A Landscape Review of Streaming Media in Scholarly Publishing:
Where are we now and where to next?
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Executive Summary

Through March and April 2018, Renew Publishing Consultants undertook 25 interviews and conversations with organizations involved in scholarly communication to explore their use of video and audio, and to highlight successful case studies.

Organizations were asked to discuss their challenges, successes, and how they were measuring return on investment in their use of either video or audio.

“If it’s not the most effective medium to convey a particular message, you are wasting your time and money.”

Video is excellent for:
- demonstrations of any kind (surgery, psychotherapy, lab techniques)
- showing behaviour (studies of animals or people)
- showing movement (cells, industrial machinery, artists/dancers at work)
- promotion (of brands, articles, science) through social media
- lay summaries of complex information
- teaching and learning

Audio is excellent for:
- Building rapport -- and by extension, community

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1 An audio presentation (with slides) based on this paper is available at https://www.sspnet.org/?library=the-landscape-of-multimedia-in-scholarly-communications
Challenges

**Business case:** creating new types of content is resource-hungry, and particularly in today's environment where users expect content to be freely available it is hard to cover costs. The benefits are often intangible – albeit real – which makes creating a business case to support new ventures extremely hard. The challenges fall into three sections:

- **Human resources:** both finding time in amongst competing priorities, and finding people with the right expertise (especially when it is new expertise for an organization), whether it be for presenting podcasts or editing video.
- **Financial resources:** creating high-quality content (either audio or video) requires a financial commitment, often with no immediate returns in sight.
- **Demonstrating success through ROI:** video and audio outputs are often free to users and therefore loss-leaders or adjuncts to another product. Quantifying and measuring their effectiveness – or even usage – is extremely challenging.

Opportunities and Threats

There is no doubt that video and audio are the media of choice for a whole generation of younger people who will shortly make up the majority of consumers of scientific and academic communication.

Finding appropriate ways to engage with video and audio is critical to continued audience engagement.

Some publishers are finding creative ways to sustainably establish themselves in these new media spaces, and are mentioned in this paper. Advertising, sponsorship and subscriptions are all models that can work – once you have an audience.
Introduction

In preparing for this white paper, Renew Publishing Consultants conducted both formal and informal interviews with publishers and other organizations involved in scholarly communication, to find out how they were using streamed video and audio within their organizations and to outline the challenges they had found, and share their thoughts on solving them both right now and into the future.

Initially we had thought we would present our findings as a series of case studies, but we found so many commonalities that it became clear it would be better to organize our findings thematically, and use the case studies to provide more precise examples of the emerging themes.

We also have not named all of the organizations who contributed to this paper within the body of it; in some cases because they chose to be anonymised, and in others simply because we had so much material we needed to be sparer with the content in order to make it more readable.

There were two elements that everyone we spoke to agreed on: engaging with video and audio is critical to future success, as it may bridge the gap between the activities we undertake now and the way that future generations are likely to choose how to consume their information. And secondly, that video and audio is not new; it is just that we, as an industry, have only just started to really grapple with how it might fit within our landscape – or, perhaps, how we might fit within the video and audio landscape.
Ad Hoc Video

All of the organizations we spoke to were engaging to some degree with video and audio. Most had YouTube channels and were using occasional video to support their communications and outreach efforts; some hosted these videos in more than one place (including Vimeo and Brightcove).

Responsibility for ad hoc videos normally sat with the marketing and/or communications department if they had one.

These videos were used to promote:

- a subject (interviews with leading lights, either professionally done or not);
- a conference (vox pops of people talking about how much they enjoyed a conference, normally taken at the previous conference);
- or a brand (videos in place of or supporting a press release about a new partnership between a society and a publisher, for example).

Many organizations used these videos as part of their social media marketing campaigns. Social media posts with images – and particularly moving images – tend to catch the eye more than plain text posts. (See Useful resources at the end of this section for more.)

None of these were charged-for products or monetised in any way, and tended to be part of a promotional campaign. Because they were one of many elements in a campaign, it is exceedingly hard to measure their effectiveness.

Many organizations made these videos themselves as a low-cost way of dipping their toes into the video “water”; those that chose a different route outsourced them.

Even here, quality (or lack thereof) was an issue for discussion: home-made is achievable but lower quality, and how much that mattered to each organization varied, depending on how closely their brand needed to be allied to quality.

These videos tended to be almost entirely un-discoverable unless a user was targeted in a marketing campaign or was already following the organization’s social media account(s); they were often visible on a YouTube channel but otherwise were a video equivalent of “single-use plastics” (in other words, disposable).

Useful resources:

http://www.speakerboxpr.com/video-what-marketers-need-to-know/

https://blog.red-website-design.co.uk/2016/09/23/8-reasons-to-use-more-visual-content-within-your-marketing-strategy-infographic/
Video Summaries and Abstracts

The next most common use of videos in this industry was video abstracts and/or summaries.

Most publishers we spoke to were supporting these in some form.

All are agreed that long-form reading is on the decline, and that sharing information via other media is becoming more common, even in the academic space. Video summaries seem, at first glance, to be a good solution: in addition, they provide raw material for social media posts, and are an obvious and easy suite of content that can be used generally in promotional activities; and they can also contribute to a society’s mission of “promoting the science” to a wider (lay) public.

They are not without challenges, however.

Author or Publisher? Price, Brand and Quality Questions

The first question that needs answering is whether the responsibility (and cost) for producing video summaries should be borne by the author (and/or their institution or funder) or the publisher themselves.

Many publishers we spoke to said they would be happy to host video summaries provided by authors alongside their papers (theoretically); they thought their content platforms would be able to support this in some form. However, it was not something they were promoting in any way (i.e. were not particularly encouraging their authors to do this, merely enabling it when an author wished to go down this road). There was little demand from authors to do this.

