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Publishing Tech Trends Report

2023

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As we look ahead to 2023, **Hum's President & Co-Founder, Dustin Smith,** offers five trends worth considering.

1. OA & the Nelson Memo

> "They don't give a damn about publishers, in fact they hate them."
>
> – (Overheard at the 2022 Charleston Conference, referencing the US OSTP)

When the Nelson Memo was first published, I asked Silverchair President Will Schweitzer what its effect would be.

"None," he said.

It seems he'll be proven wrong. Unlike earlier rulings from OSTP and Plan S, the worries of a zero-day embargo and unfunded mandate have gotten publishers scrambling.

Expect to hear plenty of worries about "exposure" and "compliance" as agencies make their rules to comply with the memo, and publishers form new policies.

Also expect to see new sorts of platforms and aggregators emerge to confront the threat.

2. Content: Decomposition, Variety, Syndication

The old dichotomy of "scholarly" and "grey lit" is dead. Even as VORs become richer (multimedia, datasets, compute environments, altmetrics, accessibility features, etc.), the scholarly record is going through a Cambrian explosion of content types. Some that are earlier in the research process, like posters and conference talks, are now getting the first-class publishing experience.

Expect to see a lot of experimentation with monetization and business models, and fighting information overload.

Publishers are wrestling the syndication conundrum: Do I put my content on ResearchGate or ScienceDirect or similar? What happens to my data and audience relationships? Is the impact really worth it?

3. Print → Digital → Audience

The shift from print to digital was largely "digitization." Old wine, new wine skins. But a combination of user expectations (how much does consuming scholarly pubs feel like a great Silicon Valley app experience? Exactly.) and the shift to OA is prompting a shift to "audience" thinking.

While that might sound more callous, it's actually more personal. How do you serve your readers (of so many types), authors, reviewers, editors, librarians, politicians, members, students, etc.? Even if you don't get all the way to personalization, you can cater to these groups' needs.

Clarke & Esposito's notion of Author Experience (AX) speaks to this shift. Let's say you really cared about authors as people. How would you re-build the submission and peer review experience? What resources would you provide them? How would you *show* authors you really cared about them?

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4. Data and Data Products

Data about people and content represents a massive opportunity for publishers. Big commercial publishers have a massive data and audience advantage, and are just waking up to that potential.

As Stacey from American Physiological Society says:

"Where many smaller publishers may be strong in reporting data, some lack the ability to truly analyze the data and further apply it to improve digital content and deliver appropriate content to our audiences."

Structuring data about your audience and content so it's useful is a massive challenge for publishers, but has gotten easier with tools like Hum. Not just to drive insights and analytics, but also experiences.

Expect to hear more on "data products," which are intelligent experiences built on data. And to see more data-driven solutions to problems like author/reviewer recruitment, alerting, personalized content recommendations, and audience engagement.

If you're not using data to solve those problems, know that others are - and it's going to become difficult to compete with them.

5. AI: From Megatrend to Reality

In the early days of AI, building bespoke models was incredibly expensive, even for organizations with access to large amounts of well-structured data.

New model architectures and open-sourced models by the likes of Google, OpenAI, and HuggingFace have democratized AI. It's still not easy, but it's much more feasible for smaller organizations.
If you haven't played with ChatGPT (next-gen chatbot) or DALL·E 2 (text to image), go do that.

Particularly exciting are "Large Language Models (LLMs)," trained on trillions of lines of text. Expect much more adaptation of LLMs for specific use cases, like reading and tagging content with Hum's CueBERT (which uses Google's BERT as a foundation LLM and has lots of exciting evolution coming in 2023!).

Call for solutions: somebody should be working on a fine-tuned LLM to fight research integrity violations!

INDUSTRY PANEL

We asked a panel of 12 publishing executives and consultants to weigh in on key trends and their predictions for 2023 and beyond.

