and the alternative means of judging impact set out by DORA and implemented by some funding organizations such RCUK/MRC
- Examine incentives for Global South researchers and how incentives might be changed to promote open publishing and publishing in Global South journals

Importance of Mentorship

- Examine with potential funders ways in which a Global South network might be developed, incorporating existing standards such as ORCID
- Contact scholarly societies to determine feasibility of new programs pairing specialty societies in the Global North and South

Learning from the "South"

- Create a clearinghouse for ways in which journals, publishers, and indexers in the Global South and North are improving quality, implementing standards, streamlining publishing, evaluating journals, or otherwise improving the publishing process. The clearinghouse should be available for researchers to evaluate the efficacy of particular approaches for different regions of the world.

“Open” questions

- Develop (with global representation) best practices for journals based on their funding model, including those funded by government, institutions, and other funders, to preserve editorial freedom and prevent conflicts of interest
- Involve stakeholders in various regions in discussions around how to change academic culture to value openness and to value publishing regionally in the research language
- Involve stakeholders to identify ways in which institutions and funders can incentivize ethical research and detect and prevent research misconduct.

Disclaimer: The ideas presented herein do not necessarily represent those of the Council of Science Editors or World Association of Medical Editors.

References

1. Best Practices for Peer Reviewer Selection and Contact to Prevent Peer Review Manipulation by Authors. World Association of Medical Editors. April 6, 2015. http://www.wame.org/policy-statements#Best%20Practices%20for%20Peer%20Reviewer%20Selection
2. Laine C, Winker M. Identifying Predatory or Pseudo-Journals. World Association of Medical Editors. February 18, 2017. http://www.wame.org/identifying-predatory-or-pseudo-journals
3. Curry S. It's time for academics to take back control of research journals. The Guardian. May 25, 2017. https://www.theguardian.com/higher-education-network/2017/may/25/its-time-for-academics-to-take-back-control-of-research-journals
4. Marusic A, Marusic M. Small scientific journals from small countries: breaking from a vicious circle of inadequacy. *Croatian Medical Journal* 1999; **40**(4): 508-14.
5. Anderson K. Detours and Diversions — Do Open Access Publishers Face New Barriers?Scholarly Kitchen blog. May 31, 2017. https://scholarlykitchen.sspnet.org/2017/05/31/detours-and-diversions-do-open-access-publishers-face-new-barriers/
6. Balk EM, Chung M, Chen ML, et al. Assessing the accuracy of Google Translate to allow data extraction from trials published in non-English languages. Agency for Healthcare Research and Quality (US); 2-13 Jan. Report No.: 12(13)-EHC145-EF.
7. Sambunjak D. Understanding wider environmental influences on mentoring: Towards an ecological model of mentoring in academic medicine. Acta Med Acad. 2015;44(1):47-57. doi: 10.5644/ama2006-124.126.

LIBRARIES

Representatives of the OSI2017 Scholarly Libraries and Library Groups stakeholder group were tasked with (1) Summarizing the various perspectives involved in the library community with regard to open, (2) Describing areas of general agreement and disagreement and the issues and questions that may be powering these different viewpoints, and (3) Proposing a set of specific actions or outcomes that can balance the needs and interests of all members of this group (or a mechanism for finding solutions or bridging gaps), as well as the challenges these actions face and how these can be addressed in a realistic and collaborative way.

Perspective Summary

Across the library community—internationally and amongst institutions of all sizes and orientations (serving the public, research universities and non-university research institutions)--there is a strong commitment to supporting open. Library leaders are knowledgeable about open, and committed to responding to the concerns of their institutions and user base on this issue.

Areas of Agreement and Disagreement

Beyond this common sentiment and groundwork, library stakeholders have a wide variety of perspectives regarding exactly what approach to take to the future of open and to what degree. These different perspectives are rooted in the different needs, resources, and missions of their institutions. Therefore, consensus was not reached in some of the major areas that would help to form a cohesive plan of action.

There was disagreement, for instance, in how members defined open access, how it was and should be supported within an institution, how financial resources should be allocated, and how labor should be distributed surfaced during these discussions.

Still, there was enough common ground to identify these shared interests—-that *the Scholarly Libraries and Library Stakeholder Group is committed to supporting open access in order to:*

- *Provide stewardship in the discovery, access, and accessibility of resources that support the teaching and research needs of faculty and students*
- *Preserve and disseminate the scholarly record produced by an institution*
- *Ensure the efficient and effective use of library budgets in the support of collections and faculty research*
- *Advocate for equitable access to all type of scholarly output for all users*

Recommended Actions and Challenges

There were a number of recommended actions members identified as opportunities that could be taken on by individual actors or in collaboration with interested parties, rather than cohesive plan for the group. They include:

- Shared training and teaching resources
- OERs as a means to promote more open practices on campus
- Optimization of open source repository platforms
- Improve discovery of what is already made available
- Engage with projects such as Initiative for Open Citations (I4OC)
- Identify opportunities for cross-institutional OA publishing

- Exploration and investment into the different models of Open Access from a library perspective that recognizes institutional diversity (i.e. Pay it Forward project)
- Journal Assessment (possibly addressing white/black lists of journals)
- Advocacy efforts that push a need for greater transparency in the pricing of OA journals
- OSI facilitation of more communication and information sharing across stakeholder groups (i.e. Tenure reform and Impact Factor groups)

In general, the common thread here is that the library community supports actions that continue to build out the framework for more open, that continue connecting resources and efforts to make more open possible, and that continue to improve the capacity of existing open resources and efforts. Over time, as the capacity of open improves and the paths to open becomes better paved, more institutions of all sizes and orientations will find more ways to become more actively involved. OSI can play in important role in helping make these things happen.

Stakeholder Membership

Helena Asamoah-Hassan
Marilyn Billings
Jessica Clemons
Lorcan Dempsey
Shira Eller
Celeste Feather
Terri Fishel
Nancy Gwinn
Susan Haigh
Martin Kalfatovic
Barrett Matthews
Meg Oakley
Stephanie Orfano
Leslie Reynolds
Christine Stamison
William Simpson
Denise Stephens
Morgan Stoddard
Megan Wacha

OPEN KNOWLEDGE GROUPS

Summary of the Discussions

This was a heterogeneous group, with representation from nonprofit societies, from academia, from new OA journals, and from services in most aspects of the scholarly communications lifecycle spectrum. There were many varied activities reported, as well as an array of opinions and comments; however, some main conclusions emerged.

- The ideal scenario for "open" is "free–free open," *i.e.*, free to publish and free to consume.
- There is no need for just one model; there are many ways to accomplish open.
- This is an exciting, and good, time to experiment.
- The common strategy is to *transition* into full openness.
- Establishing financial sustainability for a "free–free" environment is the true challenge.
- There is a need to get content to the communities who would benefit most from it.
- Greater uptake in the general community for openness is needed. All stakeholders need to be able to communicate without jargon, which is a barrier to understanding.
- In addition to open access, there are many concerns related to openness in other parts of the scholcomm ecosystem that must inform these discussions: transparency, reproducibility, incentives, peer review, etc.—from the conception of a study and its methodology to the raw data and published results.

Recommendations

The second session of this group was very sparsely attended, because people attended other groups during the mix-ups; but also because the structure of this stakeholder meeting was not as obvious as that of the workgroups. The following was the consensus of this group.

- Our time, thoughts, and efforts were/are going into our workgroups, not the stakeholder groups—there's just not enough time and energy to do both at the conference and afterward.
- Stakeholder groups were great meet-and-greet/networking sessions, but it was very difficult to organize in such a short timeframe because the theme, at least for this group, was so very broad, that most of the time was spent "getting started." And there wasn't time to come to substantive conclusions and/or recommendations.
- During the sessions, no leader for the group self-identified, so participants reported on what their respective organizations were doing; this took up most of the first session, with some discussion in between. This was a very free form kind of affair and the discussion from the first session was not captured. The planning committee might consider this issue (leadership in these groups), and might consider a different process for identifying a leader, even if only to establish some kind of "starter" leader.
- Stakeholder meetings might not be outcome-oriented (no reports) and these timeslots could be used as replacements for the workgroup mix-ups. This would give delegates the opportunity to share reflections, commonalities, and serve as a clearinghouse for information.
- The Open Knowledge group might need further delineation, as most of the people in this group could be part of many other stakeholder groups. After all, isn't all of OSI about "open knowledge"?
- Given the above comments, and those of other stakeholder groups, the planning committee might want to consider disbanding the stakeholder groups.

Organizational Perspectives of the Group's Participants

Center for Open Science (https://cos.io)

Our mission is to increase openness, integrity, and reproducibility of research. These are core values of scholarship and practicing them is presumed to increase the efficiency of acquiring knowledge.

For COS to achieve our mission, we must drive change in the culture and incentives that drive researchers' behavior, the infrastructure that supports their research, and the business models that dominate scholarly communication.

This culture change requires simultaneous movement by funders, institutions, researchers, and service providers across national and disciplinary boundaries. Despite this, the vision is achievable because openness, integrity, and reproducibility are shared values, the technological capacity is available, and alternative sustainable business models exist.

COS's philosophy and motivation is summarized in its strategic plan and in scholarly articles outlining a vision of scientific utopia for research communication and research practices.

Because of our generous funders and outstanding partners, we are able to produce entirely free and open-source products and services. Use the header above to explore the team, services, and communities that make COS possible and productive.

Coalition for Networked Information (CNI) https://www.cni.org/

The Coalition for Networked Information (CNI) is dedicated to supporting the transformative promise of digital information technology for the advancement of scholarly communication and the enrichment of intellectual productivity. Some 230 institutions representing higher education, publishing, information technology, scholarly and professional organizations, foundations, and libraries and library organizations make up CNI's members. Semi-annual membership meetings bring together representatives of CNI's constituencies to discuss ongoing and new projects, and to plan for future initiatives. One of our three main program areas is "Developing & Managing Networked Information Content," and themes within that area for the current program year are Institutional and Disciplinary Implications of E-Research, Digital Preservation, and Institutional Content Resources and Repositories.

Digital Publishing Institute (http://dpi.lib.wvu.edu)

The Digital Publishing Institute (DPI) is an international institute for digitally oriented research that focuses on publishing open-access (OA) scholarship.

The DPI is housed within the West Virginia University (WVU) Libraries and supports faculty, staff, and student production of publishing projects that require digital and media-rich components. As a new institute within WVU Libraries, the DPI is part of an organization experiencing rapid change.

Over the next few years, we will be working to establish an innovative hub for scholarly communications within the WVU community that will provide a growing number of hosted research projects and OA journal hosting as well as classes, presentations, workshops, and summer institutes highlighting the publishing capacity of scholars using digital tools and technologies.

Three of our current projects include building the Vega academic publishing platform (funded through the Andrew W. Mellon Foundation) to create and host open-access, multimedia-driven research content; teaching KairosCamp (funded through NEH) to authors interested in designing scholarly multimedia research such as born-digital humanities projects; and "Many Voices: Building a Consortium of Small Scholarly Societies in the Humanities," a planning grant also funded by the Mellon Foundation to research the provision of shared human and technical infrastructures for small, scholarly societies so that can then focus on flipping their journals to open access.