There were some concerns expressed by this group of publishers around quality control and embedding that quality check in their current workflow: at the moment, they are dealing with this on an ad hoc basis. However, if authors started submitting video in larger numbers, there were some concerns expressed around how that might impact the workflow.
Other publishers expressed concerns about how author-created videos might impact on their brand. They were worried about the perceived quality of the content, and thought that quality was such an important part of their brand identity that they could not allow the variability that would be introduced by allowing author-created video abstracts to sit on their content site.

For publishers that fall into this category, there are two possible approaches; either that they set aside funds to promote some articles with video summaries (and therefore pay for the creation of video summaries) OR that, for Open Access papers at least, they offer authors (and their funders) the option of purchasing a video summary on top of the APC through an agreed partnership with a third-party provider (unless they have the capacity to produce them in-house).

Finally, there were the publishers that took a hybrid approach: they were not concerned about the question of branding and variable quality in any video an author submitted because they felt it was very clear that the video in question was made by the author(s) themselves, and therefore had an authentic home-spun appeal and reflected on the author rather than on them as publishers; but they also commissioned professional videos for content that they wished to promote.

CASE STUDY: DOVE MEDICAL PRESS

Authors are responsible for creating their own video abstracts, but Dove Medical Press provides them with very clear guidelines for producing them and actively encourage their authors to submit them (they run an annual competition for the best video abstract, for example).

Once a manuscript is editorially accepted, authors are invited to submit a video abstract if they wish. The video abstract is then reviewed by the Editor-in-Chief to ensure the video is a true representation of the paper. There may be cases where it is sent back to the author for improvements if required. Approximately 3% of articles published each month contain a video abstract.

Some authors submit professionally put-together videos; others simply talk to the camera. As long as the message is clear and it represents what the study is about, Dove Medical Press are happy to support it.
While many agreed that it was useful to have video content to help support the promotion of an article (which ideally would be driven by both author and publisher), several publishers commented on the terminology of “abstract” and “summary” and advised on having clarity around the objectives of creating these videos in the first instance.

If a reader is seeking to find information about an article quickly, skim-reading a written abstract is a much more appropriate way of achieving their aim than watching a 2-4 minute video. The audience for whom a 2-4 minute video is most useful is those who have already decided that they want to engage with the paper in a deeper way. It might be they have read the paper and want a reminder; that they have already established the paper is in their interest area and want to watch the video (perhaps in place of reading the paper in full); or perhaps that English isn’t their first language and watching a video will help them absorb the information in the paper more easily. In terms of measuring usage (and success) this target audience might be significantly smaller than the audience who might read an abstract.

In addition, if a publisher is merely seeking video content to help them promote a paper through social media, a video summary is too long and it may be more appropriate to...
consider other visuals (either a few seconds of video, or an infographic or still image of some description).
Supplemental Material and Animated Figures

Many publishers occasionally have video submitted as part of their supplemental material. This usually causes no problems whatsoever, although it is not always the case that video appears in the appropriate point in the article. For example, in order to make most sense of a video, it needs to automatically autoplay (and sometimes on a loop) when the reader is looking at the appropriate part of a paper (e.g. a 2-second video of cells moving). These capabilities are dependent to some degree on the platform on which the content resides.

CASE STUDY: CELL PRESS

Cell Press are offering their authors the opportunity of creating “360 Figures” which are short videos that accompany a complex figure to enable those who are not expert to extract the richness of the data from the figure.

They follow the format of the author (or a narrator) talking through elements of the figure in an animated or simple-slide format, as they might do at a conference.

The video is only a minute or two, and can either be viewed inline (HTML) or within a PDF (if opened with Adobe Reader) – or in a web browser.
Podcasting

A number of societies and publishers that we spoke to are engaging with podcasting content on a variety of levels, most of them successfully – and some extremely successfully.

Podcasting is enduringly popular, with an estimated 44% of the US population having listened to a podcast at some point – and 80% of those who listen to a podcast at least once a month, listen to all or most of a podcast episode. Comedy is the most popular genre for podcasts, quickly followed by education.²

People like podcasts because they provide a way of consuming media which can be concurrent with other activities: driving, exercising, cooking.

For a society or publisher seeking to build engagement with a community, podcasting is a good step if they can resource it. Revenue aside, it nevertheless supports and promotes a brand and/or a subject area (so can fit within a core mission of a society), and can bring readership and attention to a journal.

“We have no direct evidence that our podcasts drive readers to our content, but we like to think they do. It may be the case that listening to the podcast is replacing reading.”

CASE STUDIES: PODCASTS AS AUDIO TOC ALERTS / LITERATURE ALERTS

Several journals we encountered through our study create a podcast for every issue that is published. In one case, the Editor-in-Chief simply talks through a summary of what is in the latest issue, with a brief summary of every research article that is published. Another podcast features several author interviews, with one of the interviews being in more depth than the others. The authors talk about their papers and the research that they undertook and their findings. For one journal, the editor did an overview of all the new literature that had been published in that space in the time since the last podcast. (“What I’m reading” …)

CASE STUDY: GROWTH OF PODCASTING AT AMA / JAMA

JAMA first started creating podcasts in 2008. They were the editor’s 8-minute audio summary of what was in that week’s issue of the journal. It was an initial experiment to explore new ways of reaching their audience.

Its success took JAMA a little by surprise: it quickly ranked highly in the medicine section on Apple Podcasts, and gathered a large audience.

The next series of podcasts they engaged with were author interviews (beginning in 2012). These are created for every journal. They are brief interviews that focus on high-level overviews of an article.

In 2015, JAMA very deliberately decided to invest in elevating the quality of their podcasts to compete with the highly produced podcasts their listeners were also listening to. They chose to focus their efforts on podcasts of higher quality – and decided to make them longer.

Creating the podcasts is not a simple job: they are made up of several interviews that get woven together; they have a script; sometimes they have patient interviews. They have a narrative structure, much like the shows they are competing with, that requires time and thought (and skill) to create.