Will Schweitzer
President,
Silverchair

John Challice
SVP of Business
Development, Hum

Tanya Laplante
Sr. Product Manager,
Platforms, OUP

Rebecca Moakes
Head of Business
Development, Maverick
Publishing Specialists

Stacey Burke
Director of Publications
Marketing & Sales,
American Physiological
Society

Heather Staines
Sr Strategy Consultant,
Delta Think

Mark Huskisson
Owner of The Husk Agency,
OPERAS Co-Chair, &
Publishing Specialist, PKP

Sven Molter
Senior Product Manager,
PLOS

**Jessica
Lawrence-Hurt**
CMO, Cadmore Media

Marianne Calilhanna
VP Marketing,
Data Conversion
Laboratory

Lou Peck
CEO,
The International Bunch

Neil Christensen
Head of Publisher Relations,
Knowledge Unlatched/
Oable

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WHAT DO YOU SEE AS THE NUMBER ONE OPPORTUNITY FOR PUBLISHERS TO DRIVE MORE REVENUE IN 2023?

Nontraditional products (not books and journals) that encompass multimedia and build on publishers' access to SME and brand, and meet the desire for expanded e-learning resources. *—Jessica Lawrence-Hurt*

1) **Collections**. 2) Continuing to invest in **open access programs** and launching new open access titles. 3) **Monetizing underutilized content** like that from digital meetings. 4) Reconsidering third-party content, licensing, and **aggregation models**. *—Will Schweitzer*

Content syndication. *—Heather Staines*

Aside from **new products** (which are always a revenue stream, but are becoming increasingly difficult to maximize), I would say services related to **data**, **intel**, and **authors**. *—Tanya Laplante*

First-party data will help those publishers that are able to capture and action it do all sorts of critical, revenue-generating and revenue-improving things: publish more; publish faster; review better; improve author experience (so critical for many of the current OA models); improve reader experience; improve discovery; offer personalization; improve advertising opportunities; the list is long. And exciting! *—John Challice*

In terms of new revenue streams, data. As in selling data and in understanding data, content, & audience to optimize sales and relevance. *—Neil Christensen*

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Author Enhancement Products. Despite author budget limitations for OA, I think other products that extend promotion of their excellent research might be on the rise. (Spotlight Covers/Cover Supplements being a key example.) These types of products offered by publishers will help to build upon their CVs and professional careers to become the NEW revenue approach. As for the traditional models, OA and **OA partnerships to maintain subscriptions** will continue to be a priority. —*Stacey Burke*

The **expansion of journals that offer/require APCs**. The publisher that can nail a consistent author experience, combined with a fair review experience in a timeframe that is acceptable to submitters is going to drive greater revenue long term. Ultimately though, I think publishers will continue to drive revenue through APC deals with institutions. —*Sven Molter*

Sustainability. For my publishers, partners, and societies it is all about driving revenue to support the process and engaging with significant new initiatives in open source and open infrastructure. —*Mark Huskisson*

Improving **community resonance** and **engagement**. Publishers and providers in the research ecosystem are starting to look at who their audience really is and how to resonate better with them. We have a responsibility to improve the marketing we do across the industry, to ultimately improve the experience and engagement of those on the receiving end. —*Lou Peck*

WHAT DO YOU SEE AS THE #1 CHALLENGE FOR DIGITAL CONTENT PUBLICATIONS IN 2023?

Content gluttony. Ever-increasing output naturally creates downward pressure on value per publication unit unless publishers understand how to extract value from all that inventory. —*Neil Christensen*

Just doing something that moves in the **strategic direction**, instead of thinking they have to spend an entire year - or more - figuring out a plan. Strike while the iron is hot/the content is fresh! —*Jessica Lawrence-Hurt*

Discovery and findability. The corpus of papers increases exponentially year over year. Publishers need to deliver content in a seamless, automated manner to their platforms and discovery vendors. —*Marianne Calilhanna*

That we're still talking about **metadata** and persistent identifiers. A lot of publishers are now willing to sign transformative deals or into open access pilot schemes and are finding that their institutional identifiers don't match up across systems or that they don't have accurate or highly structured funder or grant data in their XML. All of this information is critically important to understanding how open access may change your publications. —*Will Schweitzer*

