Scientific Society Journals: By Scientists for Science

Publication of scientific studies is the primary product of science. But scholarly publishing is in a state of flux—some would even say dysfunction. How did we get here?

The birth of scientific publishing can be traced to 1665, when Henry Oldenburg, the Secretary of the Royal Society, launched *Philosophical Transactions*, the world's first scientific journal. He did that under the aegis of the Royal Society because its members—among the most accomplished scientists of the time—provided a knowledgeable and authoritative editorial board.

As the scientific enterprise grew, more journals were needed to present and certify the growing body of work. Scientists continued to rely on their societies for that need, because who better to assess scientific studies than active scientists? But as scientific publishing became more lucrative commercial publishing houses increased their footprint in scholarly publishing. Today journals run and edited by employees of for-profit publishers outnumber those run and edited by scientists who serve not-for-profit scientific societies.

“Publish or perish” has long been scientists’ reality. The main purpose of publication, of course, is to report discoveries and disseminate knowledge, but it is also how authors document their experimental skills, cleverness, and productivity. Scientists—especially those in academia—need to publish to advance their careers.

For-profit journals have increased in influence, in part because scientists have increasingly placed much value on the Journal Impact Factor (JIF) for evaluating their fellow scientists. This sometimes forces authors to shift their priorities, from seeking journals most suitable for their story toward publishing in journals perceived to have high impact.

The misperception that papers published in high-JIF journals and magazines are the most significant is damaging science by distorting its reward system. Some commercial publishers have launched suites of journals to leverage authors’ attraction to their high-JIF title. (For example, *Nature* and *Cell* have between them launched 40 journals

in the last 25 years.) The consequence is that employees of for-profit publishers have a large and growing influence on the trajectory of science.

To remind researchers of the value of community-based journals, several scientific societies, including the Genetics Society of America, formed the Scientific Society Publisher Alliance (SSPA). Society-sponsored journals benefit authors and the community by being:

Peer approved and certified. As practicing scientists, editors of society journals know their field and have high standards, so publication in society journals is a significant accomplishment and a valuable mark of certification from the authors’ peers. And because the editors are invested in their field, maintaining the integrity of the scientific literature is their primary motivation.

Accessible and supportive. Because the editors of society journals are practicing scientists and authors themselves, they know what it takes to tell a story that advances the field. Because they have their own research programs they have reasonable expectations of their fellow authors. And because they are experienced scientists, society journal editors can adjudicate reviewers’ sometimes conflicting comments and provide authors helpful feedback. Society journal editors are authors’ colleagues; society journals exist to serve authors.

Agile and responsive. Societies have direct and daily ties to the communities they serve. Practicing scientists serve on their editorial boards, committees, and boards of directors, and bring feedback from their labs, departments, and institutions and collaborate with society publishers and editors to put it into action. From early support of preprint servers, to establishment of data standards, to being the first to publish articles early online—society journals have a track record of innovation.

Relevant, recognized, and targeted. Society journals reach the scientists most interested in the authors’ work, ensuring articles reach authors’ key audiences with maximum exposure.

And society journals are well-established, long having been recognized as among the top journals in their fields.

Prestigious. Society journals are published by prominent scientific societies that have long been an integral part of their fields. Their editors, who manage peer review and determine the journals' content, are among the most accomplished and highly regarded scientists in their fields.

Not-for-Profit. The mission of societies is to serve science and their communities. They do that in many ways, including enabling collaboration, supporting scientists' professional development, organizing meetings, enhancing education, advocating for public support of research, and much more. Some, in many cases most, of the revenue that supports those

activities comes from their journals, and it is reinvested in our community. By publishing in society-owned journals, authors are reinvesting in *their* community.

Journals owned by societies and run by practicing scientists remain a mainstay of academic publishing, providing prestigious, selective venues for publication of research results. Their peer editors are fair and authoritative stewards of the scientific literature who seek to help authors tell their stories. And societies reinvest in the community. Help preserve the pre-eminence of society publishing by submitting your best work to journals run by scientists for science.

Mark Johnston, Editor-in-Chief