The AMA now have a dedicated audio team that record, edit and process the podcasts. The team is made up of 3 dedicated producers (and they also call on a number of others who host the podcasts in addition to serving in other capacities at the JAMA Network).

The response to these higher production podcasts was instantly very positive. Pretty quickly JAMA saw an uptick in downloads, listenership, subscribers – and positive reviews for their podcasts.

JAMA now produces 21 podcasts (shows) – you can see all of them at jamanetworkaudio.com. They have had a total of 2.7 million downloads over the past 12 months.
Common challenges those producing podcasts talked about were having the ingredients to create a podcast that would hold a regular listenership:

- the right presenter(s) (it is critical to have a passionate, engaging presenter)
- the commitment (in terms of time) required to create a podcast on a regular basis
- the logistics of aligning diaries to arrange interviews / time to collaboratively work on a podcast (sounds basic but is real!!)
- creating a good script on regular basis is challenging – and a skill in its own right

“We are competing for listeners attention against shows like This American Life and TED Radio Hour.”
Conferences

Conferences are a rich seam of content that some societies are exploring how to maximise.

For those who are simply seeking to create content to promote the subject area or their societies, it is a gathering of experts that provides an easy opportunity for interviews and topical conversations which can be used either for social media video snippets (What do you value about being a member of ABC society? What do you gain from coming to this conference?) or as the core content for a podcast or promotional video series.

As one publisher pointed out, for a conference you need to have an Audio/Visual set up in place anyway – it is only a small step further to record that and then re-use it in some way, either for promotion (of the society or of the conference itself) or as a member benefit, or even to monetise it.

One society we spoke to now regularly employs a videographer at all of their conferences to record keynotes and plenary talks; another uses conferences as a key opportunity to gather experts together for interviews and panels which they then use for both podcasts and promotional video material.

**CASE STUDY: SOCIETY FOR SCHOLARLY PUBLISHING (SSP)**

This year SSP 2018 sold virtual seats to their annual conference: all of the plenary sessions were recorded and streamed, as were one from each of the concurrent sessions. Those who bought virtual seats also had access to recordings of all the sessions (after the event) for 60 days.

Access to the recorded sessions after those 60 days is freely available on the SSP website.

Speakers had to sign a release form.
Continuing Professional Development (CPD) and Continuing Medical Education (CME)

Several of the societies we spoke with had a Continuing Professional Development (CPD) or Continuing Medical Education (CME) program as part of their suite of products.

Many of these use video as part of their program – demonstrating how to take blood, for example, or how to resuscitate an infant – both lend themselves well to being demonstrated on video. One society we spoke to have repurposed their popular podcasts to form an element of their CME program. (See case study, below.)

**CASE STUDY: BUILDING ON PODCASTING SUCCESS – JAMA (AGAIN)**

Because their podcasts were so successful, the AMA began to look at how they might use those to help solve the challenge of CME.

The AMA had been getting feedback that physicians were needing to be able to fulfil their CME activities in bite-sized chunks. Busy people were struggling to find handfuls of hours in which to undertake the more traditional CME activities – whether those were evening activities, or whole day conferences, they were proving challenging to fit in. Consequently, as the end of the year approaches, many physicians scramble to fit in their CME requirements.

The AMA conceived of a CME program which would allow people to listen to selected podcasts, and then take a quiz afterwards to earn credits towards their CME. This way, physicians could slowly build up credits over the course of a year, with small chunks that they could more easily fit into their lives.

JAMA have created an app, named JNListen. The podcasts sit within it, as do 3-question quizzes for physicians to undertake at the end of the podcast. This then gives them a half credit towards their CME requirement.

Users are able to set their areas of interest. All the content is tagged, so the app then provides you with a recommended list of content.

The app is free, as are the podcasts; but the quizzes are subscribed-to content.
Video for Teaching and Learning

Video is a core part of today’s teaching and learning environment. Students currently coming through university have had video content from their earliest years in education; and students now expect to be able to access recordings of the lectures they have attended (or should have attended) in order to refresh their memories of what they learned. It is natural they will want to continue to consume educational video as they progress.

Online courses and remote learning are flourishing and providing a rich seam of revenue for many who choose to engage in it.

Societies who are ambassadors for their subject areas, or who are the arbiters of standards should be using videos as part of their publishing / outreach / teaching activities if they aren’t already (and most are); but video can also be used for internal teaching and processes.

CASE STUDIES: A MEDICAL SOCIETY AND A SCIENTIFIC SOCIETY

Two society publishers we spoke to provided subject-specific training for practitioners in their spaces. They create – and sell – online courses demonstrating the most up-to-date techniques in their particular area.

CASE STUDY: ETHICS TRAINING FOR REVIEWERS AND EDITORS

One publisher has created a library of short 5-minute videos which train editors and peer reviewers on the guidelines and policies of the publisher. Originally, they ran webinar style training sessions, but although they got positive feedback on these, they were not as well attended as they might have been, and users fed back they wanted to be able to refer back to what was said when they needed it. So, in response, this publisher has created a library of shorter videos which address a single topic and can be accessed at any time. Editors and reviewers can search across the library to find out about their policies and procedures around, for example, suspected plagiarism. The course has been a success – with fewer queries to staff – and the publisher is considering expanding the program to other areas.
Video as Primary Content

Subjects that lend themselves well to video are those where the medium adds something that no other medium can. The linking theme is movement, usually of people or animals, and falls into two categories: teaching (demonstrations / methods, particularly of things where people use their hands) and behaviour studies.

**CASE STUDY: ARTHROSCOPY TECHNIQUES**

*Arthroscopy Techniques* is a peer reviewed journal where the core part of every article is a video demonstrating a surgical technique. The journal is Open Access. Articles are submitted as video (with technical notes, a text abstract, and supporting images) and are created by the author in conjunction with their hospital / funder. The articles are peer reviewed – and then they are either accepted or not.