ECS (electrochem.org)

Electrochemistry and solid state science are the future: they are the leading sciences that will ensure our survival on this planet. ECS believes that by opening and democratizing research, we can more rapidly advance our important sciences and society at large, while directly fulfilling our mission. The key to scientific advancement has always been the open exchange of information. Yet even in today's digital environment, many scientists around the world struggle to access quality, reliable research. The bottom line is discoveries need discoverability and that is only guaranteed through full open access.

By creating uninhibited availability of the science, ECS can "free the science" and accelerate scientific discovery and innovation, leading the community as the advocate, guardian, and facilitator of our technical domain.

Free the Science is a bold, long-term vision to further ECS's mission to disseminate and advance our fields by embracing a more open science paradigm to promote innovation. It is a business-model changing initiative that will make our research freely available to all readers, while remaining free for authors to publish. This initiative can set a new publishing standard for ECS (and others), one of the last independent scientific society publishers.

As ECS develops its vision for a shift toward more open science, the Society is becoming more involved in the open community and serving as an advocate for the physical sciences as the inevitable changes take place in scholarly publishing. In 2017, ECS will hold its first satellite OpenCon on open science, host a data sciences hack day, launch a preprint server, and a new "born OA" journal.

History Communication (http://www.historycommunication.com)

The #histcomm movement aims to ensure that historical scholarship gets communicated effectively to non-experts across the wide array of media available today and in the future.

At the heart of the movement is a desire to see that scholarship by historians produced in academic journals and scholarly monographs is made more visible, accessible and understandable to audiences that do not have the same subject matter expertise.

In some ways the need for #histcomm is a work-around for a lack of open access. Virtually no one outside of academic historians reads the thousands of research articles and monographs produced by historians annually. It is inaccessible to most people, and also largely unintelligible. #Histcomm asks the question of what would happen if historians (and others) repackaged that same scholarship as videos, podcasts, memes, gifs, emojis, snapchats and more, and disseminated it via new technologies. Would more scholarship reach wider audiences? Would that improve public understandings of history, which often lag many years behind the academy?

#Histcomm also asks the question of what training and instruction are needed for historians to do this work. In addition to the research and analysis skills taught to historians in undergraduate and graduate programs, should we also be teaching communications strategies and media literacy--and specifically applying these skills to the dissemination of historical arguments?

Being part of the OSI conversation is vital for #histcomm. If history journals transition to open, this will shift how #histcomm functions and what changes to the history profession it should aim to inspire. Perhaps the model would shift from re-packaging scholarship that most people cannot access, to *directing* people to scholarship which is freely open and available. Whatever the future, #histcomm wishes to remain part of the conversation and a participant in shaping the culture of open and scholarly communication more generally.

INASP http://www.inasp.info/

INASP is an international development charity working with a global network of partners in Africa, Latin America and Asia. We believe that research and knowledge have a crucial role to play in addressing global challenges and contributing to the achievement of the Sustainable Development Goals. To realize this potential, we work in partnership to strengthen the capacity of individuals and institutions to produce, share and use research and knowledge, in support of national development.

INASP works with publishers to enable affordable and sustainable access to online resources to developing countries in Africa, Asia and Latin America. We work with national consortia or equivalent bodies so that they can meet the information needs of their researchers. The Journals Online project aims to improve the accessibility and visibility of developing-country research by providing a cost-effective and secure platform for online journals. AuthorAID is a free pioneering global network that provides support, mentoring, resources and training for researchers in low and middle income countries.

The Open Access Publishing Cooperative Project: A Stanford University & Public Knowledge Project Initiative (http://oa-cooperative.org)

The Open Access Cooperative Project, supported by the John D. and Catherine T. Macarthur Foundation, is investigating the potential for collective and cooperative models in which libraries and publishers work together to develop economically responsible and sustainable paths to open access to rigorously reviewed and professionally published research. We are exploring this premise through two major initiatives. The first, LIBRARIA, is a collective of anthropology, archaeology and social studies of science journals and learned societies that have teamed with the PKP and the Scholarly Publishing and Academic Resources Coalition (SPARC) to develop a cooperative alternative to the subscription economy to advance OA within these disciplines, which are not well supported by existing APC-based models for OA. Next, we are examining the feasibility of a "subscription-equivalent" transition to open access, leveraging the existing resources and mechanisms of the subscription economy, but repurposing library subscription spends on journals from limited-access subscriptions, to supporting the publishing of content open access, through an approach that is not based on the payment of APCs. This model is revenue neutral for publishers, and expenditure neutral for libraries, i.e. for the cost of a subscription to a journal(s), libraries are able to serve not only the needs of their users and patrons, but to deliver scholarship globally by financing OA publishing of content.

We are in the process of testing the principles and paths for implementation of this model through surveying the library community, as well as extensive consultations with a broad range of scholarly publishers in order to understand the opportunities and pitfalls of this approach. We are testing implementation of this model in cooperation with the non-profit publisher Annual Reviews, who, with the support of the Robert Wood Johnson Foundation have transitioned 2017 volume of the *Annual Review of Public Health* to OA, with all previous volumes now available freely online. Annual Reviews is in the process of testing the collective model, starting

with subscribing libraries, to gain the support of libraries to redirect their subscription spend towards a collective fund to publish subsequent volumes of the journal OA.

Open Knowledge Stakeholders Group

- Cheryl Ball, Digital Publishing Institute, West Virginia University
- Sioux Cumming, INASP
- Stacy Konkiel, Altmetric
- Joan Lippincott, Coalition for Networked Information
- David Mellor, Center for Open Science
- Kamran Naim, Annual Reviews; Stanford University
- Jake Orlowitz, Wikipedia Library
- Louise Page, Public Library of Science
- Richard Price, Academia.edu
- Jason Steinhauer, Lepage Center for History in the Public Interest, Villanova University
- Mary Yess, ECS

COMMERCIAL PUBLISHERS

At the OSI 2017 meeting in Washington DC 13 attendees were publishers. At a minimum, this demonstrates that publishers heavily engage with the services they provide to research communities and consider the discussions about open science to be important.

Nevertheless it is important to understand that different publishers have different opinions, policies and strategies and - because many of them compete with each other- it is in many cases forbidden (by law) and/or unwanted (for competitive reasons) to share these opinions, policies and strategies. Therefore it is not possible to have one combined opinion for this stakeholder group.

There is another reason why publishers at the OSI2017 meeting are not necessarily united: Those attending are diverse with respect to size (eg. Elsevier vs. Annual Reviews), in background (eg. Commercial entities like Springer Nature and not-for-profit societies like IEEE) and dominating current business models (eg. the large publishers with mixed business models vs. PLOS and Hindawi operating with an open access model only).

The one thing that unites all publishers is a dedication to providing optimal services to their customers: researchers, students, institutions, libraries, research funders, governments and commercial entities all around the world. Together publishers contribute to creating a global research publication ecosystem in which they validate content, facilitate the workflow of reporting the results of research, organize peer review, perform many quality measures (including e.g. plagiarism checks), safeguard integrity, add metadata and other structural elements to the content to make this content available, findable, usable and visible at scale, while assuring the availability of that content for perpetuity.

These main functions of the publishing industry guarantee a clear and sustainable infrastructure for the scholarly record, that in principle is agnostic about business models different publishers might use.

Publishers are important drivers of innovation in scholarly communication: they actively support (in many cases in time, money and brainpower) many innovative organizations like Crossref, Force11, ORCID and RDA. They also support organizations that care about standards, like COPE and COUNTER. Additionally, publishers are the main contributors to archiving solutions such as CLOCKSS and Portico.

Many publishers are a member of OASPA, the Open Access Scholarly Publishers Association.

Despite their diversity publishers do in general care about innovation and open science is an important subject. For that reason publishers are happy to be actively involved in initiatives like OSI2016/7. OSI is an inclusive forum to engage with many stakeholders in the discussion and has global intentions.

There also are concerns. There is little engagement from funders at the OSI meetings and there is virtually no attendance from the Global South. It also is unclear what the exact impact of the initiative can be, particularly as it will be very difficult to unite all stakeholders in recommendations or even opinion statements. Finally, publishers are concerned about the vulnerability of the organization, as it is basically a one-man-show in its current form.

RESEARCH UNIVERSITIES

Participants: Ali Andalibi, Nancy Davenport, Barbara DeFelice, Michelle Gluck, Patrick Herron, Mark Newton (reporter), and Joyce Ogburn

Although many of the participants in our working group occupy positions in their home institutions' libraries, they were joined by active researcher colleagues as well as a colleague in a general counsel's office. It may not surprise you to hear that while we found common cause in the exploration of the ways in which research universities may advance an open scholarship agenda, we also encountered a refreshing, spirited debate challenging too-easily accepted fundamental positions on the value of and approach to the development of the open exchange of new knowledge and the pursuit of higher goals attendant to the role of the academy in modern society.

It is not, we discovered, always quite so simple as to recommend that institutions of higher education impress unilateral policies of intellectual property licensure for their open access repositories without rationalizing the tradition of scholar-managed copyright. And while we may agree to observe openness as a virtue, it is also a vulnerability – the datasets produced by the scholars of our institutions may not be copyrightable, but they encode and express a near-irreproducible intellectual intent and they represent a life's work. Thus one-size, absolutist approaches to openness fail to capture the needs of our scholars working as best they can within a system of anachronisms (even if it is evolving, slowly) – and these are the creators without whom there would be very little intellectual product about which to debate.

The work ahead will be very challenging – we'll need to think critically and creatively about the development of programs and platforms that explore open in ways that meet the needs of our scholars. Can we imagine and realize, for example, university-supported platforms for open data sharing that invite peers in as collaborators rather than competitors? Can we incorporate commercialization into our vision of open scholarship as one of a number of modes of dissemination – or will these forces forever be opposed to a pure vision of openness? The answer to these questions and more suggest a revisitation of the role of the research university as an environment for the support and fostering of new knowledge.

Despite the increasingly risk-averse mechanisms impeding forward process in an era of resource scarcity at the state and federal funding levels, the research university has an obligation to the benefit of society and to the public good at its core, regardless of how invisible or rarely expressed this appears in modern discourse. Real advancement requires support for the innovation and experimentation of our scholars, structures tolerant of failure and admitting of a new range of techniques and approaches. Anything short of this presents a threat to breakthrough science and research, breakthrough scholarship, and this concerns us all.

Yet the systems developed to provide these supports emerged in a different era of scholarly communication as well. One might well ask, would it even be possible to instantiate the modern research library today, imagining it didn't already exist? As we found this a properly-sobering thought-exercise, we also find within the question the wherewithal to resolve our recommendation for strategic investments in our research libraries and across our institutions, to innovate and experiment in modes of support and partnership with our scholars to elevate their efforts and provide on-ramps to Open that speak to the collective interest. The challenges of supporting open scholarship in the research university are many and involve numerous stakeholders. Research data infrastructure, digital scholarship support, information discovery and access – and the sustainability problems among them– all challenges that both necessitate AND contribute to an increasingly open environment of knowledge generation and exchange. In common, they face the fact that solutions will come from the many many stakeholders that comprise our institutions – our scholars and our libraries and our modes of research

computing support and our offices of sponsored projects and our information technology and high performance computing infrastructure.

What is necessary is dialogue, as well as a party to convene the stakeholders and conduct the debates and then use these to expand into creative partnership at local and consortial levels. For each of our stakeholder groups, the mistake we risk is in presuming the necessity of radical transformation in the absence of deliberate dialogue. OSI provides us with one such venue to challenge preconceptions – university libraries and their programs of digital scholarship and scholarly communication support and outreach suggest a counterpart at the institutional level.