Uncertainty around the **policy and funder environment**. —*Heather Staines*

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Open Access and navigating that world in a way that honors **commitment to openness**, while **retaining revenue** by illustrating to institutional customers why subscriptions to content that is largely OA is still beneficial to their constituents. *–Tanya Laplante*

Solving the puzzle of **OA sustainability** in nurturing bibliodiversity, diamond OA, and enabling equitable treatment for non-English language journals in discovery and prestige. *–Mark Huskisson*

Building and maintaining trust. Our industry is in constant flux, and it's hard to keep up sometimes. This leaves the communities surrounding them questioning what will happen next. When you look at a journal, early career researchers are beginning to ask - "What is their value? Why do I need them if I can use a preprint or repository to disseminate my research?" *–Lou Peck*

Staff with analytics experience. Recently a colleague said "You know what is worse than no data? Wrong data." Many smaller and non-profit organizations have limited analysis in-house, and individuals are left scrambling to equip themselves with tools to help drive editorial, financial and publication business decisions. Everyone should become a "data analyst," but with limited bandwidth and lack of professional guidance, it becomes a tertiary thought that gets put to the wayside until - *oh, we need some data for X!*, and everyone stares blankly. *–Stacey Burke*

PSST!
Looking to improve your data literacy in 2023?

Hum's (nearly!) complete guide to data for publishers is a great first step.

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IN WHAT WAYS WILL WE SEE PUBLISHERS' CONTENT PRIORITIES SHIFT IN THE YEAR AHEAD?

They will want and need to **extract more new value from their existing and growing content assets**. The traditional models of roughly publishing more units at increasing prices and at lower expense are a downward spiral and a waste of knowledge. *—Neil Christensen*

Multimedia and events-based content will grow in priority – all optimal ways to engage with users and generate a quick feedback loop. *—Jessica Lawrence-Hurt*

New content formats. Why does content have to be an article, book, conference paper, review etc? As long as the content is indexed and tagged in a certain way, we can have more flexibility in how we present it to the explorer, and how they digest it. *—Lou Peck*

Shift from journal-level thinking to **portfolio-level strategy**. Standardization of formats for efficiency and researcher satisfaction. More attention to data and article-associated outputs. Increased emphasis on protecting research integrity. More attention to digital assets, like conference outputs. Connecting content to teaching and learning. *— Heather Staines*

We're headed into a year of financial and market uncertainty. In times like these, conservative organizations (publishers included) want to retrench and cut back R&D investment; I think they should do the exact opposite. I think that uncertain times are the ideal time to **adapt and innovate**, and try out things because it'll leave you in a better position when the market recovers. *–Will Schweitzer*

For my stakeholders, it is aligning with growing OA initiatives like the pan-European platform and a continued discussion on XML-first, **peer review** (open /no-reject submissions/reviewer rewards), and getting content fully discoverable where it has not been previously indexed. *–Mark Huskisson*

More focus on authors and **attracting authors** – they will be the source of revenue in a way they haven't been before. More **focus on value-add of publishing platforms** – what features/tools can we add to the content to make the platform version of the content more enticing to users and authors? Looking at non-traditional content support – how can we support content in societies archives that isn't yet digitally available?
–Tanya Laplante

We need to move outside of what we have always done and think about **partnerships that make us understand and target our audiences better**. *–Stacey Burke*

HOW WILL WE SEE PUBLISHERS' PRIORITIES FOR DELIVERY & DISSEMINATION OF CONTENT SHIFT IN THE YEAR AHEAD?