**CASE STUDY: JoVE**

*JoVE* was started 10 years ago with a view to solving some of the problems with the reproducibility of research. *JoVE* was born to solve the problem of clearly demonstrating how a particular researcher undertakes a particular activity (e.g. dissecting the hind brain of a zebrafish). All articles are video-based, but also have a text component: a full materials table and a text abstract. The journals are subscription journals (although some articles are OA); the content is commissioned by a team who survey the current literature and identify research projects and/or scientists working in the field who are doing something that would benefit by being captured on video and visualized. Upon submission from an author, protocols are peer reviewed. Once accepted, *JoVE* assigns a script writer to work with the submission author to write a script. *JoVE* works with 75 videographer teams in 25 countries; videographers go to labs and film the author performing the experiment, and then the footage is sent back to *JoVE* who edit it and put it together in-house. Once the video is cut it’s reviewed by *JoVE*’s in-house scientific team to ensure the experiment is visualized correctly, then released on *JoVE*.com. It’s labour intensive, but meets a need and is therefore a successful subscription journal. Videos demonstrating core lab techniques get watched over and over again as new researchers enter labs and need to learn these techniques for the first time, and as discoveries are made, and new techniques are developed.
CASE STUDY: BRIDGING HUMANITIES (BRILL)

In 2017, Brill started an experiment with Leiden University to publish a video journal, Bridging Humanities. It is a peer reviewed, interdisciplinary journal which publishes “visuals and other kinds of digital sources as an integral part of the publication.” All content goes through the normal procedure that articles in traditional journals undergo: it is peer reviewed, it is edited, and it is published and then (hopefully) indexed in the same way as other publications. The authors should get the same credit they would for publishing a text article.

Brill and Leiden University are seeking to establish video (and possibly other media) as core academic output: they want to create a framework for how it might work, and to use the opportunity to overcome any technological challenges and discover any hidden issues – and to test whether academia is ready to move away from entirely text-based outputs.

Video is a particularly apposite medium for many of the subject areas that Brill publish in: particularly anthropology and sociology.

Traditionally Brill has published a lot of journals on these topics, where all of the primary research is represented in text or still pictures, including, for example, interviews with people and photographs of ceremonies. Video is a more appropriate medium for disseminating this information; it allows for richer detail to be shared, including facial expressions, tone of voice, singing, the rhythms of a conversation.

The work of video creation lies with the authors, but Brill and Leiden University are (at this stage) supporting the editing and finishing processes.
Financial Challenges

Creating high quality audio and video output is not a cheap activity.

So how do we, as an industry, afford to invest in it? – Especially in an environment where consumers are used to much audio and visual content being available to them for free.

In some instances, where video meets a need that cannot be met at all – or as well – by any other medium, it is arguably more easily monetized.

“Although library budgets are contracting overall, we have seen an increase in spending on video products, albeit a modest one.”

Where we spoke to publishers who were able to generate revenue from these activities, the way they were doing so will be on surprisingly familiar models:

- **Advertising:** In 2016, the American Society for Microbiology began experimenting with accepting advertising on podcasts. In that year, podcasts generated thousands of dollars in ad revenue (which was shared with the volunteer hosts for the podcasts that the ad appears on).

- **Sponsorship:** The Future Science Group (FSG) work on a sponsorship model for some of their video content. For example, they record panel discussions which are often sponsored by more than one organization: their sponsorship gets them a seat on the panel.

- **Subscription:** One society we spoke to had a channel of how-to streamed videos which were sold as a subscription to practitioners; JoVE (referenced above) is a straight subscription-model journal.

More than one publisher remarked that it was easier to grow a podcast program than it was to grow a video program, because podcasts have a lower barrier to entry.
CASE STUDY: ROYAL SOCIETY OF CHEMISTRY

The Royal Society of Chemistry publishes an online edition of its magazine called Chemistry World, which provides a digest of primary research, as well as a wide range of current affairs, opinions, columns, reviews, and features. (The magazine also publishes a print edition.)

Video and audio are integral parts of the online Chemistry World, both to enrich articles, and as standalone content types. RSC's analytics show that visitors that go on to become subscribers tend to be those that engage with multiple content types, and so broadening the content and offering users a richer content experience can lead to more engagement, and in turn, additional subscriptions.

One of the commercial benefits of using inline video within an online magazine environment is the opportunity to improve the revenues generated from banner advertising. Impression-based advertising revenue is tied to the number of banner adverts that have been shown to a user, so assuming banner advertising is configured to rotate the adverts shown at short intervals, the longer a user stays on a page, the more advertising revenue can be generated. And a compelling video greatly increases the amount of time spent on a page.
Discoverability and Navigation

Many of the publishers we spoke to about their video and audio content admitted that it was almost entirely undiscoverable (apart from podcasts, which are easily discovered in iTunes).

In some cases, this is intentional and desirable. For example, the video that is created by the American Psychiatric Association that shows demonstrations intended for professionals and practitioners – and is sold alongside or as part of books – and is not intended to be found by serendipity.

In other cases it is because the video or audio content is single-purpose ephemera, so discovery of these items outside their narrow purpose is unimportant.

Sometimes, however, publishers are posting content on YouTube with a view to increasing its discoverability – they want users to find and use it. But video and individual pieces of audio are notoriously difficult to make discoverable; especially longer items which contain many ideas on sometimes complex, scientific or specialist topics.

Creating full text transcripts and exposing those to search engines is a good start (though how to create them in a world where speech recognition technology is not yet able to cope with the precision language required by research poses challenges); closed captions for videos (which is effectively the transcript chopped up into smaller parts that can be aligned to the correct part of the video as it plays) are another way of dividing up longer videos to make them more useful – and easier for users to navigate.