SCHOLARLY COMMUNICATIONS EXPERTS

Group Members

- **Rachael G. Samberg**, Scholarly Communication Officer, UC Berkeley Library
- **Eric L. Olson,** Community Engagement & Support Specialist, ORCID
- **T. Scott Plutchak**, Director, Digital Curation, University of Alabama's Office of the Provost.
- **Roy Kaufman**, Managing Director, New Ventures, Copyright Clearance Center
- **Catherine Mitchell**, Director, Publishing, California Digital Library
- **Najko Jahn**, Electronic Publishing, SUB Göttingen
- **Sheree Crosby**, Vice President of Global Marketing at Cabell's
- **Suzie Allard**, CCI Associate Dean for Research, Director of Center for Information & Communication Studies, & Professor, University of Tennessee, Knoxville
- **Adrian Ho**, Director of Digital Scholarship, University of Kentucky
- **Christopher Erdmann**, Chief Strategist for Research Collaboration, NCSU
- **Eric Archambault**, CEO, 1Science
- **Hillary Corbett**, Director, Scholarly Communication & Digital Publishing; University Copyright Officer, Northeastern University
- **John G. Dove**, Information Industry Consultant
- **Barrett Matthews**, State Authorizations Coordinator, George Washington University
- **Bryan Alexander**, Bryan Alexander Consulting, LLC.
- **Lacey Earle**, Vice President of Business Development at Cabell's
- **Marilyn Billings**, Scholarly Communication & Special Initiatives Librarian, UMass-Amherst

I. Perspectives on OA

This stakeholder group reflects a diverse constituency including: university presses; repository managers; scholarly communication librarians; researchers; copyright attorneys; funders; and more. Indeed, we believe we embody a microcosm of stakeholders across the scholarly publishing terrain.

Nevertheless, as professionals engaged in scholarly publishing, and with shared interests in supporting a sustainable scholarly publishing lifecycle, we share a perspective of OA that reflects both the need for clarity in communicating about what open scholarship means, and a richer underlying landscape enabling a spectrum of openness for different scholarly objects. For instance, open data may demand both a different meaning and a different timeline for achieving "openness" than, say, open articles would. Yet, how the scholarly community understands "open" currently is muddled by disparate understandings of the term, and stymied by the existing binary publishing framework—that is, open vs. closed.

Further, we understand that achieving both a clearer and more diverse landscape for OA likely necessitates identifying proper incentives to effectuate change. Why should funders invest in creating platforms to facilitate open scholarship dissemination? Why should scholars dedicate time to depositing in institutional repositories if making open copies available does not bear upon promotion and tenure? Why should researchers publish their data sets open now, and allow others to start using their data, if they wish to publish multiple future articles? The value and incentives of OA can become easily obscured by long-standing concerns within academia.

Therefore, this stakeholder group also shares an interest in more clearly fostering and articulating the incentives for OA publishing to effectuate behavioral changes. This necessitates:

- Establishing external prizes to reward OA outcomes (including not only for researchers, but potentially also funders and publishers, societies, etc.)
- Demonstrating and publicizing the benefits of OA for public good, social justice, and democratization
- Documenting ways in which OA has advanced knowledge and innovation
- Encouraging and locating OA collaborators (e.g. funders, publishers, Research Offices)
- Appealing to researchers' and institutions' self-interests by highlighting ways that OA promotes impact

II. Areas of Agreement & Disagreement

Given the diverse nature of this group, our discussion focused on areas of shared interest and concerns, and how we can bring our differing perspectives to bear in a productive fashion.

For example, there is a shared concern with author rights among the members of the group, running the spectrum from those concerned with encouraging authors to exercise their available rights as fully as possible to those concerned with developing tools and resources that can help authors (and others) operate well within the margins of existing copyright and licensing schemes. While these approaches can sometimes manifest themselves in opposition or in conflict, we recognize the need to engage all perspectives in establishing a more balanced landscape that is tailored to all digital learning objects and that levels negotiating power among the different parties who have an interest in maintaining and making use of certain intellectual property rights. Engaged discussion in these areas can help to increase trust and an understanding of what each group can contribute.

In addition we recognize a shared need to try to simplify the messaging around sharing of intellectual property, noting that data and articles, for example, may have different needs and require the establishment of different norms.

We recognized that across the various organizations of which we are a part, OA advocates are often challenged in the degree to which they are empowered to change the culture around OA. For example, can scholarly communication officers in academia speak legitimately about where to publish? To what degree can individuals in a corporate environment encourage shifts in official company policy? In large organizations, it can be challenging to finds ways to be involved in the decision making or implementation of systems that have implications for OA. In the academic setting, the adoption of Research Information Systems can be one such example. Often, the people charged with selecting such a system may have priorities in mind that don't take OA issues into account.

Additionally, we acknowledged the challenge resulting from stakeholders' vested interests in particular aspects of scholarly publishing. These interests often shape actions (and counteractions) in the discourse and actualization of open scholarship. Our best intentions may be limited by organizational and professional constraints.

Finding ways to share perspectives and experiences across these and similar issues would be productive and we tried to suggest a number of ways in which we could approach that going forward.

III. Specific actions or outcomes that can balance the needs and interests of all group members

OSI2017 is an attempt to stride forward, stepping off of the "starting block" of unique cross-stakeholder discussions during OSI2016 and onto a path toward a proliferation and acceptance of open in scholarly

communication. Like any path toward attitude and behavior change, it is fraught with barriers. Our diverse stakeholder group proposes the following actions to avoid, hurdle, or eliminate these barriers.

Establish synergies

Agents can encourage behavior change through a number of different appeals. The rhetoric around open remains inconsistent and even contested, so direct appeals toward participation can be challenging. However, we can also work toward these changes by manipulating the "path," the processes of scholarly communication, to make it easier for stakeholders to take part in an open ecosystem.

For example, publishers and institutional repositories could partner to build a synchronization where the publisher would automatically share the manuscript and attached metadata with the IR upon acceptance. The growth of ORCID requirements among publishers and encouragement among research institutions facilitates these experiences, as the authors can keep an updated record of contributions, the institutions can get better data about their researchers, and the scholarly communication community has a consistent, transparent framework instead of many systems with limited interoperability.

Representation at OSI Events

One of the primary challenges of OSI2016 remains for this meeting; author and researcher representation. They are a stakeholder group that is obviously affected by whatever levers of action we may be able to pull, but it has been difficult to involve a multitude of voices that span disciplines. Other players that can drastically impact any attempts to put proposals into action are university research offices and upper administration, both of which need a platform going forward.

We discussed a number of ways to change the OSI communication plan to hear more from these stakeholder groups, but it is important that they have the opportunity to be a part of the in-person events that are so important for building familiarity and collaboration among this diverse community. One way that we propose to do this is by having OSI become a "Fulcrum Event".[1] Some cross-discipline academic conferences now partner with smaller, discipline-specific meetings that help to bring attention and attendance to both that they may not be able to obtain separately. OSI could reach out to research communities to propose synchronous meetings that could provide increased researcher participation in the meeting.

Explore a Fellows Program

OSI's interstitial position can make it an ideal partnership catalyst with scholarly communication. As identified by several workgroups in OSI 2016 and OSI 2017, one of the challenges of communicating between the "silos" of scholarly communication is that the "producers" like researchers are unfamiliar with the cultures of "providers" like publishers and vice versa. A fellowship program that facilitates an exchange of individuals between these silos could provide valuable insight and experience to begin bridging these cultural gaps. Given that some university presses now exist as administrative units of their institutions' libraries, there could be natural opportunities to facilitate this type of communication flow.

Establish a more balanced author rights ecosystem and options for author choice

As experts from our group effectively reflect all stakeholders within scholarly publishing, we were keenly aware of an imbalance of influence regarding how the end product—the scholarly publication itself—can be shared. There are potentially competing interests, such as between authors, publishers, and readers about managing copyright and licensing works for reuse, in an open framework. We acknowledged that authors may

wish to have a more robust set of choices within the general framework of "open" by which to license their data or publications for re-use—yet typically are given little if any opportunity to select from licensing options when signing a publication agreement. Moreover, some publications that are "open" in the sense that they are readable without access are not "open" for re-use but remain protected by copyright held by the publisher. We acknowledged that this often results in a binary approach to rights management—either the work is licensed, say, with a CC-BY license, or copyright is reserved entirely by the publisher. Diversification of rights management options would foster greater balance within scholarly publishing.

Be Ambassadors to Our Own Groups and Facilitate Stakeholder Engagement

The unique makeup of this stakeholder group may be an opportunity to address one of the communication barriers that OSI faces. It is difficult to monitor the conversation of such a diverse collection of stakeholders, to say nothing of curating, organizing, or participating in it. Perhaps we could each serve as a community ambassador for our respective silos, where we are able to bring a particular perspective to the OSI exchange of ideas as well as bring ideas found there back to our communities. In addition, these ambassadors can be seeking efforts and ideas that overlap with other stakeholders, which are prime opportunities for collaboration and engagement.

[1] *Culture of Communication Workgroup*. Youtube Video. Open Scholarship Initiative 2017 Workgroup Presentations. Washington, DC, USA, 2017. https://youtu.be/ejj90pHlFwY?t=904.

SCHOLARLY SOCIETIES

I. Charge & Members

The 2017 Societies Stakeholder group discussed the various approaches to publishing that was represented around the table. Representatives in this group included:

Kris Bishop
Karla Cosgriff
Michael Forster
Diane Scott-Lichter
Brian Selzer
Crispin Taylor
Emma Wilson

The group all came from science disciplines and represented all sizes of organizations and publishing arrangements, i.e. small and large independent publishers, and those that partner with for-profit publishers under various arrangements.

II. Assumptions & Challenges

To guide their conversations, the stakeholder group agreed to a set of baseline assumptions, the most important of which is making sure that to maintain high quality publishing operations, the society must have a sustainable business model. For all of the groups represented, journal publications and ancillary activities are not only self-sustaining but they also fund many other society programs such as awards and education programs. This position is similar to the situation that keynote speaker Vint Cerf described at the Association for Computing Machinery, where he previously served as president. At ACM, 30% of funding for programs came from publishing surpluses. The group questioned whether it is possible to replace the subscription revenue with other forms of support, including philanthropic, to keep these programs going.

One of the groups represented, The Electrochemical Society (ECS), which is relatively small compared to the others in the stakeholder group, is trying to go to a platinum open access model (*Free the Science)* by raising philanthropic support for this change in business model. The stakeholder group acknowledged that this kind of model cannot work for everyone because the publishing operations are just too large.

Similarly, the group concluded that there is not one right model for the future of open. There probably needs to be a mixed economy of business and funding models. One of the ways that costs to publish could be reduced would be for smaller or independent society publishers to realize economies of scale and share platform expenses. There may also be opportunities to use open sourced software that is being developed.

There is, however, a perceived concern that a gold open access, APC-based economy may result in competition on price and a lowest common denominator level of service/quality.

The bottom line is that the missions of the societies represented encompass a responsibility to steward and advance research but that does not always fit well with publishing-centric revenue models. A shift away from traditional publishing operations is therefore, a delicate budgetary and PR issue that no one has the answer to yet.