It will be really critical for publishers to consider their openness to dual publication across platforms. What is the impact on usage? What is the impact on revenue? Does it impact usage of VOR? There may be a move toward more openness, and less protectiveness around where content is discovered and consumed. **Usage and impact will become paramount** and if being protective of content has a negative impact, trends will likely shift. —*Tanya Laplante*

Content re-use - understanding and leveraging use. —*Neil Christensen*

Mass market channels that don't surface scholarly content won't cut it. We'll see publishers apply scholarly apparatus to a broader array of content types. **Improved recommendations & user targeting**. —*Jessica Lawrence-Hurt*

Focusing more on **providing content (& metadata) where users already are**. Generating robust metadata for machine readability. —*Heather Staines*

Finding **international content for the market**, or content suitable for an international market. —*Sven Molter*

Metadata improvements, more **purchase options**, & **accessibility**. —*Rebecca Moakes*

It's wishful thinking but I would really like to see the **elimination of the PDF**! Who reads PDFs? Have any publishers invested in serious research to answer PDF usage among its readership? —*Marianne Calilhanna*

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IN WHAT WAYS WILL WE SEE PUBLISHERS MONETIZE CONTENT IN 2023?

New **content services**, new **licensing opportunities** and **new products**. —*Rebecca Moakes*

Events around content, in collaboration with education colleagues. —*Jessica Lawrence-Hurt*

Upstream attention to journal selection and **editorial services for ESL researchers**. Promotional offerings, including plain language and lay summaries. Content **syndication around thematic issues** that could include ads and related services. —*Heather Staines*

I think we're going to see more **creative one-time rather than subscription sales**. The backflow model has been really successful for publishers for far longer than any of us thought, and libraries or institutional customers continue to have one-time money to spend. Very few publishers have launched successful B2C product extensions or offers but I hope publishers continue to experiment with these. —*Will Schweitzer*

Monetizing grey lit/non-traditional content. Perhaps monetizing services around the content, offering different scales of access from standard to premium (e.g. the latter comes with epub download options). —*Tanya Laplante*

More **institutional deals**. —*Sven Molter*

For my clients it is exactly the opposite – they're firmly **working against the monetization of content**. It is not the norm in Latin America and large swathes of the global south. —*Mark Huskisson*

WHAT CHALLENGES DO YOU SEE AROUND GROWING & ENGAGING YOUR AUDIENCE IN 2023?

A lot of publishers have Google Analytics; a lot of publishers have straightforward advertising alerts and email marketing tools; but very few have a sophisticated **understanding of the users, purchasers, their journeys or personas** to pull together a robust digital strategy. Accordingly the biggest challenges of scaling, and having staff with the knowledge and leeway to implement new processes to experiment with tools and systems, and to try things out. There are very few experts in our industry, but there's certainly are capable people. —*Will Schweitzer*

A broad challenge to audience growth is **access.** There is lots of scholarly content that lots of people would like to read but can't. How do publishers make sure all of their truly relevant content gets in front of readers at the point when those readers are looking for it? The solutions to that are mostly technological. Publishers need vastly improved methods for understanding their readers and serving them accurate, timely, and personalized recommendations. —*John Challice*

The general shift away from prominence of brand and community to **a more agnostic way of consuming content**. Content is what users are after, so if they can get it on PubMed or in another space, what creates loyalty to (or even awareness of) the OUP platform? There is no relationship between user and the platform - how do we create that? How do we keep users on the platform, engaging with more content once they've consumed the content they discovered via a Google search? —*Tanya Laplante*

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The market is oversaturated. Journals are struggling to find the free labor to process manuscripts in a timely fashion (reviewers/editors). *—Sven Molter*

Cutting through the noise, open access - researchers /authors don't care about platforms. *—Rebecca Moakes*

Information overload and uncertainty. *—Heather Staines*

Reader time/attention. It's just math: with the rapid growth in the amount of content being produced, there is much more content in various formats clamoring for readers' mindshare. The signal-to-noise ratio gets smaller. Anything that increases the amount of useful content that is put in front of a reader helps address this (though of course, the amount of useful content will also be going up). Improving the efficiency of surveying the scholarly literature would also help. Emerging technologies–such as AI-derived summaries of research articles/scholarly literature–offer some promise to make this process more efficient. *—John Challice*

External noise and internal **pressure to catch up** on things that have been delayed by several years now. *—Jessica Lawrence-Hurt*

Motivation and enthusiasm from staff to drive change and push for it on a regular basis. This is partly due to **limited resources** and maybe a dulled workforce. How do we lead our workforce to have innovation top of mind and activate them to make and defend recommendations for the betterment of audience engagement? Of course a good workforce is needed along with excellent leadership, and, yes money helps too. Outsourcing this energy from one or two staffers may be the key for small publishers. *—Stacey Burke*

HOW DO YOU SEE YOU SEE PUBLISHERS' APPROACH TO THEIR AUDIENCE CHANGING IN 2023?