The infrastructure that has been created for the scholarly communication environment (DOIs, metadata norms, Google Scholar) does not transpose (currently) cleanly to video or audio, leaving a discoverability gap for this content. (This is true for video content, audio content, and even blogs and in some cases pre-prints: “grey” content that is arguably an important part of the scholarly communication exchange.)

Questions that creators of video and audio content in our space need to be thinking about are:

- Can you easily create thumbnails as “summaries” of your video (or an index for some kind for audio) and make the thumbnail the image that you want it to be?
- Is the full text of your video or audio exposed to search engines?
- Can people jump to the part of your video or audio they are most interested in? (Less important for pieces that are only a few minutes long; very important if they are ten minutes long – or more.)
- Is your video or audio indexed by the A&Is? (Almost certainly not – but should it be? How do we go about effecting that change?)
How are you using metadata to support the discoverability of your video or audio? Are you using standard metadata across your own products, let alone using industry-recognised standards?

How can people find your video or audio again? (Again, excluding ephemera here.)

**CASE STUDY: MODERN LANGUAGE ASSOCIATION**

At the time of writing (May 2018), the MLA are planning to start indexing video content. They see that video content is going to be an increasingly common format for scholarly communication, and students and researchers are likely to soon be producing videos rather than just writing a paper. One of the biggest challenges they see is around the lack of standard metadata for videos, and what information is essential to capture. Obviously, each video needs a title – but what else needs to be captured? What is an “author” when it comes to creating a video? What terms are people going to be searching on to find content? (“I want to find all videos that involve person ABC in any of the following roles?”)

**CASE STUDY: ALEXANDER STREET**

Alexander Street, a ProQuest company, sell a subscription aggregation product, *Academic Video Online*. They have a large database of video content, and it all has MARC records provided to subscribers. Ensuring that discovery services are up to date is another question entirely—and there are challenges. All Alexander Street’s videos have associated full text, but making the associated metadata useful is more difficult because of a lack of agreed standards. Is a person associated with creating a film a filmmaker, a director, a producer, or an author? There’s a new level of nuanced indexing that discovery systems have yet to catch up with. If there were an easy solution, all this would have been solved by now; it’s a work in progress.
Content Management

Many of the organizations we spoke to had sophisticated content management systems in place for their “core content” but have not yet considered how they are going to corral, curate and organise their visual and audio content (and other “non-journals content which isn’t the topic of this paper but is relevant here – specifically blogs), although unsurprisingly this is a challenge that the largest and most successful organizations in academic media do have hurdled with well-planned and implemented content management solutions in place.

The biggest common challenge is that there are no metadata standards for scholarly media content. The definition of a standard would go some considerable way to defining the bulk of the data elements for content management.

Audio and video content seems to be in a similar position to journals and books prior to Dublin Core.

As the importance of this content increases and becomes a more mainstream part of the record, it needs to be citable and re-findable. OECD and Health Affairs are aiming to assign (or have already assigned) DOIs to all of their (non-ephemeral) content, including blog posts.

If a video (or a podcast) has a script or a transcript, where is that stored? Does that also need its own DOI? Can it be made available to search engines? (See the section on Discovery.)

If videos / audio files / blog posts are associated with a journal article, issue or a book (and particularly a print book) how do you link those formats together so a user can move between them?
CASE STUDY: OECD

The OECD is exploring how it can re-package messages and findings that are buried in its research and direct them to a broader audience through short, digestible and shareable formats such as tweets, infographics, visualizations, videos, podcasts and blog posts.

The key audience that OECD is seeking to reach and inform are key influencers in civil society and business, journalists, bloggers and concerned citizens who are contact with policy-makers and their research assistants. This target audience is extremely busy and will not spend the time to work through lengthy research outputs but do need the assurance that they can make statements and arguments on the basis of trusted, reliable, research.

Scholarly publishing systems have evolved sophisticated discovery and tracking tools which do not exist in the broader communications space. So, the OECD is exploring how to use the same metadata systems and tools (such as DOIs) in the creation and management of short-form content. Quite apart from making it easier to post, discover, cite and track, use of scholarly metadata systems will also make it easier to build user journeys from videos, tweets, blog posts etc to the full research content, and vice-versa.

The OECD has realised that just as books evolved internal navigation tools (e.g. a table of contents), longer videos require internal navigation tools that enable viewers to jump to particular part of a video, rather than having to watch the whole thing. Equally, just as exposing the metadata of individual book chapters online boosts discoverability, so exposing the metadata of video ‘chapters’ online will boost discoverability. In addition, the OECD is adding full-text transcripts that can be exposed to search engines, boosting video discoverability still further.
Success Metrics and Measurement

Measuring the usage of video and audio content is notoriously difficult to do.

If someone shows a video to a class of 200 people is that one view or 200? How do you, as the creator of that content, know—or find out—how many people have viewed that content?

If the core audience of your content (say, orthopaedic surgeons) is very small, the sheer number of views or downloads doesn’t tell you what you need to know about your usage. (Were they viewed by the intended audience?)

Can you identify where your users are coming from? (Not by institution, if it is hosted on YouTube.) Does that matter to you?

If audio and visual content had DOIs, it would be possible to cite it properly—and count citations (a metric of success metric currently impossible to measure in any meaningful way).

**CASE STUDY: ALEXANDER STREET**

Alexander Street offer usage analyses to their customers at the title level, with in-depth information: length of viewing time, titles viewed, collections used, and how the user accessed the content, including what device was used and if the person reached the item through a reading list. COUNTER stats don’t answer these usage questions for video.
**CASE STUDY: OECD (METRICS)**

The OECD wants to build rich reports about the impact of its research and policy recommendations. They are very clear that impact is not to be confused with measuring the number of visits or downloads: their aim is to try to measure whether OECD’s work is changing minds and changing policy. This means being able to track not just how often a publication is cited, but being able to track the reach of the associated communications content and whether it has hit the intended targets. The metrics from YouTube and other social media systems is not specific enough to deliver this: it is possible to measure engagement and views, but only in isolation. The OECD wants to be able to aggregate metrics from all content types (tweets, blog posts, videos, press releases) and combine them with the metrics from the associated publications and datasets to produce holistic impact reports. Critically, the OECD wants to track impact by institution, say ministries, parliaments or civil society organisations (targeted impact is more important to the OECD than a large number of views).