III. Future Roles for Society Publishers

The group discussed way in which societies could play a bigger role in the shift toward greater openness and sharing. The most important role is educating their constituencies on the benefits and requirements of open that can help perpetuate a culture change. Beyond that, they could offer platforms and recognition for those making the shift:

- Managing member metadata
- Connecting, tracking, and rewarding contributions
- Discipline-specific awards for "open"
- Scholarly Communication Networks
- Micro-credentialing

One example of the beginnings of some of the aforementioned comes from one of the stakeholders, the American Society of Plant Biologists: https://plantae.org/.

IV. Next Steps

Societies are in a unique position to influence the move toward open because they represent large groups of professional constituencies. To better understand the landscape, the stakeholder group recommends the following action steps:

1. Socialize concepts of open more within communities.
2. Bring together independent society publishers to determine if collaborations can be made. Determine how to increase efficiencies across the ecosystem.
3. Determine how the funds in the system can be redistributed (institutionally, nationally, internationally) to provide a more transparent economic relationship among producers, consumers, and publishers of information.

For any of these collaborations or developing economies of scale, societies must trust each other and have shared values.

SUMMIT GROUP

The initial program for OSI 2017 included time on Wednesday for each of the stakeholder groups to elect or appoint representatives to an OSI "Summit" group that would be empowered "to revise (as needed) the proposals developed by workgroups, and to prepare agreements and action plans built on these proposals after first consulting with relevant workgroups, delegate groups, and the full OSI group." However, during the open discussion on Thursday morning, there was consensus among the delegates that the formal governance structure proposed was premature. This eliminated the need for the Summit group, at least for the time being. Nonetheless, several of those who had been elected (or volunteered) in our stakeholder sessions (see below) got together on Thursday morning anyway as an initial informal advisory group. While we did not represent all the stakeholders, we touched on process issues that we think might have broad agreement among many of the delegates.

At this point we are much less concerned with governance than with process – that is, coming up with ways to continue to engage people productively, particularly across stakeholder groups, throughout the year.

The email discussions are often interesting, but they can be difficult to participate in. It's the nature of the form that there'll be a flurry of emails depending on who has the time on any given day, and then within a day or two (at most), it's over. People who take longer to put their thoughts together or who would like to get back to a topic at a later time tend to be left out.

There are a variety of tools available. We have Basecamp accounts for the workgroups, but it's not clear how much use they've gotten for that purpose. They have not been used for other discussions. The group talked about other kinds of tools that might include a variety of synchronous and asynchronous options. Megan talked about the CUNY Academic Commons as an example of a robust, multi-featured tool that might be useful for our purposes.

Making good use of these tools will require more structure. Perhaps we could organize monthly webinar sessions. Scott mentioned the NIH's BD2K weekly seminar series as one possible model. Perhaps a brief presentation on a topic being investigated by one of the workgroups, followed by discussion would help to keep people engaged. Announcing topics of such presentations and/or webinars could allow additional experts to join.

Using these technologies effectively could also help to address the need to involve more researchers and more people from outside the U.S.

Organizing these activities will require careful planning. A small group willing to commit themselves to making it happen will need to be organized.

Given the discussion about governance, we weren't entirely clear what the long term prospects of the group would be.

Carrie Calder – Springer Nature (Commercial Publishers)
William Gunn – Elsevier (Commercial Publishers)
Alexander (Alex) Kohls – CERN (Non-university research)
Joyce L. Ogburn – Appalachian State University (Research Universities)
T. Scott Plutchak – UAB (Scholcom & Publishing Experts)
Megan Wacha – CUNY (Scholarly Libraries & Groups)

ANNEX 8: SCIELO PRESENTATION

"The future of scholarly publishing"
A remote presentation to SciELO by Glenn Hampson
Executive Director, National Science Communication Institute
December 2016

The views expressed herein and in the accompanying PowerPoint presentation and videos are solely those of the author and do not reflect the official views or positions of the National Science Communication Institute or its staff or projects. Most of the following text was recorded and accompanied by a PowerPoint presentation, which was then subtitled in Portuguese.

Good morning. My name is Glenn Hampson. I'm the executive director of the National Science Communication Institute. Thank you for inviting me to speak to you today.

As you know, scholarly publishing is an issue that is vital to the future of research and discovery, but that really hasn't received as much attention as it needs.

What questions should we ask?

First, in order to answer the broad question of what the future of publishing looks like, we need to set a proper frame of reference by asking a long list of smaller questions. For instance:

- What is publishing anyway? What did it used to mean and what does it mean today? Tomorrow?
- What are journals anyway, how prevalent are they, what influence do they wield, and why do they matter to science? What do scientists think about journals? About journal reform? How about funders?
- Why is reform needed? What's wrong with journals anyway? Are these problems cosmetic, technological, systemic, institutional, connected (i.e, how fixable are they, can these repairs be prioritized, and do we need 100 one-off adjustments or just a few major ones)?
- What might be the possible impacts of publishing reform? How about the unintended consequences?
- What is changing now? Who is doing what and how successful are they so far? What influence will the market have in determining winners and losers?
- What are the prospects of widespread change happening anytime soon?

The current state of publishing (overview)

There are many "broken" aspects of publishing—some that are legitimately dysfunctional, others that simply need improvement, and others that are only broken depending on your perspective. The table here lists just a few of these in very general terms. This list is just meant to be illustrative; cataloging the full litany of problems and solutions is well beyond the scope of my presentation here, so we'll need to just suffice it to say that there's a lot of activity going on at the moment.

What does the future look like (the short answer)?

How should we answer these questions and how should we view the reform efforts that are happening? The short answer (since I only have 20 minutes of your time), is "it depends." Specifically, it depends on:

- *who* you ask (except for the history of publishing question, different disciplines, institutions and stakeholder groups can have markedly different views of what should and will happen)
- *when* you ask (the answer is changing almost constantly)
- *what* you ask about (some parts of publishing are changing, some aren't)
- *why* you ask (different problems--saving money, for instance—have different solutions)
- *where* you ask (different regions and institutions have different approaches)
- *if* you ask this as a realist or an idealist (realists will say that nothing will change without publishers leading the way, idealists will say that publishers are the problem and that society has a moral obligation to reform publishing)

The future: A longer answer (10 key points)

The longer answer can be summarized with these 10 key points (these were developed by the OSI2016 delegation; I'll describe later on what "OSI" means):

1. Scholarly publishing is changing, and this presents opportunities and challenges.
2. Some of the change that is happening involves shaking up the current system to utilize publishing tools and approaches that may be better suited to an Internet-based information world. But not all current and needed changes fall into this category. Indeed, some of the most needed changes do not.
3. Some change will need to involve reforming the ancient, stagnant communications culture inside academia, where old publishing methods, measures and perceptions drive author choices and are used as proxies for merit when evaluating grant awards and tenure decisions. And some will need to involve examining our own biases that publishing is a binary proposition involving either open or closed, subscription or green, right or wrong. Open, impact, author choices, peer review and other key concepts all exhibit a range of values. Creating new, non-binary measures for some of these values (as proposed by several workgroups) may be helpful insofar as allowing stakeholders to focus on improving areas most in need of change, and comparing progress and best practices across disciplines, institutions, publishing approaches, funders, and so on.
4. Any widespread change is going to require a widespread, coordinated effort. There are simply too many stakeholders with different interests and perspectives who influence different decision points. No single stakeholder or group will be able to affect this kind of change unilaterally.
5. Additionally, we don't have a clear, coordinated action plan for improving open. What needs to happen today, tomorrow and the day after? Who are the actors, what are the mileposts, what are the likely impacts, and how do we measure success?
6. How do we make these reforms in response to needs and concerns of authors rather than in spite of authors?
7. How do we make changes across disciplines (which have different needs) and that also effectively build on the efforts of the many stakeholders in this space?
8. How do we reform the system without losing its benefits?
9. How do we move from simply repairing dysfunction to creating a more ideal publishing world and reaping the benefits that such a world could provide in terms of participation, efficacy, efficiency, and discovery?
10. More standards and norms would be helpful as we move forward, as well as answers to a number of key questions.

The future: An even longer answer

But to get a really complete answer you need to take a step back and look at the whole ecosystem of scholarly communication.

1. Journal publishing itself fits inside a large and complex science communication ecosystem, and this ecosystem is poorly defined and understood, and also evolving through a variety of disconnected efforts and initiatives. As science communication goes, so goes journal publishing.

   And how you determine where science communication is going really depends on what you do for a living. If you're a journalist, science communication means writing and reporting about science. If you're Alan Alda's Center for Communicating Science, it means trying to improve the way that scientists talk to the public. If you're scholarly communications specialist at a university, it means improving access to research materials produced at your institution and ensuring it can be widely shared and disseminated. If you're a special interest advocate—maybe your concern is climate change or medical research—it means working to ensure that critical information is shared quickly and effectively in science and with policymakers and the public. It's the proverbial case of blindfolded people trying to describe an elephant: Science communication means many things to many people, including but not limited to science writing, STEM education, science marketing, science policy, collaboration, informatics, study design, and tech transfer. There is no one all-encompassing description, no one course of study that prepares someone for a career in science communication, and no right answer for how to improve science communication. Fortunately, all of these endeavors are connected. They all have a common goal to improve science through more effective communication. Our failure to connect these efforts to-date so they can work together more effectively has had and will continue to have ramifications for education, public policy, even discovery, and it's one reason why the National Science Communication Institute was started—to help connect the dots and help science communication reach its full potential so it can help remedy these impacts. Science journals are just one part of this ecosystem— of critical importance inside science but certainly less visible to "outsiders" and well off the radar of most funders who want to help reform science communication but are backing just limited efforts like science writing or science education.

2. While it is growing and transforming, science communication is struggling to adjust and respond to a society that:

   - is creating massively more information than ever before in its history—the increase is on an exponential growth curve
   - is pushing for better access everywhere (e.g., more free, open content)
   - has lost faith that science is above reproach ,and
   - has less and less confidence that science can is providing reliable answers.

   I'll talk about the growth in journals in a moment—which really pale in comparison to the growth of information in general but that's sort of a separate talk altogether. As for our push for open, the world is becoming more open everywhere—open research, open government, open data, open source code, and so on. However, in at least in one of these areas—open research—there is growing tension between the desire to see more open content in the world, and the reality of how this is going to happen quickly and on a large scale. So many systems in research are interconnected and depend on the status quo—peer review systems, tenure and promotion practices, embargo policies, the use of impact factors, the metrics of funding decisions, data protection and competition in research, and so on. Simply "switching" to open is an unfunded and untested mandate, and will require not only

institutional changes, but changes in the culture of academia, government policy, and research itself. Indeed, there is resistance to (or at least misunderstanding of) change inside research and even a fear among many that this change will cause harm. But change is coming. More and more funders are mandating open policies, as are governments and a growing number of universities. How can this change be coordinated so that researchers aren't caught in the crossfire of complying with new communication requirements that may not be in their best interests and that may also move in a different and even competing directions? A number of high ranking research officials have expressed concern that this cacophony poses a threat to research and that solutions need to be developed immediately.