A newfound eagerness to **cater to audiences**. To help them in their research journeys, ensuring all the tools they need are at their fingertips. Making the author journey from initial engagement with us through to publication a seamless one. Fostering relationships with authors and users in a way that we haven't done in the past. —*Tanya Laplante*

Data - **know and leverage your audience** (and engage with 3rd parties to do this). —*Neil Christensen*

Publishers need to become more **audience-led**. Not only in terms of author experience (which I think everyone is coming to understand is very important), but also in terms of deeply understanding readers. Ultimately, a lot more listening. But because this has got to be done at scale, it means a lot more data and a lot more analysis. Publishers will become more **data-focused and data-facile**. —*John Challice*

Publishers creating different **audience journeys** around content and services. —*Heather Staines*

Continued **community building**; both supporting the growing momentum behind the tens of thousands of journals published in the Global South and for those publishers in the Global North wanting to move to open.
—*Mark Huskisson*

Elife is leading the way in experimentation, much to the dismay of the industry. Old guard publishers are trying to prove they're relevant by **jumping on the APC bandwagon**. —*Sven Molter*

Engagement with early career researchers. —*Rebecca Moakes*

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WHICH TECHNOLOGIES, RESOURCES, OR PARTNERSHIPS WILL INCREASE IN IMPORTANCE FOR PUBLISHERS IN 2023, AND WHY?

I find it kind of crazy that I've been speaking about XML-first and XML-early publishing workflows for most of my career. BUT I think we are really, really there. In 2023, I think it's extremely important to partner with tools and service providers and other partners who can support publishers with **generating XML immediately after peer review** or in the case of pre-prints, an automated transform when uploaded to a repository.
—*Marianne Calilhanna*

Less go-it-alone mentality and more **openness to collaborating** with like-minded partners on areas that are not a specialty. —*Jessica Lawrence-Hurt*
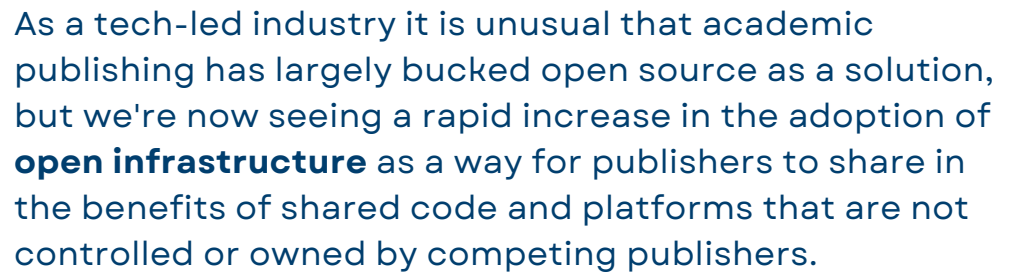
Partnerships to expand outside of our core competencies will be on the rise. Outsourcing to build on resources, both technical and professional. And overall **stronger engagement technologies** that create automation to assist in small staff with limited resources. —*Stacey Burke*

Anything around **metadata generation**, **abstract and summary creation**, **digital research assistants** (to deal with information overload), **AI** for identifying reviewers, level of copyright needed, extraction of key components, repository partnerships (for OSTP compliance), anything that helps them get their data in order. —*Heather Staines*

User intel; **dashboarding for society partners and institutions**; more seamless and complete **integrations across platforms** and systems so that all data can be centralized; **user-friendly tools** that do not require specialized knowledge to operate or glean information from.
—*Tanya Laplante*