The OECD is aiming to get to a place where they are able to see the links between the way all the elements of a particular piece of work have been used, and where and by whom (at an institutional level if not at an individual level), and believes that unique identifiers used in scholarly communication systems (altmetrics, DOIs, Ringgold identifiers, ORCID, IP ranges) could be leveraged in tracking where all content elements (from tweets to videos to infographics to full reports) are being viewed and used, and enable the metrics to be brought together into useful reports.
Quality

High quality video and audio content is time consuming (and therefore expensive, even if only indirectly) to make.

Poor quality output does not add to the record; and consumers are not interested in engaging with poor quality content.

“No-one wants to watch a crap video.”

Some publishers we spoke to started out with their experimentation with video and audio not terribly concerned with quality. They did not use quality as a barrier to stop them from experimenting with these forms of media; but as they explored how useful they could be to them, they realised that they needed to invest more in them so that the quality is high enough that people are happy to consume them.

But this does bring financial burdens, and therefore a business case needs to be made as to where when and why video or audio is a better medium than anything that is currently in place – or at least a case for why it is a new form of communication that needs to take place.
Accessibility

Most producers of video in the wider environment do not have to grapple with accessibility issues to the same degree that those in the scholarly space need to. When creating educational content, or Version of Record (VoR) content, accessibility becomes even more important: and its importance is supported by the law in many countries.

Accessibility issues in their widest forms vex publishers, and many are existing in a state of compromise at the moment, where they know their set-up is not ideal, but are moving towards addressing issues where they can.

Accessibility issues include:

- Language (not English) – How are you catering for users who do not have English? (Is this important for your audience and your content?)
- Bandwidth – if you are streaming media, do your audience have enough bandwidth to enable them to access your content?
- Full transcripts – Does your content have full transcripts that can be made available to audio-describers? (What about the “just visual” elements?)
- Closed captions – Does your content have closed captions? How are you generating these?

Happily resolving some of the accessibility issues also resolves some of the discoverability issues, discussed in its own section.

Closed captions, for example, are commonplace on social media videos because many people do not watch videos with the sound on (are at work, or are somewhere noisy), so are desirable for reasons other than accessibility issues.

CASE STUDY: ANONYMOUS ORGANIZATION

One organization we spoke to was unusually on top of accessibility issues. All of their podcasts are published with a transcript alongside, and all of their videos (with the exception of some of their older content) have closed captions. We were interested in exploring what the business motivators were in taking this path. The answer? “We were sued.”
Slow Work

A common theme to emerge from our interviews with publishers is that it takes time to learn how to maximise the potential of video and audio for each business; there is learning to be done both culturally, in terms of skills, and in terms of the users.

CASE STUDY: ANONYMOUS ORGANIZATION

It takes time to build expertise and credibility. Although this publisher was very clear that video was an area they felt was right for them to move into, it took effort and commitment to get their current practice in place. They needed to learn what it was they wanted to do; and then ensure they had staff on board with the right capabilities, and work to get the entire organization accepting the place of video in the landscape. Then they needed to build their skills and capabilities so they could create videos within a cost envelope that would allow these activities to be sustainable.

Building an audience is a long-term activity, and they were clear that their aim is to get people to engage – repeatedly – with their content, and so they are always looking at usage patterns and feedback to ensure they are creating the kind of content their chosen audience wants to engage with.
Ethics

Using video and audio raises ethical questions that need addressing that are nuanced differently than the text material our industry publishes.

In some subject arenas, it is easy to see: if we are recording people to study, we need to ensure that we have their permission to do so (and they are aware of what that recording is going to be used for).

If patients are being recorded (either for surgery, or for psychotherapy) then do they give full consent? Is that consent being recorded? And stored with the video material in some way?

**CASE STUDY: AMERICAN PSYCHIATRIC ASSOCIATION**

The APA have a series of videos that are supplementary material that sit alongside some of their books. The content is demonstrations of psychotherapy sessions with a patient. Psychotherapies lend themselves well to video because it is much more powerful to be able to see the entire interaction between the patient and the therapist. However, there are ethical issues when considering creating these videos. The APA regularly do not use real patients for their videos: they use actors (usually drawn from their pool of graduate students who have a strong understanding of the significant elements of the interaction that need to be portrayed). The demonstrations are based on real sessions, but are effectively re-created for the video.

Who owns the copyright of the video and audio content you are creating and distributing? Is that all clarified (release forms signed, and filed somewhere that can easily be retrieved)? Most of this is similar to bread-and-butter work for publishers, but because the content form is new, the workflow needs to be created to sit alongside it.
Diversity

Having watched a lot of video in compiling this report, we found the lack of diversity in both audio and visual material painfully obvious.

There appears to be a single, mid-American, male voice who narrates all the video summaries (even when summarising papers that are clearly rooted in another English-speaking culture).

Most doctors appear to be white.

English is the only language.

When compiling video and audio content, a lack of diversity is more apparent than it is in written work.

In an environment where scholarship and science is being rightly challenged on its hegemony and bias, audio and visual content – by its nature – gives an audience many more clues about how we define the voice of authority. Without ensuring that a diversity of people and voices is included in the creation of this content, it can easily undermine claims that scholarship is open and inclusive.
Longevity

As video and audio become the mainstream outputs of our society – and not just of the scholarly record – preserving these outputs should be built into our models of creating them, particularly in this industry.

