

System Dynamics Review Publication Contract Options Analysis

Final Report and Recommendations

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Executive Summary

The current contract for publishing the *System Dynamics Review* (SDR) with Wiley ends on December 31, 2023. Wiley has proposed a new publishing agreement to take effect January 1, 2024 that would remain in place until December 31, 2026.

The Publications Committee recommends accepting the proposed agreement with Wiley, as amended to include concessions negotiated with Wiley. We also recommend continued investigation of potential contracts for 2027 and beyond.

The journal publication landscape is in a period of disruption. In the old “traditional” mode authors could publish articles for free, institutions would pay the costs of publishing through subscriptions to individual or packages of journals and readers could only access articles through an institutional or publisher paywall. In the new Open Access (OA) mode, the costs of publishing are borne by authors as Article Processing (or Publishing) Charges (APC’s) -- which are mostly paid by institutions or funding agencies -- and readers can access articles for free. When the transition to the new mode will be fully completed is uncertain, but it is clear that the rate of change is accelerating rapidly. This transition affects publication options for SDR.

The Publications Committee assessed information about expected changes in the publishing and institutional subscription landscape from researchers, journal publishing experts and academic library “consumers.” We solicited and considered proposals from open access publishers MDPI and Frontiers, met with representatives from Springer about the potential to publish with them, and had many discussions with Wiley about their expectations about the immediate- and long-term changes in the publications landscape and their operations that will affect our journal.

This report details the process and analyses that were undertaken to arrive at our recommendations. Interim information was presented to the Policy Council in April, May, and July 2022. This report has been updated to reflect subsequent developments and input from PC and Society members.

Choosing the Wiley proposal is not the end of this discussion. As the publishing landscape moves toward fully OA, opportunities and challenges for the SDR will also continue to change. The committee therefore recommends that SDS make full use of the window of opportunity provided by the new 3-year agreement to consider alternative publishing options and to improve our attractiveness to any publisher by developing a strategy that enables the journal to remain viable in the long run.

Key Contract Terms in Wiley’s Proposal

- length of term: 3 years
- royalty fee on subscription and open access fees brought in by SDR reduced from current contract
- APC discount: 20% off article charge for open access publishing (\$3040 per article for 2023)
- editorial expense stipend: unchanged from current contract
- cost to SDS for member subscriptions: none
- published online only, print-on-demand available for additional charge
- hybrid format allows authors to submit articles for free (requiring paywall access to read) or open access for payment of Article Processing Charge

Ongoing considerations

- The 2024-2026 contract is a very short-term arrangement, so we have no time to lose in positioning ourselves better for Wiley or other publishers for future publication.
- Negotiation for a new publishing agreement to follow this proposed contract with Wiley or anyone else will need to begin by late 2024.
 - SDS needs to be prepared for the following possibilities from Wiley:
 - Another short-term proposal (this is the new normal in the current, rapidly changing OA landscape)
 - No proposal from Wiley
 - A proposal from Wiley for going fully OA
 - Consider alternative options besides Wiley
 - Fully OA publishers (e.g., MDPI or Frontiers)
 - Other traditional publishers (e.g., Springer or Sage)
 - Self-publication or other options that may emerge
- We need to consider how best to balance two competing goals: increasing the number of articles we publish and maintaining the quality of those articles.
- Increasing the number of articles will improve the attractiveness of SDR to Wiley or any other publisher. However, it comes at a cost of reviewer and editor time. More articles mean more reviews need to be engaged and managed.
- To increase the number of articles, the SDS should aim to expand the reach of those articles toward all of SD practitioners, not exclusively academics. The Publications Committee is pursuing the following paths toward this goal:
 - Add SDR categories for articles that are education and application oriented
 - Encourage high-quality conference presentations to submit to the SDR and mentor them to and through the submission process
 - Improve the SDR author experience to encourage repeat submissions
- To address article quality, the Publications Committee is looking at ways to
 - Improve the review process, including providing guidelines for how to be a reviewer and mentoring new reviewers
 - Reduce the number of review requests that are declined
 - Reduce the reviewing and editing burden on volunteers

Evaluation Process

This report presents the work done since March 2021 by the Publications Committee to identify and evaluate options for publishing the System Dynamics Review after 2023. The Committee analyzed two general options: (1) continue publishing with Wiley under the best contract we could negotiate and (2) consider switching to a fully Open Access publisher such as Frontiers. We compared benefits and drawbacks of the two general options. While we did not request a formal proposal from other traditional publishers, we did have an extended conversation with Springer that helped us understand the difficulties getting an attractive proposal given our low article volume.

