

Graduating from publishing platforms to researcher-oriented pipelines

Jonathan Hevenstone*

SVP Business Development, Atypon, Hoboken, USA

The scholarly publishing industry has, in many ways, fallen behind the needs of the researchers it serves. We have continued to deliver journal articles as online replicas of their print counterparts, missing the opportunity to use digital technologies to deliver a richer representation of the research process and construct a more authoritative scholarly record.

We have developed a discontinuous archipelago of publication websites and then waited for Google to build bridges and for governments to build aggregations. Researchers frustratingly encounter separate logins, separate searches, and separate emailed content alerts—all of which are also ineffective for publishers.

As a result, traffic is flowing onto aggregator and pirate websites that are more convenient for researchers to use. According to data from digital market intelligence company SimilarWeb, of the top ten scholarly websites, only five are operated by publishers; two-thirds of the traffic is on non-publisher-hosted websites, three of which are pirate sites.

1. The inadequacy of search

The dominant paradigm of searching for article PDFs—whether across publisher sites, within aggregations like PubMed, or within abstracting and indexing services like Scopus and Web of Science—is suboptimal. Users remain frustrated by searches that must be performed over and over on multiple sites, yield results that are too narrow or too broad and unfilterable, or yield no results at all.

In its effort to drive traffic and maximize advertising revenue, Google indexes and presents everything—both scholarly and non-authoritative results. Conversely, Google *Scholar* is far from comprehensive. And both serve links to file sharing and pirate sites.

Once users find the content they need, they face challenges accessing it, especially off-campus, even when they are entitled to view or download content based on institutional subscriptions.

It's no wonder that recent studies indicate that the majority of the users of Sci-Hub, a pirate site, use it for its convenience, not just because the content is free [1,2].

*E-mail: amiller@atyp.com.

2. Giving researchers what they want

Researchers are cross-disciplinary knowledge workers, fluent with scientific computing environments and often working collaboratively. What they need is an open environment that wraps around them to provide services, tools, and capabilities that make their work easier and more productive.

While publishing platforms themselves will continue to be foundational to research and researchers, they need to be incorporated into a holistic, interoperable ecosystem of researcher tools that addresses the work of researchers at every step of their workflow.

Atypon is making an investment to support the development of such an interoperable ecosystem, which to be successful must address the needs of researchers, publishers, and other technology providers who share the values of the scholarly community. The ecosystem includes:

- **Collaborative authoring tools** that support the import of interactive data sets and computer code into a manuscript that can then be submitted for publication as a single unit.
- **A submission portal** that makes authors' workflows easier and more straightforward.
- **Discovery of personally relevant content** through an automated, visually engaging content feed, driven by machine learning and delivered to—and personalized for—each user.
- **Copyright-compliant content sharing and promotion** among colleagues that lets them learn about each other's interests, providing a collaboration channel and maintaining both the serendipitous and intentional elements of content discovery.
- **A single interface that ties together all of a researcher's activities**, providing the ability to read, research, manage references, submit papers, and discover relevant and shared content as part of a personal, cross-publisher library of services.
- **Secure, copyright-compliant access and authentication through a single user login** that is accepted across the entirety of the tools and content researchers use, regardless of publisher or product vendor.
- **API support** for third-party tools and services.

3. Publisher success = researcher success

The next wave of scholarly publishing technology has the potential to transform the relationship between researchers and publishers. By cutting across website silos, accelerating the publishing process, and prioritizing the needs of researchers, publishers can help support and empower the people whose work becomes the authoritative content that they promote, market, and sell.

References

- [1] John Bohannon, Who's downloading pirated papers? Everyone, *Science* (2016). doi:[10.1126/science.aaf5664](https://doi.org/10.1126/science.aaf5664).
- [2] David Nicholas, Chérifa Boukacem Zeghmouri, Jie Xu, Eti Herman, David Clark, Abdullah Abrizah, Blanca Rodríguez Bravo and Marzena Świgoń, Sci Hub: The new and ultimate disruptor? View from the front, *Learned Publishing* 32(2) (2018), 147–153. doi:<https://doi.org/10.1002/leap.1206>.