Publishers will need to convert their content to updated formats periodically and should plan to do so from the time the content is created. This is true for digital content in all its formats.

In some cases, the product that is being sold is the most up-to-date way of doing something; in which case, clearly videos demonstrating older techniques need to be cycled out of it. But the videos showing older ways of demonstrating techniques still may have a life; they just need to be appropriately tagged and findable in a different way (i.e. not bundled as a product showing best current practice!).

On the other hand, JoVE and others mentioned that their videos demonstrating basic techniques are “evergreen”; they are the most popular and enduring videos precisely because they are an essential stepping stone to building skills.

**CASE STUDY: ALEXANDER STREET**

In their aggregation, Alexander Street aim to have content that is no more than four years old, unless the film is a “classic” video. But experience has shown that when the company tries to retire a video, there’s invariably one vocal fan that objects—so retiring videos is not as easy as one may think. Taking a title down is clearly right only when it’s factually incorrect, or when the provider has withdrawn the rights to host the film in the aggregation.

**CASE STUDY: AMERICAN PSYCHOLOGICAL ASSOCIATION**

The APA say: “Videos we made in the 1990s continue to sell. Techniques do get updated, but there are also some classic approaches. Video is an evergreen product in terms of psychotherapy. There is something that can be had from older psychotherapy videos.”
The Future

We realise that we have raised more questions than we have answered in this paper.

But, it is clear that video and audio are fast-growing areas for academic and science communicators. How are we going to adapt to manage that?

Video will be increasingly important in the education sector across the world; and this industry is allied – sometimes directly – with the education sector.

So far, many organizations have dabbled in video (which is a great way to begin to learn about something); but dabbling is not enough and it is time to engage in a more professional and coherent fashion with the challenges that video brings.

Video must be accepted as an academic output. It needs to be citable, rewarded as a legitimate output, and then also discoverable and searchable in new ways – and preserved.

There are clearly some areas we should be seeking to address:

1. **Learning**: video is a new format for many in this industry. In terms of professional development, many of us need to learn more on the intersection of where scholarly publishing excels (around unique identifiers, metadata, discoverability, accessibility) and how that expertise needs to apply to the videos created within our domain.

2. **DOIs**: All video content that is not ephemera needs to have a DOI.

3. **Standard metadata for videos**: an industry-wide effort needs to begin to create standards for the metadata that needs to support the discovery and indexing of video.

4. **Transcripts and closed captions**: all video should have closed captions and a full-text transcript both for accessibility and discoverability purposes; all podcasts should have a full-text transcript.

5. **Long-term archiving**: CLOCKSS and Portico are both committed to preserving video; it is up to publishers to ensure that they are submitting their video as well as their traditional text content. Both organizations have been accepting video and audio as supplementary material; accepting it as primary content is a newer area. Publishers also need to be preparing for needing to migrate / update formats every few years (much as they need to with text).

6. **Rights**: Engaging with rights issues around videos as seriously as we do around other forms of content, and ensuring that the agreements are documented (and perhaps even the rights agreements sit in the metadata, in the same way that OA licenses can).
Conclusion

Video and audio are very clearly going to be an increasing part of the landscape of scholarly communication.

Despite some concerns about the death of long form reading and what that will mean for publishers, it is clear that text still has – and will continue to have – a key role to play. There are some things that only text can achieve, even for the most averse reader. Skim reading an abstract, for example, cannot be replaced with video or audio (although The Financial Times reported in April 2018 that some podcast listeners were listening to podcasts at up to five times faster than they were meant to be listened to!). Equally it is probably true that the numbers of people who actually read a whole research article are on the decline, and that decline is likely to be sustained.

So for those who are responsible for thinking about future developments in scholarly communication, thinking about video and audio and what role it might play in the near future – and right now – should be a central part of answering the “what next?” question. Yes, video and audio pose challenges. But they also provide opportunities to further refine what it is we do.

And there are shared challenges (around metadata in particular) that we need to come together as an industry to resolve – and to lead the way in how to do it.

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3 Margolis, Jonathan “How to cram in more media”, Financial Times, April 17th 2018
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Cell Press
CLOCKSS
Dove Medical Press
Frontiers
Future Science Group
Health Affairs
The JAMA Network
JoVE
Modern Language Association
OECD
Portico
Royal Society of Chemistry
Society for Scholarly Publishing
About Renew

Scholarly publishing is multi-faceted and fast-changing, with new challenges emerging with sometimes bewildering speed. Renew Publishing can help you better understand, navigate and get ahead in this changing landscape.

We work with organizations involved in all stages of the scholarly publishing process, from publishers and societies, to intermediaries and libraries.

We almost always work as a team, and between us, we provide unrivalled and completely independent comprehensive knowledge of the entire publishing process, from author and funder right the way through to the reader.

We’ve worked together for many years and on many projects, latterly as part of Simon Inger Consulting, until our rebrand as Renew Publishing Consultants.

Work with us to renew your services and strategy in the scholarly sphere

Our expertise covers:

- Society tendering and request for proposal management
- Publishing partnerships including financial and contractual terms
- Working with society staff, officers and editorial boards
- User navigation and content discovery
- Deep understanding of researcher and author behaviour and needs
- Unrivalled knowledge of platforms, content delivery and discovery
- In-depth expertise in the mechanics and technology of publishing
- Developing business concepts
- Research and advice around product positioning
- Training.
Meet Us

Simon Inger

Simon has been working in journals since 1987, when he joined Blackwell's subscription agency in Oxford. After some years of leading a product development team in library technology and online customer service systems, he left to found CatchWord, the world's first journal platform service provider (1994) and grew the business rapidly until its acquisition by Ingenta in 2001. Since 2002, he has worked as a consultant in all aspects of journals strategy for not-for-profits, commercial publishers, technology providers, intermediaries and publisher service providers. In addition, Simon runs training courses on journals delivery for librarians and publishers; he co-founded Renew Consulting for Societies, which assists societies with their publishing partnership arrangements; he has worked in the development of industry standards; and is frequently invited to speak at conferences on publishing strategy, content discovery, and innovation. Simon has worked extensively at the interface of business and technology, library and publisher, and has advised in the launch of a number of start-ups, as well as in acquisitions of established entities.