We started by determining a set of evaluation criteria that included requirements to make any transition seamless for readers by keeping our impact factor, current indexing, and volume numbering the same, and considering operational details of producing the journal, revenue and costs, and the reputation of the publisher (see details in Appendix I). Given our long history of publishing with Wiley, we also considered reasons to stay with Wiley as well as reasons we might want to leave Wiley.

We solicited and considered publishing options from Wiley, Frontiers, MDPI, and Springer. We received formal proposals from the first two publishers, a pre-proposal from Frontiers and informal information from Springer. Table 1 summarizes the four options considered by the key evaluation criteria.

Table 1. Comparison between Wiley and MDPI proposals, Frontiers pre-proposal and Springer potential

Evaluation Categories and Criteria	Wiley Proposal	MDPI Proposal	Frontiers Pre-proposal	Springer potential option
Duration	3 years	Slightly longer than Wiley	To be determined	To be determined
Can keep impact factor and journal history	Yes	Yes	Yes	Yes
Transition	None needed	Managed by MDPI. MDPI covers setup and transfer costs	Managed by Frontiers. Frontiers covers setup and transfer costs.	No information
Publishing cost to SDS	none	% of APC per article published	Set fees per article published	Depends on whether SDS or Springer owns the journal
SDS Revenue	Royalty % of any subscription or APC revenue attributed to SDR	% of APC per article	Any APC amount above the set per article fee that SDS decides to charge	Depends on whether SDS or Springer owns the journal
APC cost to authors	\$3040 per article in 2023	Proposed fee per article,	Publishing fee per article plus	Similar to Wiley. Many Springer

	No difference for different types of articles, should expect 3-5% increase per year	considerably less than Wiley APC	whatever additional amount SDS decides to charge, Less than Wiley APC SDS sets APC, keeps anything over the set publishing fee as revenue	journals have APCs in the range of \$3,000 - \$5,000
Potential annual revenue to SDS assuming 20 main OA articles/ year	\$3040 APC/article * 20 articles/yr * royalty rate => <u>less than \$20,000 / yr</u>	Assuming 20 articles/yr => <u>less than \$5,000</u> Assuming 50 articles/yr => closer to \$15,000/yr	Assuming SDS sets APC at moderate level, 20 articles/yr => <u>\$10,000</u>	No information
APC discount for SDS members	20%	20% Plus APC waivers and vouchers for good and timely reviews.	none	No information
Open to APC waivers?	No	Yes, possible for guest editors, others	No, but SDS can decide to waive revenue above base cost or subsidize.	No information
Pursuing transitional agreements with subscribers to cover APCs?	Yes	Unclear	Yes	Yes
Editorial support	Stipend paid to SDS	Strong in-house support: editorial assistants to manage reviews and reviewers, final decisions made by SDS editorial board. Editorial board compensated with 1-2 APC waivers/yr. Amount of editorial support from MDPI increases with # articles published.	In-house tools to streamline reviewer selection and article production.	If Springer owns the journal, they hire an Executive Editor and pay their salary.
Level of pressure to	Gentle, but steady, likely to increase	High	Minimal	Very High

increase # of articles published		MDPI considers 20 articles/yr very low, would aim to increase to 50/yr, preferably 70/yr. Provides more editorial support perks with increased # published.		For new journals, Springer aims for approximately 100 articles/year
Print version fee	Print On Demand approx. \$300/yr	Print On Demand \$25-\$50 per issue	Print On Demand about \$25 per issue	No information
Operations	Interactions with Wiley production staff can be difficult	Proposes increased operational support	Proposes increased operational support	Depends on whether SDS or Springer owns the journal, could eliminate SDS operational requirements.
Publisher reputation	High	Has baggage	Mixed	High
Publications Committee summary of benefits vs cost	No transitional work required, familiar with their operations, hybrid format gives authors options, good reputation, some difficulties with operations, expensive APCs, pressure increasing to increase # articles.	Minimal work required on our part for transition, potential to reduce editorial burden on SDS and, therefore, make it easier to increase # articles. Has poor reputation in the past although it is changing. May not be accepted by SD potential authors. High pressure to increase # articles, may be beyond our capability.	Minimal SDS work required for transition, potential decrease in editorial burden. Seems to have mostly good reputation in academic circles, would have to investigate this further with potential authors. Low pressure for increasing # articles. Flexible APC structure with good SDS autonomy. Fixed cost of publishing.	Biggest concern is the aim to publish many articles. Option to sell the journal to Springer is intriguing. Need more information, potentially consider for next contract period.