I don't have time to go into much detail on points 3 and 4. The retraction crisis of the past few years, which I'll mention later, has certainly played a role in damaging the public's confidence in science. So too is the branding problem that science has. We live in a world where the moniker of science has been appropriated—and unfortunately, misappropriated as well—by many fields wishing to look more "scientific" by tacking on ornaments like equations and studies of some sort to gloss over conclusions that are anything but rigid. And the net result has been dilution of the science brand. Public confidence in science has been eroded by a long parade of broken promises regarding how many eggs we should eat, whether sugar is good or bad for you, how much television our kids should watch, whether product x is better than product y because it has been "scientifically proven" to be better, and on and on. In the popular media, there is often no distinction between "soft" science and "hard" science—the discovery of the Higgs Boson particle, for instance, or new planets around nearby stars—and so over time, people internalize these false equivalencies and begin to question whether all scientists really know what they're talking about. "Why not keep smoking, skip vaccinations, and keep driving a car that spews smoke out its tailpipe? Scientists really don't know what they're talking about anyway."

3. Whether and how journal publishing transforms depends in large measure on whether and how journal publishing can respond to these broader societal forces, and do so in a way that is broadly and quickly adopted and makes sense for authors, science, the marketplace, funders and policymakers, and for the culture of communication in science. It's a complicated puzzle.

Struggling to adjust: Growth

The growth of legitimate journals is another issue for several reasons. There are somewhere around 30,000 scholarly journals at present (no one knows the exact number) that publish about 2 million articles per year. The rate of growth of articles has been a constant 3.5% per year for the last 350 years, on average, but even this steady growth results in a doubling of the amount of published content every 20 years. The growth rate driven by a mix of factors—not clearly related to markets, political influences, or research and development spending, but probably more related to the number of active researchers. More researchers means more publishing. That said, the number of publications has increased exponentially in recent years due to a number of factors, including the increasing specialization of science, the internationalization of research, and changes to the publishing industry itself over the last 30 years (with lower barriers to entry due to desktop publishing and the emergence of the Internet). What challenges does this increase present for the future of journal publishing?

Struggling to adjust: Growth (continued)

How do we reliably vet all this information? The explosion in content poses at least an existential threat to science in terms of outright fraud and replicability issues.

Is it a big issue? Not if measured by retraction rates, anyway. Out of the 2 million articles published last year alone, everywhere in the world, in every language and on every subject it's possible that only 75 or so—or 0.005 percent—were retracted for a variety of reasons, and not just fraud. Journal articles were also retracted because of errors, duplication, plagiarism, ethics violations and other causes, and the retraction rates in biomedical research were higher than in most other fields, and varied by geography as to the specific causes. That's like walking into the largest bookstore in your state, and in this wall-to-wall mass of published work covering acres of shelf space on every subject known to man, finding just seven books that contain suspect information, plagiarized passages, or calculation errors. This might be touted as an impressive statistic in most circles, not a dire warning. Indeed, what makes these particular findings even less newsworthy is that in 2012 (for example), a mere 38 labs with five or more retractions each accounted for 44% of the total number of retractions due to fraud or suspected fraud (390 cases out of 889), and 17 researchers with 10 more retractions accounted for fully 37% of the total (325 cases). What's more, the definition of fraud is broad and includse everything from "conclusions set forth…cannot be relied upon" to "critical data can't be reproduced," to "errors in calculations," to contaminated samples, inappropriate data collection methods, ethics violations, and more. Added to this, retractions didn't even exist before 1975; there is more robust oversight and protection capacity of today's science with the far less developed systems of 36 years ago.

Still, the "retraction crisis" stirred up a lot of negative press, which only further eroded public confidence in science and played into the hands of policymakers who need more reasons to fight against climate change legislation. Also, its possible that what we're seeing is only the tip of a much larger problem (psych studies were recently criticized for their lack of replicability, although an analysis of this by the Center for Open Science has since been criticized), and we need to be cognizant of this. This is because there's a new threat to science from journal publishing fraud—fake science, journals that publish bad science for a fee, and journals that repackage plagiarized journal articles for a fee. Why? Because there's money to be made, and because of the cache involved in being published.

Struggling to adjust: Growth (continued)

- How do we make sense of the information overload?
- How do we combat information underload, where lower resource areas and institutions aren't getting the information they need to succeed?
- How do we reliably vet all this information? Our peer review systems are not up to the challenge, and the sheer number of publishers means there will certainly be more players who see an opportunity to make money at any cost.
- How do we reliably categorize all this information and provide guidance about which venues are good and which aren't. Impact factors are the current method, but these have come under heavy criticism for their poor methodology and the perverse impact these factors have on funding and tenure decisions.
- How do we ensure that what's being published is useful and readable? This question goes beyond just trying to move increasingly toward an international lingua franca in science (English appears to be the standard). It also means trying to ensure that the studies that get published are helpful and not just gibberish for the sake of being publishing, that these studies are actually readable—there is a "journal speak" expectation in science writing which requires multisyllabic obfuscation where plain language would be just fine (the internationalization of science and the fact that there are more multiple-author papers now than in the past is also impacting this evolution of readability)—and whether they are being shared and read.
- What do we do about costs, as more journals means more subscriptions are needed? The pressure of subscriptions is weighing heavily on even the richest libraries? For this reason there's been a global move toward open (and accompanying tensions). The move toward open is not limited to "open access" in scholarship. We live in an increasingly open society, and this expectation that everything

should be free has played a leading role in the slow death of journalism. So open is coming. But it will have consequences, both good and bad, and universities need to be convinced about the benefits of open, what it means in practice, what it means to faculty and researchers, and so on. Universities will not jump blindly into the unknown—they are very conservative institutions—which is why the open access movement, while important in raising our collective consciousness about this issue, has succeeded in making only 15% of academic content freely and immediately available over the last 15 years. The movement can do more, and needs to do more, but it will take more thinking about how to get there from here.

Struggling to adjust: More open

More subscriptions means more costs, which are taxing even the wealthiest library systems into submission. What can be done about this?

- Rethink subscription bundles?
- Make pricing more transparent?
- Make more open options available?
- Make more open options available? The growth rate of open isn't strong (about 15% of journal content is open after 15 years of advocacy for this approach). With a "global flip, subscription journals could be "flipped" to free, open journals if universities and research funders agree to pay the publishing costs up-front instead of after the fact through subscriptions, which in theory would accelerate the global move toward open. Critics question whether there's enough competition in the system to actually make this happen, though, since about 45% of the journal publishing market is controlled by only six publishers), and even what incentive publishers would have to do this—unless they could make at least as much money as before.
    - There are many other loose ends here: what kinds of open are we talking about (is there an open spectrum), what are the measured economic impacts of open, what is the moral case for open weighed against the business case (yes, information should be free, but at what cost), what are the usage dimensions of open—who needs it and why and where's the proof it's being used as envisioned—and importantly, who should decide these issues? Libraries? Open knowledge groups? Governments? Through what process. And how do we ensure participation in the new system (indeed, how do we ensure that what we're doing is what's needed?).

Struggling to adjust: Faith & confidence

Restoring public confidence in science is perhaps the seminal challenge of science communication and science journals. It will take a village to make this happen:

- Democratize science by making information much more readable and understandable, and also take time to explain its relevance, not only for the benefit of the public and policymakers, but also for other scientists (who if hard pressed would also admit that it's hard to understand most articles), with a particular focus on doing a better job of explaining what science is and is not (to help rebuild the science brand and public confidence in science)
- Make information more discoverable (whether through more open, more use of institutional repositories, a wider variety of non-journal summaries in blog posts and so on), both to help with discovery but also to help combat our information overload issues
- Support approaches that combat underload without violating copyright like SciHub

- Make information more complete (including datasets, for instance) and more comparable so we can connect the dots better within and between fields.
- Do a better job of making the case for open with universities—the challenges ahead should not be divisive and partisan. There are practical concerns that need to be discussed and addressed, and the sooner we can do this and come up with solid answers and practical approaches the better for everyone—publishers, scientists, and society.
- Connect science communication efforts to improve their efficiency, visibility and impact
- Connect journal reform efforts so the global community is involved. See the next slide.

The key to the future: Make sense

Finally, it's important to note that for all the activity that surrounds publishing reform and concerns about reform, the reality is that nothing can happen and change cannot be sustainable unless it makes sense:

- for authors (do authors want these changes? How will these change impact their recognition, funding, promotion, and so on?)
- for science (is this what science needs? In all fields? Will these reforms help or hurt science? This needs to be the first and last question we ask.)
- the marketplace (publishers need to be part of these reforms. Mandating reforms that publishers won't follow is simply creates chaos—the system is already filled with lots of unenforced and unenforceable "mandates" regarding manuscript deposits and such)
- for funders and policymakers (are there reforms good policy?)
- and for the culture of communication in science (can these reforms be achieved?)

The Open Scholarship Initiative

The Open Scholarship Initiative is the only such effort trying to build the future of journal publishing with a global, collaborative approach. Why is collaboration needed? What proof is there that collaboration will succeed? On the one hand, it's clear to many people who have followed the changes happening is scholarly publishing over the years that much tension and uncertainty currently exists. Having a forum where issues can be discussed that reach across stakeholder groups is critical, as it is with many other societal concerns. Imagine OSI's approach to improving scholarly publishing as being akin to auto manufacturers needing to establish common standards, or environmental regulators working toward common goals with a wide variety of stakeholders in the private sector, state and local governments, and federal and international governments. In scholarly publishing, a variety of independent stakeholders are independently working to create a similar class of products that should ideally be interoperable and that have significance to society—the production of knowledge of consequence to medical research, industry, environmental protection, and so on, using public money in most cases. This information isn't entertainment, nor is the type of information we're likely to easily find in newspapers or online (without access privileges), but research that we've invested in, that we monitor, and from which we increasingly expect to receive a return on investment. And in the production of this good, we have no universal guidelines—no coordinating body that says how it will be done, where it will be stored and preserved, how it can (or can't) be used, and so on. Ensuring that this process has reasonable guidelines that protect the benefits owed to society is the best way to protect the outputs from this system. So, to create these guidelines—or at least to begin having this conversation—we need to create some kind of working group, some kind of representative body or forum that can work toward developing a system of joint responsibility for its proper care and development.

For the print version of this presentation, I'll include a broad overview of OSI. For more information, go to the OSI website at www.osinitiative.org:

Different stakeholder groups—universities, researchers, commercial publishers, funding organizations, scholarly societies, libraries, governments, open access advocates and so on—have focused on improving scholarly communication for many years now but generally as interest or industry groups and not as a broad stakeholder community. Because of the scope of impact of scholarly communication and because there are so many divergent perspectives on this issue—by stakeholder group, discipline, country and more—many have concluded that coming up with a broad, large-scale, collaborative, global approach to scholarly communication issues is vitally important, now more than ever, not just to protect the future health of research but also to ensure that the solutions we adopt today won't widen the information access gap that already exists between wealthy and developing regions of the world (and indeed that ideally, global efforts will help close this gap and help sustain a more equitable future for information access).

The Open Scholarship Initiative (OSI) was developed to address this need. The objective of this effort is to build a new and robust framework for direct communication and cooperation among all nations and stakeholders in order to improve scholarly communication, beginning with scholarly publishing and the issues that surround it—and to the extent possible to help usher in common understanding and achievable, sustainable solutions and the capacity to work toward these solutions together. To accomplish this, OSI, which has been developed in partnership between the National Science Communication Institute (nSCI) and the United Nations Educational, Scientific and Cultural Organization (UNESCO), has created a large community of high-level delegates from stakeholder groups around the world and convened this community in extended conversations, meetings and collaborative efforts—executive officers from key groups chosen to represent a cross-section of interests and opinions, authorized in most cases to speak on behalf of their institutions and in a position to reach agreements and push forward change.