Tracy Gardner
Principal Consultant for Specialized Competitor Analysis and Market Research

Tracy has worked in journals since 1997. She has a very broad view of publishing having worked for publishing technology companies (CatchWord and Ingenta), a not-for-profit publisher (CABI Publishing), and thereafter in consultancy, on various projects for publishers, intermediaries and libraries. Throughout her career she has been focused on improving the communication channels between publishers, intermediaries and librarians and understands the business of scholarly publishing from many different perspectives. Tracy has worked on a wide range of projects, including sales, marketing & pricing; journal delivery & platform selection; management; product development; market research; content discovery; library technology; strategic business reviews; and open access publishing. She is the co-author of How Readers Discover Content in Scholarly Publications, published in 2012 and 2015. Tracy is a trainer on a number of training courses in association with ALPSP and UKSG.
Julie Neason  
*Principal Consultant for Journal Tenders and Journals Contract Reviews*

Julie has been working in the publishing industry for over twenty years and has experience in both the commercial and not-for-profit sectors. As Publisher at the British Psychological Society, she focused on peer review systems selection, editorial workflow, production, distribution, financial planning, and strategic development. Julie has also worked in the commercial sector where she was responsible for developing new society partnerships, journal acquisitions, contract management and the financial growth of a portfolio of over 100 journals. Julie co-founded Renew Consulting for Societies, which assists societies with their publishing partnership arrangements. Julie has the advantage of having worked on both sides of this process and, as a result, she has an unrivalled understanding of the needs of not-for-profit organizations and is ideally situated to understand the pitfalls of journals’ partnership agreements.

Sam Burrell  
*Principal Consultant for Platform Selection, Platform Migration and Peer Review*

Sam has been working in scholarly communications since 2000. In her early years in the industry, much of her work involved articulating the requirements of users, publishers and librarians, and in so doing she developed a deep understanding of the relevant technology and users’ experience of it. Sam’s expertise is in change management and in publishing, specifically product development and project management. Her skills focus on bringing technology-led and marketing-led ideas and people together and helping to deliver solutions that are tailored to the particular goals of the business. Sam has worked on developing the requirements for, technical development of, and implementation of whole platforms, as well as individual websites for publishers, both “out of the box” and bespoke; she is also experienced in managing migrations. She brings a business-led focus to her work, backed up by several years of project management experience within scholarly publishing.
Selection of Clients

Our goal is to provide clients with the best possible service, solve complex problems, and steer clients through the rapidly changing business of scholarly publishing.

We have an excellent track record and have worked with a wide range of publishers and intermediaries, helping them to create new products, migrate business models, remain competitive and refocus on strategic goal.

AACC International
Advertising Association
American Academy of Pediatrics
American Ceramic Society
American Heart Association
American Institute of Aeronautics and Astronautics
American Institute of Physics
American Medical Association
American Oil Chemists Society
American Physiological Society
American Phytopathological Society
American Society for Microbiology
American Society of Brewing Chemists
American Society of Civil Engineers
American Theological Library Association
Annual Reviews
Antipode
Association of Anaesthetists of Great Britain & Ireland
Bioscientifica
Brill
British Editorial Society of Bone & Joint Surgery
British Sociological Association
CABI
Cambridge University Press
Canadian Anesthesiologists Society
Canadian Science Publishers
Company of Biologists
ECS – The Electrochemical Society

Edinburgh University Press
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European College of Neuropsychopharmacology
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SAGE Publications
Scandinavian Association for the Study of Pain
Spandidos Publications
Taylor & Francis Group
Wiley
Testimonials

For any publishing business, particularly in the academic area of publishing, the complexities of building book and journal platforms cannot be underestimated. For small and medium sized businesses these complexities are magnified several times over and it was hugely reassuring to have the support of Simon Inger Consulting throughout the development and implementation phases of our new journal and book platforms. At all times Simon & Tracy provided clear, focussed and, crucially, honest advice.

Timothy Wright  
Chief Executive & Company Secretary, Edinburgh University Press

Renew Publishing Consultants were invaluable partners to AIAA as we prepared to renegotiate a contract with our publications platform provider. Their experience and expertise in managing vendor relationships, identifying publisher needs and understanding the publishing industry ensured we would ask the right questions, highlighting the unknowns and risks often missed in these complicated agreements. As a result, we were more confident in our negotiations with the vendor. The outcome was a more informed, fair and transparent agreement. We look forward to working with RPC in the future.

Heather Brennan  
AIAA Director of Publications

I met with Simon Inger and Julie Neason to undertake a strategic review of our journal’s publishing operation. Simon and Julie worked closely with staff and produced a comprehensive report covering all elements of our journal’s business including editorial and production processes, sales and marketing, subscription analysis, open access and the options available to the College in the medium to long-term future. I was pleased with the quality of the report, the findings of which have resulted in a number of positive changes including streamlining workflow processes, working more closely with the commercial arm of the College, engaging with third-party sales agents in a number of new territories as well as exciting plans for development and growth. I would recommend Renew to organizations seeking expert analysis regarding the future direction of their publishing business.

Catherine Hull  
BJGP Manager, British Journal of General Practice, Royal College of General Practitioners

Renew delivered a great course to a group of product managers and technologists from Taylor & Francis. It was filled with all the essentials needed to understand the user journal from discovery to delivery as well as being packed with valuable tips and inside information. Simon and Tracy were engaging and knowledgeable and everyone on the course, whether they were new to academic publishing or had been working industry a long time, learnt an awful lot.

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