As a tech-led industry it is unusual that academic publishing has largely bucked open source as a solution, but we're now seeing a rapid increase in the adoption of **open infrastructure** as a way for publishers to share in the benefits of shared code and platforms that are not controlled or owned by competing publishers. *—Mark Huskisson*

Automation and getting people to trust said automation. *—Sven Molter*

Merging societies, **AI and automation,** working with third parties on paper mill and manuscript submission processes, publishers buying tech companies. Scale, velocity and volume, **research integrity**, data-led BI. *—Rebecca Moakes*

MarTech, language editing, interoperability. *—Lou Peck*

The industry has underestimated the work involved with **managing OA transactions**, and publishers are continuing the habits of creating too many different publisher- centric OA management solutions that are ineffective for institutions to use at scale. Tools like Oable make it easier for institutions to transact with publishers at scale. *—Neil Christensen*

I'm impressed by the experiments being tried by publishers as they try to learn what will work here. And not all are technological, by any means. **New content formats**. **Innovative business models** (like Subscribe to Open). **Syndication arrangements** (which, depending on what data is being shared, may be good or bad). **Industry-wide collaboration** on technical solutions to common (and often wicked) industry challenges. The searingly clever use of technology to combat threats to research integrity. Data is what will feed the emerging technologies that will help publishers do more, reach more, & make sure content is found by those who should see it. *—John Challice*

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BONUS PREDICTIONS: ANY OTHER PREDICTIONS FOR PUBLISHING IN 2023 THAT YOU'D LIKE TO SHARE?

I think we will see the publishing community and new vendors building **solutions to help accommodate proper metadata** and personal identifiers integrated into publishing workflows using AI to truly validate data and stop relying on our authors who should be focused on research. **AI tools** will be on the rise - maybe with automated programs that are designed to safeguard research integrity. **Funder ID and Institutional ID automation** on our submission systems are at the top of my list to discover. *—Stacey Burke*

New ways of **incentivizing peer review**, **supporting societies** and associations, **more business models** and more acquisitions - less choice. *—Rebecca Moakes*

I think we'll be talking about **content and user data security** a lot more. Publishers and vendors will continue to build and refine their knowledge and practices around **privacy laws** and will move from the space of designing features and processes for compliance to ones focused on the user and presenting them with options, educating them, allowing them to make sensible choices in a straightforward and easy way. *—Will Schweitzer*

Need to brush up on those privacy laws?

Silverchair's guide to **DATA PRIVACY FOR PUBLISHERS** breaks down the basics of this legislation.

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With more openness to remote work and generally slow moves back to the office setting, publishing (and vendors) both **increase the potential talent pool and decrease potential engagement for new staff**. Creative folks may be able to "design" their own jobs across employers (as there continue to be more openings than applicants), but early careers may fail to see the benefits of their possible career paths, leading to **increased staffing difficulties** (and more stress for employees at other levels). —*Heather Staines*

Significant funding is being allocated to open infrastructure by the EU and other governments. It will be interesting to see how these growing communities operate alongside and in competition for limited researcher-reviewer resources with commercial publishing interests. It is possible that – initially – two systems with the same building blocks develop concurrently. —*Mark Huskisson*

There will be more and more **industry event sessions about OA and AI**, and people will continue to tire of the topics and the same speakers. Instead, we need to more simply talk about the underlying issues, drivers of change, and actual use cases. —*Neil Christensen*

The old guard will continue to "reinvent" themselves to masquerade as proponents of Open Science when Revenue is actually their top concern. Publishers will continue to **struggle to find reviewers and editors for free**. AI will need to play a greater role but **trust in AI limits its adoption**. —*Sven Molter*

WHAT DOES 2023 LOOK LIKE AT YOUR ORGANIZATION?

LET US KNOW!

We'd love to hear how your plans for technology, content, reaching new readers, and more are evolving this year.

We look forward to discussing these trends with you as they play out in 2023 and beyond.