These leaders are currently interacting on four levels to negotiate the future of scholarly communication and publishing: (1) On the OSI listserv (with 350 scholarly communication executives from around the world), ideas and perspectives are constantly being exchanged. This listserv is the main communication tool for this group—and the only direct line of communication between some stakeholders; (2) Listserv members choose important questions and projects to work on—for instance, how to improve peer review—and work together as part of interdisciplinary teams (publishers, librarians, policy officials, open knowledge advocates, funders, etc.) to develop approaches for the full group to consider. The project manager, the National Science Communication Institute, provides a technical and management capacity to help roll out the solutions proposed by workgroups and approved by the full OSI group; (3) Annual meetings (the first was held this past April) provide an opportunity for these different leaders to discuss issues face and face, and get to know each other better; and (4) In addition to these measures, there are a number of important research questions that are being funded by OSI and that exist in parallel with OSI's work—including but not limited to determining the impact of embargoes on journal subscriptions and the economic impacts of open.

The first meeting of this group happened this past April (OSI2016). Meetings are just one part of the overall OSI strategy, which consists of a continuous 10 year-long effort to expand perspectives, explore options, build partnerships with the many other groups who are also trying to affect change in these areas, research answers and fix problems, punctuated by annual meetings to build new bridges and dig more deeply into key issues. A central tenet of OSI's still-evolving program will be to help figure out how these different groups and voices can work effectively together to rapidly achieve common goals and actionable, sustainable solutions. Improving the global reach of OSI will also be important in this effort: OSI is not yet to the point where it is truly global or inclusive process—more work remains to be done but this effort is off to a strong start.

The goal of OSI is to help make significant improvements scholarly communications quickly—not to help eventually nudge along marginal change, but to help make broad, significant, sustainable change in a reasonably short period of time. Toward this end, it's important to acknowledge first and foremost that everything that happens as a result of the enhanced communication between stakeholders that happens as a result of OSI is win—even the conversation itself. That these groups are agreeing to communicate at all—OSI2016 was just a first step—shows that there is broad acceptance of the merit of this general approach, but the exact mechanisms for what comes next and how have yet to be considered and approved by the full OSI assembly.

It is also important to understand that OSI is not trying to supplant or surpass existing reform efforts. Indeed, one of the goals expressed by several OSI2016 workgroups was to try to integrate OSI quickly into the fabric of existing stakeholder groups to figure out how this effort can add value.

Over the short term, then, this project will benefit the open science effort by creating a framework where inclusive, widespread, sustainable, and rapid change can be negotiated and implemented instead of continuing with the current polarized environment where unpopular change is being slowly adopted on a limited scale. Eventually—whether OSI ends up taking three years or ten—we hope this effort will improve the scholarly communication landscape for everyone by:

- Achieving open goals faster and on a more predictable trajectory by bringing all stakeholders to the same side of the table to push together toward their common goals (while continuing to work out their differences on tangential issues),
- Creating multiple platforms for working on scholarly communication improvements together as a broad stakeholder community (these platforms will expand as OSI's ability to collaborate and communicate increases),
- Increasing the efficiency and effectiveness of stakeholders by facilitating the development of a common roadmap of goals, policies, and standards in scholarly communication, and
- In the end, increasing the amount of science information available to the world and the number of people who can access this information.

What will happen?

I've told you what might happen and why. Here's what *will* happen:

- Other forms of recording will continue to emerge and be tested as technology supports these changes—for instance, e-notebooks that archive a full accounting of lab notes and data, open data repositories that will help better integrate study data instead of just the summaries of data that are written in journal.
- Science journalists play a critical role in selecting and "translating" science for the public. But as the amount of published material increases in science and the number of science journalists decreases, journalists are handed an increasingly impossible task in this regard. There will eventually need to be some other way more realistic way of transmitting important science information to the public. In the meantime, journalists will continue to struggle in the short term.
- The current state of journal publishing is healthy—the major publishers turn a healthy (and much maligned) profit, and the market is supporting a lot of innovation. As mentioned, of course, subscription costs are an issue, and there are many other issues with the system. But journals themselves have an important credentialing and filtering role in science. Will some other format emerge that handles these responsibilities? For instance, what if peer review was handled elsewhere and not by journals? What if some sort of field-wide ranking systems

evolve that could help determine the importance of a piece of research instead of determining this by which journal handles publication and/or which study gets the biggest grants? If this happened—say in an "All-Scholarship Repository" type of system where all research articles everywhere are deposited, then publishers would be removed from the middle of the publishing and vetting process and would instead be forced to compete for content, which might result in lower prices for journals and even paying royalties to authors. But this is decades away if it ever happens. Over the short term, the most important journals will remain king. And it's important to recognize why this important—it's not just market inertia, but market need. If publishers disappear in a brave new world, what will our creation system will look like without some sort of credible filter? Can you imagine what news would look like in such a world? Already we can, with the emergence of "fake news" this past year and its role in swaying the US presidential election. In response, Facebook and Google will being taking an active role in delegitimizing fake new sites (by withholding ad revenue, for instance). Do we think science would be immune to these same forces? Without publishers, science would be overrun with fake science, and the damage to real science would be incalculable since science is built on itself.

- But publishing is not immune from change. It needs to continue to evolve to become more responsive to the changing world of publishing and changing needs and demands of authors. It is changing already, of course—just in twenty different directions at a thousand different institutions. It will take time to see how this all settles. In the meantime, it will be important for the world of science to maintain some reliable channels with predictable practices. Print will stick around, open options will continue to grow, authors will continue to have more choices, and other science communication channels and practices will continue to evolve, but over the short term certainly, publishing as we now know it will continue to exist and thrive.
- Issues and services that are peripheral to publishing will change and evolve: embargo periods, peer review systems, impact factor measures, institutional repositories and "domes" that connect repositories, libraries, subscriptions, and so on—but not publishing itself. In this respect, SciELO is exactly where the future is headed and SciELO's work is extremely important: serving as a filter to help organize and categorize science and provide some stamp of authority for what is good science and what is not, editing to make science more readable and ensure that more science is available to the world in English, coordinating the transition of publishing to tech platforms and otherwise improving the interoperability of science, and more.

In conclusion

I'm afraid I may have left you with more questions than answers here, or at least very vague and unsatisfying answers. Maybe that's fitting—science appreciates equivocation. I think the next five years will tell us a lot—whether we're going to see only modest changes at the margins, or some wholesale push toward radical change. Inertia is on the side of the former, but an up and coming generation of young researchers who are digital natives and who have come to expect that information should be free (or least more free) are on the side of the latter. My brain is betting on inertia, but my heart is with the natives. Hopefully, OSI will make progress soon where everyone will win.

Sincerely,

Glenn Hampson
November 2016

ANNEX 9: OSI PARTICIPANTS

To the best of our knowledge, the following 380 individuals (listed alphabetically by first name) are currently OSI participants. These individuals belonged to OSI at some point in the last several years, and about half the delegates on this list attended OSI2016. Only five members (not list here) have requested to be removed from the list since the start of OSI (four due to retirement), and one member is part of the listserv but not identified here by request (more may have dropped out on their own without notifying OSI; however, it's not likely that many have done this since the listserv currently contains 392 members and since we do often hear from a wide variety of delegates who follow the conversations in OSI but don't regularly contribute).

OSI delegate	Current title & institution
Aaron McCollough	Head, Scholarly Communication & Publishing, University of Illinois Library
Abel Packer	Co-founder and director, SciELO
Ada Emmett	Head of the Office of Scholarly Communication & Copyright, University of Kansas
Adam Huftalen	Senior Manager of Federal Government Affairs, Elsevier
Adrian Ho	Director of Digital Scholarship, University of Kentucky Libraries
Adyam Ghebre	Director of Outreach, Authorea
Agathe Gebert	Open Access Repository Manager at GESIS Leibniz-Institute for Social Sciences
Aimee Nixon	Head of Open Access Publishing, Emerald
Alberto Pepe	Co-founder, Authorea
Alex Wade	Principle Program Manager, Microsoft academic portals
Alexander Garcia Castro	Senior Research Officer, Universidad Politécnica de Madrid
Alexander Kohls	SCOAP3 Operation Manager, CERN
Ali Andalibi	Associate Dean of Research, Science, George Mason University
Alice Meadows	Director of Community Engagement and Support, ORCID
Alicia Wise	Director of Access and Policy, Elsevier
Alison Mudditt	Director, University of California Press
Amy Brand	Director, MIT Press
Amy Buckland	Chair, Research and Scholarly Environment committee, ACRL
Amy Jessen-Marshall	Vice President for Integrative Liberal Learning and the Global Commons, Association of American Colleges and Universities
Amy Nurnberger	Research Data Manager, Columbia University
Andrew Plume	Associate Director, Scientometrics & Market Analysis in Research & Academic Relations, Elsevier
Andrew Sallans	Partnerships and Collaborations Manger, Center for Open Science (COS)
Andrew Tein	Vice President, International Government Partnerships, Wiley
Angela Cochran	Associate Publisher, American Society of Civil Engineers
Ann Gabriel	Vice President Global Academic & Research Relations, Elsevier
Ann Michael	President, Delta Think
Ann Riley	President, ACRL
Ann Thornton	Vice Provost & University Librarian, Columbia University
Anne Kenney	University Librarian, Cornell University
Annie Johnson	Library Publishing and Scholarly Communications Specialist, Temple University
Anthony Watkinson	Principal Consultant CIBER Research
Arnie Grossblatt	College of Professional Studies, MPS publishing program, GWU
Audrey McCulloch	Chief Executive, ALPSP
Barbara DeFelice	Program Director, Scholarly Communication, Copyright, and Publishing, Dartmouth

Barbara Gordon	Executive Director, American Society for Biochemistry and Molecular Biology
Barrett Matthews	Copyright & Scholarly Agreements Specialist, GWU
Becky Clark	Director of Publishing, Library of Congress
Belinda Huang	Executive Director, National Postdoctoral Association
Betsy Wilson	Vice Provost for Digital Initiatives and Dean of University Libraries, University of Washington
Bev Acreman	Commercial Director, F1000
Bhanu Neupane	Program Manager, UNESCO
Bill Hubbard	Deputy Head Of Scholarly Communications Support, JISC
Bobby Schnabel	CEO, Association of Computing Machinery
Brad Fenwick	Senior Vice President, Elsevier
Brett Bobley	CIO, National Endowment for the Humanities
Brian Selzer	Assistant Director of Publications, American Public Health Association
Brianna Schofield	Executive Director, Authors Alliance
Brooks Hanson	Director, Publications, AGU
Bryan Alexander	President, Bryan Alexander Consulting
Bryan Vickery	Director, Cogent OA
Bryn Geffert	Librarian of the College, Amherst College
Carlos H. Brito Cruz	Science Director, SÃ£o Paulo Research Foundation (FAPESP)
Carol Hunter	Interim Vice Provost for University Libraries and University Librarian, UNC-Chapel Hill
Carol Mandel	Dean, Division of Libraries, New York University
Caroline Black	Associate Publishing Director, BioMed Central
Caroline Sutton	Head of Open Scholarship Development, Taylor & Francis
Carrie Calder	Director, Business Operations & Policy, Springer Nature
Catherine Mitchell	President, Library Publishing Coalition and Director, Access & Publishing Group, California Digital Library
Catherine Murray-Rust	Dean of Libraries & Vice Provost for Academic Effectiveness, Georgia Tech
Cathy Wojewodzki	Librarian & Scholarly Communication Officer, University of Delaware
Catriona MacCallum	Advocacy Director, PLOS
Celeste Feather	Senior Director of Licensing and Strategic Partnerships, Lyrasis
Cheryl Ball	Director, Digital Publishing Institute, West Virginia University
Chris Keene	Head of Library and Scholarly Futures, JISC
Christie Aschwanden	Lead Science Writer, FiveThirtyEight
Christina Drummond	Director of Strategic Initiatives, Educopia Institute
Christine Borgman	Distinguished Professor, UCLA
Christine Casey	Editor, *MMWR* Serials, US Public Health Service, Centers for Disease Control and Prevention (CDC)
Christine Stamison	Director, NorthEast Research Libraries Consortium (NERL)
Christopher Erdmann	Chief Strategist for Research Collaboration, NCSU Libraries
Christopher Thomas	Administrator, Defense Technical Information Center
Claire Blin	Director of Libraries, University of Pierre and Marie Curie
Claudia Holland	Head, Scholarly Communication and Copyright, GMU
Colleen Campbell	Director, OA2020 Partner Development, Max Planck Digital Library
Colleen Cook	Dean of Libraries, McGill University
Concetta Seminara	Editorial Director, Social Science & Humanities Journals, Routledge/Taylor & Francis
Crispin Taylor	CEO, American Society of Plant Biologists
Daisy Selematsela	Executive Director, Knowledge Management Corporate, National Research Foundation (South Africa)
Dan Cohen	Executive Director, Digital Public Library of America (DPLA)
Dan Morgan	Digital Science Publisher, University of California Press
Danny Kingsley	Head, Office of Scholarly Communication, University of Cambridge
Dave McColgin	UX Director, Artefact
Dave Ross	Executive Director, Open Access, SAGE Publishing
David Evans	Executive Director, National Science Teachers Association
David Hansen	Director of Copyright & Scholarly Communications, Duke
David Mellor	Project Manager, Journal and Funder Initiatives, Center for Open Science

David Wojick	Government policy analyst
Deborah Jakubs	University Librarian & Vice Provost for Library Affairs, Duke
Deborah Kahn	Publishing Director, Medicine and Open Access, *Taylor & Francis*
Debra Kurtz	CEO, DuraSpace
Dee Magnoni	Research Library Director, Los Alamos National Lab
Deni Auclair	CFO/Sr. Analyst at Delta Think
Denise Stephens	University Librarian, UC Santa Barbara
Diane Graves	Board member, EDUCAUSE; Assistant VP of Academic Affairs and University Librarian, Trinity University
Diane Scott-Lichter	Sr. Vice President, Publishing, American College of Physicians; Chair, AAP/PSP Executive Committee
Diane Sullenberger	Executive Editor, PNAS, National Academy of Sciences
Dick Wilder	Associate General Counsel, Gates Foundation
Donald Guy	Manager, Research Collaboration & Library Services, Sandia National Labs
Donna Scheeder	President, IFLA
Elizabeth Marincola	Former CEO, PLOS
Elizabteth Kirk	Associate Librarian for Information Resources, Dartmouth
Emily McElroy	Director, University of Nebraska Medical Center Library
Emma Wilson	Director of Publishing, Royal Society of Chemistry
Eric Archambault	President and CEO, 1science
Eric Brown	Division Leader, Explosive Science and Shock Physics, Los Alamos National Laboratory
Eric Massant	Senior Director, Government & Industry Affairs, RELX Group
Eric Olson	Outreach coordinator, PressForward Institute
Frances Pinter	Founder, Knowledge Unlatched
Franciso Valdes Ugalde	Mexico Director, FLACSO
Frank Sander	Director of the Max Planck Digital Library, Max-Planck-Society, Germany
Gail McMillan	Director of Scholarly Communication, Virginia Tech Libraries
Gary Evoniuk	Director of Publication Practices, GSK
Gary Miller	Associate Dean for Research, Rollins School of Public Health, Emory University
Gemma Hersh	OA leader, RELX
Geneva Henry	Dean of Libraries and Academic Innovation, George Washington University
Geoff Bilder	Director of Strategic Initiatvies, Crossref
Geraldine Clement-Stoneham	Knowledge and Information Manager, Medical Research Council, RCUK
Ginger Strader	Director, Smithsonian Scholarly Press
Glenorchy Campbell	Managing Director, BMJ North America
Grace Xiao	Co-Founder and President, Kynplex
Gregg Gordon	President, SSRN
Gregory Eow	Associate Director for Collections, MIT
H. Carton Rogers	Vice Provost for Libraries, University of Pennsylvania
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Helena Asamoah-Hassan	Executive Director, African Library and Information Associations (AfLIA)
Hillary Corbett	Director of Scholarly Communication & Digital Publishing, Northeastern University
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Howard Gadlin	Ombudsman, NIH
Howard Ratner	Executive Director, CHORUS
In McCann	Senior Manager, Corporate Information Management, Sandia National Labs
Ingrid Parent	University Librarian, University of British Columbia
Ivan Oransky	Ivan Oransky, Vice President and Global Editorial Director, MedPage Today, and Co-Founder, Retraction Watch
Ivy Anderson	Director of Collections, California Digital Library
Jack Schultz	Director, Christopher Bond Life Sciences Center
Jake Orlowitz	Head of The Wikipedia Library, Wikimedia Foundation
James Butcher	Publishing Director, Nature Journals

James Duderstadt	Chair, Policy and Global Affairs Committee
James Hilton	University Librarian, Dean of Libraries, Vice provost for digital education and innovation, University of Michigan
James Mullins	Dean of Libraries, Purdue University
James Taylor	Deputy Executive Officer and Chief Operating Officer, American Physical Society
Jamie Vernon	Editor-in-Chief, American Scientist
Jane McAuliffe	Director, National and International Outreach
Jason Hoyt	CEO, PeerJ
Jason Schmitt	Associate Professor Communication & Media, Clarkson University
Jason Steinhauer	Director, Lepage Center for History in the Public Interest, Villanova University
Jean-Gabriel Bankier	President and CEO, bePress
Jeff Mackie-Mason	University Librarian and Chief Digital Scholarship Officer, UC Berkeley
Jeff Murray	Deputy Director in Family Health, Bill & Melinda Gates Foundation
Jeff Tsao	Distinguished Member of Technical Staff, Sandia
Jennifer Hansen	Senior Officer, Knowledge & Research Services at the Bill and Melinda Gates Foundation
Jennifer Howard	Former senior reporter, Chronicle of Higher Education
Jennifer Pesanelli	Deputy Executive Director of Operations and Director of Publication at FASEB
Jerry Sheehan	Assistant Director for Scientific Data and Information, White House Office of Science and Technology Policy (OSTP)
Jessica Clemons	Associate University Librarian for Research Education and Outreach, SUNY-Buffalo
Jessica Sebeok	Associate Vice President for Policy, Association of American Universities
Jie Xu	Associate Professor, Deputy Director of Publishing Study, School of Information Management, Wuhan University, China
Jill Mortali	Director, Office of Sponsored Projects, Dartmouth College
Jim O'Donnell	University Librarian, ASU
Jo McShea	VP & Lead Analyst, STM, Outsell, Inc
Joan Frye	Acting Deputy Office Head, Office of Integrative Activities, National Science Foundation
Joan Lippincott	Associate Executive Director, Coalition for Networked Information
Joann Delenick	Scientist, biocurator
John Dove	Library and publishing consultant
John Inglis	Executive Director and Publisher, Cold Spring Harbor Laboratory Press and Co-Founder, bioRxiv
John Mareda	Manager, Knowledge Systems & Analytics, Sandia National Labs
John Paul Christy	Director of Public Programs, American Council of Learned Societies (ACLS)
John Warren	Head, Mason Publishing Group, George Mason University
John Willinsky	OA pioneer, PKP founder, and professor, Stanford U.
John Zenelis	Dean of Libraries and University Librarian, George Mason University
Jon Cawthorne	Dean of Libraries, West Virginia University
Jonas Rabinovitch	Senior Advisor, Public Administration Modernization, United Nations Secretariat UNDESA
Jose Roberto F. Arruda	Special Advisor to the Scientific Director, FAPESP
Joshua Greenberg	Program director, Sloan Foundation
Joshua Nicholson	CEO and Co-Founder, The Winnower
Joyce Backus	Associate Director, National Library of Medicine
Joyce Ogburn	Digital Strategies and Partnerships Librarian, Appalachian State University
Judy Luther	President, Informed Strategies
Julie Hannaford	Deputy Chief Librarian, University of Toronto
Kaitlin Thaney	Director, Mozilla Science Lab
Kamran Naim	Lead Researcher, Open Access Cooperative Study, Stanford University; Strategic Development Manager, Annual Reviews
Karin Trainer	Former University Librarian, Princeton
Karina Ansolabehere	Human rights and democracy expert
Karla Cosgriff	Director of Advancement, *Free the Science*, The Electrochemical Society
Kathleen Fitzpatrick	Associate Executive Director and Director of Scholarly Communication, Modern Language Association
Kathleen Keane	Director, Johns Hopkins University Press

Kathleen Shearer	Executive Director, COAR
Keith Webster	Dean of Libraries, Carnegie-Mellon University
Keith Yamamoto	Vice Chancellor for Science Policy and Strategy, Vice Dean for Research, School of Medicine, and Professor of Cellular and Molecular Pharmacology, University of California San Francisco
Kevin Bradley	President, US Journals, Taylor & Francis
Kevin Davies	Vice President for Business Development, American Chemical Society
Kim Barrett	Distinguished Professor of Medicine and Editor-in-Chief, The Journal of Physiology
Kostas Repanas	Head, Office of Science Communication and Archives, A*STAR
Kris Bishop	Product Manager, American Association for the Advancement of Science (AAAS)/Science Family of Journals
Krista Cox	Director of Public Policy Initiatives, ARL
Lacey Earle	Vice President of Business Development, Cabell's
Lars Bjørnshauge	Founder and Managing Director, DOAJ
Laura Helmuth	2016 president, National Association of Science Writers
Laura Lindenfeld Sher	Director, Alan Alda Center for Communicating Science
Laure Haak	Executive Director, ORCID
Laurie Goodman	Editor in Chief, GigaScience
Lee Cheng Ean	University Librarian, National University of Singapore
Leslie Reynolds	Senior Associate Dean of Libraries, University of Colorado Boulder
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Lisa Colledge	Director of Research Metrics, RELX Group
Lisa Macklin	Director, Scholarly Communications Office, Emory University
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Lorcan Dempsey	Vice President of Membership & Research and Chief Strategist, OCLC
Lorena Barba	Associate Professor of Mechanical and Aerospace Engineering, GWU
Lorraine Haricombe	Vice Provost and Director, University of Texas Libraries
Louise Page	Publisher, PLOS
Maggie Johnson	Director of Education and University Relations, Google
Mangala Sharma	Program Director, Office of International Science and Engineering, National Science Foundation
Marcus Banks	Head, Blaisdell Medical Library, UC Davis
Margaret Winker	Secretary, World Association of Medical Editors
Mariette DiChristina	Editor-in-Chief, Scientific American
Marilyn Billings	Scholarly Communication & Special Initiatives Librarian, UMass Amherst
Mark Edington	Director, Amherst College Press, and Publisher, Lever Press
Mark Newton	Director of Digital Scholarship, Columbia University Libraries
Mark Parsons	Secretary General, Research Data Alliance
Mark Ware	Director, Mark Ware Consulting
Martin Hicks	Board member, Beilstein Institut
Martin Kalfatovic	Associate Director, Smithsonian Libraries
Martin Paul Eve	Professor of Literature, Technology and Publishing, University of London
Martin Sugden	Head of Open Access Marketing, Taylor & Francis
Martin Wybourne	Vice Provost for Research, Dartmouth College
Mary Augusta Thomas	Deputy Director, Smithsonian Libraries
Mary Ellen Davis	Executive Director, American Library Association
Mary Woolley	President, Research!America
Mary Yess	Deputy Executive Director & Chief Content Officer, The Electrochemical Society
Maryann Martone	Former Executive Director, Force 11
Matt Spitzer	Community Manager, Center for Open Science
Matthew Salter	Publisher, American Physical Society
Maura Marx	Deputy Director for Library Services, Institute of Museum and Library Services (IMLS)
Medha Devare	Data and Knowledge Manager, Consultative Group on International Agricultural Research (CGIAR)

Meg Buzzi	Director, Project OPUS, UCLA
Meg Oakley	Director of Copyright & Scholarly Communications, Georgetown
Megan Wacha	Scholarly Communications Librarian, City University of New York
Mel DeSart	Head, Engineering Library and Head, Branch Libraries, University of Washington
Melanie Dolechek	Executive Director, Society for Scholarly Publishing
Melanie Schlosser	Scholarly Communications Program Leader, Educopia
Melinda Kenneway	Executive Director, Kudos
Melissa Cragin	Staff Associate, National Science Foundation
Meredith Morovati	Executive Director, Dryad
Micah Vandegrift	Director of Digital Scholarship, Florida State University
Michael Eisen	Co-Founder, PLOS and Professor of Genetics, Genomics and Development, U Cal Berkeley
Michael Forster	Managing Director, IEEE Publications
Michael Roy	Dean of the Library, Middlebury College
Michael Van Woert	Executive Officer, National Science Board
Michael Wolfe	Executive Director, Authors Alliance
Michael Zentner	Senior Research Scientist, Network for Computational Nanotechnology, Purdue
Michele Woods	Director of the Copyright Law Division, World Intellectual Property Organization (WIPO)
Michelle Gluck	Associate General Counsel, George Washington University
Mike Furlough	Executive Director, Hathi Trust
Mike Taylor	Software Engineer, and Research Associate at the University of Bristol
Morgan Stoddard	Director of Research Services, George Washington University
Moshe Pritsker	Co-founder, CEO, and Editor-in-Chief, JoVE
Najko Janh	Scholarly Communication Analyst, University of Gottingen
Nancy Davenport	University Librarian, American University
Nancy Gwinn	Director, Smithsonian Institution Libraries
Nancy Rodnan	Senior Director, Publications American Society for Biochemistry and Molecular Biology
Nancy Weiss	General Counsel, US IMLS
Narda Jones	Legislative Counsel, US Senate
Natalia Manola	Managing Director, OpenAIRE
Neil Jacobs	Head of Scholarly Communications Support, JISC
Nick Lindsay	Journals Director, The MIT Press
Nina Collins	Scholarly Publishing Specialist, Purdue University
Norbert Lossau	Vice-President, University of Göttingen
Pablo Gentili	Brazil Director and member, Higher Council, CLACSO
Patrick Herron	Senior Research Scientist for Information Science + Studies, Duke University
Patty Baskin	President, Council of Science Editors (CSE) and Executive Editor, Neurology Journals
Paul Ayris	Director of Library Services and CEO of UCL Press, University College of London, and Co-Chair of the League of European Research Universities (LERU) CIO Community
Paul Groth	Disruptive Technology Director, Elsevier Labs
Paul Murphy	Director of RAND Press
Paul Peters	CEO, Hindawi
Paul Royster	Coordinator of Scholarly Communications, University of Nebraska
Pedro Cote Baraibar	Communications Coordinator, FLACSO-Mexico
Peter Berkery	Executive Director, Association of American University Presses
Peter Brantley	Director of Online Strategy, University of California Davis Library
Peter Potter	Director, Publishing Strategy, Virginia Tech
Phil Carpenter	Executive Vice President, Research, Wiley
Phil Kim	Co-founder and COO, 20 Million Minds Foundation
Philip Bourne	Chair of Data Science, Director of the Data Science Institute (DSI) and Professor in the Department of Biomedical Engineering (BME), University of Virginia
Pippa Smart	Editor, "Learned Publishing" and publishing consultant
Pollyanne Frantz	Executive Director, Grants Resource Center
Prue Adler	Associate Executive Director, Federal Relations and Information Policy
Rachael Samberg	Scholarly Communication Officer, UC Berkeley
Rachel Burley	Publishing Director, Biomed Central and Springer Open

Rachel Dresbeck	Immediate Past President, National Organization of Research Development Professionals/Director, Research Development, Oregon Health & Science University
Ralf Schimmer	Head of Scientific Information Provision, Max Planck Digital Library
Ramesh Gaur	University Librarian, Jawaharlal Nehru University
Rebecca Kennison	Principal, K|N Consultants/Open Access Network
Remi Gaillard	Head of Collection Development Department, Universite Pierre et Marie Curie (UPMC)
Renaud Fabre	Director, Scientific and Technical Information Directorate (DIST)
Richard Gedye	Director of Outreach Programmes, STM and Publisher Coordinator, Research4Life
Richard Ovenden	Bodley's Librarian, Bodleian Libraries, University of Oxford
Richard Price	Founder and CEO, academia.edu
Richard Wellons	Program Manager, Grants Resource Center, AASCU
Richard Wilder	Bill & Melinda Gates Foundation, Associate General Counsel
Rick Anderson	Associate Dean for Collections & Scholarly Communication, J. Willard Marriott Library, University of Utah
Rikk Mulligan	Program Officer for Scholarly Publishing, Association of Research Libraries (ARL)
Rita Scheman	Director of Publicatons and Executive Editor, American Physiological Society
Rob Johnson	Director, Research Consulting
Robert Cartolano	Vice President for Digital Programs and Technology Services
Robert Kiley	Head of Digital Services, Wellcome Trust
Robert Miller	CEO and Executive Director, Lyrasis
Robin Champieux	Scholarly librarian and founder of ARCS
Robin Staffin	Director for Basic Research, US Department of Defense
Roger Schonfeld	Director, Library and Scholarly Communication Program, Ithaka S+R
Roxanne Missingham	University Librarian, Australian National University, and Deputy Chair, Australian Open Access Support Group (AOASG)
Roy Kaufman	Managing Director, New Ventures, CCC
Ryan Merkley	CEO, Creative Commons
Sally Rumsey	Head of Scholarly Communication and Research Data Management, Oxford
Salvatore Mele	Director of Open Access, CERN
Sam Burridge	Managing Director of Open Research, SpringerNature
Sarah Michalak	Associate Provost for University Libraries and University Librarian, University of North Carolina Chapel Hill (UNC)
Sarah Pritchard	Dean of Libraries, Northwestern University
Scott Delman	Director of publishing, ACM
Scott Plutchak	Director of Digital Data Curation Strategies, UAB
Scott Waugh	Executive Vice Chancellor and Provost, UCLA
Seth Denbo	Director of Scholarly Communication, American Historical Association
Sharon Farb	Associate University Librarian and Chief Content Strategist, UCLA
Sheree Crosby	VP of Global Marketing, Cabell's
Shira Eller	Art & Design Librarian, GWU
Sindy Escobar Alvarez	Senior Program Officer for Medical Research, Doris Duke Charitable Foundation
Sioux Cumming	Programme Manager Journals Online, INASP
Stacy Konikel	Director of Research and Education, Altmetric.com
Stephanie Diment	Director of Open Access, Wiley
Stephanie Fulton	Executive Director, Research Medical Library, Univ of Texas MD Anderson Cancer Center
Stephanie Orfano	Head of Scholarly Communications, University of Toronto
Stephanie Westcott	Research Assistant Professor, Roy Rosenzweig Center for History and New Media, George Mason University
Steve Fiore	Professor, University of Central Florida
Steve Sayre	Director of Publishing, Ecological Society of America
Steven Hall	Managing Director, IOP
Steven Hill	Head of Rearch Policy, Higher Education Funding Council for England (HEFCE)
Stuart Buck	Vice President of Research Integrity, John and Laura Arnold Foundation
Stuart Taylor	Publishing Director, The Royal Society

Susan Dentzer	Senior health policy advisor, RWJ Foundation and President and CEO of NEHI (Network for Excellence in Health Innovation)
Susan Fitzpatrick	President, James S. McDonnell Foundation
Susan Haigh	Executive Director, Canadian Associate of Research Libraries
Susan Murray	Director, African Journals Online
Susan Skomal	CEO, BioOne
Susan Veldsman	Director of Publishing, Academy of Science of South Africa
Suzie Allard	Associate Dean for Research and Director, Center for Information & Communication Studies, U of Tennessee
Talmesha Richards	Chief Academic and Diversity Officer, STEMConnector
Tee Guidotti	President, Sigma Xi
Terri Fishel	Library Director, Macalester College
Terry Ehling	Associate Director / Project MUSE (Johns Hopkins University Press)
Timothy Vollmer	Public Policy Manager, Creative Commons
Toby Green	Head of Publishing, OECD
Todd Carpenter	Executive Director, NISO
Tom Reller	Vice President Global Corporate Relations, Elsevier
Tony Peatfield	Director of Corporate Affairs, Medical Research Council, RCUK
Tony Roche	Publishing Director, Emerald Group Publishing Limited
Trevor Dawes	Vice Provost for Libraries and Museums, University of Delaware
Trevor Owens	Senior Program Officer, Institute of Museum and Library Services
Tyler Walters	Dean, University Libraries, Virginia Tech, and Director, Shared Access Research Ecosystem (SHARE)
Vickie Williams	CEO, Research Media
Vicky Gardner	Open Access Publisher, Taylor & Francis
Vicky Williams	CEO, Research Media
Victoria Reich	Executive Director LOCKSS Program, Stanford University
Vidya Krishnamurthy	Director of Communications, Hewlett Foundation
Virginia Barbour	Executive Director, Australasian Open Access Strategy Group
Vivian Siegel	Lecturer, MIT and Senior Editorial Advisor, Bio-protocol
Wayne Kaplan	Executive Vice President for Research, Technion - Israel Institute of Technology
Wendy Lougee	University Librarian, University of Minnesota
Will Schweitzer	Director, Product, American Association for the Advancement of Science/Science Family of Journals
William Gunn	Director of Scholarly Communications, Elsevier
William Simpson	Associate Librarian and Institutional Repository Librarian, University of Delaware
Williams Nwagwu	Head of Knowledge Management, Council for the Development of Social Science Research in Africa (CODESRIA)
Wim Van der Stelt	EVP Strategic Relations, SpringerNature
Winston Tabb	Dean of University Libraries & Museums
Wolfram Horstmann	University Librarian, University of Gottingen
Xiaolin Zhang	Director, National Science Library, Chinese Academy of Sciences (CAS)