Each of these potential options has tradeoffs. Wiley and Springer have good reputations as publishers but have high APCs for authors. MDPI has good editorial support services but a challenging reputation. The pressure to publish more is growing with Wiley, Springer, and MDPI. Frontiers offers a lower pressure to increase the number of articles and lower APC costs.

Two factors led us to favor the Wiley proposal for this contract period: inertia and uncertainty about the rate of change. Even though the MDPI and Frontiers options had clear plans for helping make a smooth transition, we felt that the work needed to make a transition would be high. Given the rapid pace of change in the publishing landscape, it seems wise to use the duration of the proposed Wiley contract to continue to assess the changes. One drawback of waiting, though, is the potential that the low APC's offered by MDPI and Frontiers may increase.

Closer look at Wiley Contract Proposal for 2024-2026 compared with current contract

Wiley's proposed new contract for the period after our current contract expires included the following changes from our current 2019-2023 contract:

- Shorter contract duration
- Reduced royalty fee
- Online only delivery of SDR to SDS members; print version only available as print-on-demand

In negotiations with Wiley, we were able to remove the charge for online only member subscriptions and retain the 20% discount for APCs for SDS members. They were not open to other requests such as APC waivers.

[Table 2 Comparison between current and proposed Wiley terms deleted for confidentiality]

SDS and Policy Council Input

The committee presented interim results to the Policy Council in the April 27, May 25, and July 18, 2022 meetings. We held 3 open discussion meetings on May 11, June 29, and August 17, 2022 for discussion of any questions or concerns, provided a Slack channel for online discussion, and had several conversations with individuals to solicit further input to the process.

We asked for input on two questions and invited any other questions or concerns:

1. What does the Society need to achieve with the journal?
2. What further information would you like to have to inform the discussion?

Points raised included:

- Journal revenue should not drive the decision
- It may be better to accept the decline in net revenue with Wiley than to switch to a fully OA publisher for a marginal benefit in net revenue
- We can benefit by seeing how Wiley adapts to the changing OA landscape
- Would like at least one set of comparison terms from another traditional publisher
- Would like to negotiate with Wiley to waive APCs for 5-10% of articles submitted under OA
- Would like to hear from some existing customers of publishers we are considering (including OA publishers) about their experiences.

- Concern about requiring authors to pay to publish in SDR if it becomes fully OA: would it be fair? would we have an even harder time recruiting papers? would we have to change standards?
- Concern about accessibility of publishing to authors who are not affiliated with academic institutions that have transformational agreements
- Concern about shifting to a revenue model that is based on APCs from authors
- Would like to make the SDR more welcoming to application and education work
- Would like to set consistent standards for work that is good enough to be published in SDR
- Need to have a constructive review process
- Concern that an OA publisher would push for fast reviews at the expense of review quality
- Would like to broaden the reviewer pool, could recruit from special interest groups

Recommendations

First and foremost, it is the recommendation of the Publications Committee that the Policy Council vote to approve the offer from Wiley with the revised terms as negotiated by the Committee and empower the President or Executive Director to sign the formal contract on behalf of the Society.

Beyond that, with a contract that will expire in 2026, we have a little over two years before we again need to address the issue of ongoing publication of the System Dynamics Review. The short term of the contract is a result of the rapidly changing publishing landscape and Wiley's uncertainty as to how things will stand in 2027.

Though the Publications Committee does not have any special insight into how things will stand with Wiley in 2027, it is clear that the overall publishing landscape is rapidly changing in a way that makes the volume of articles a critical component of our attractiveness to all publishers. Over the last decade the total number of articles published in the social sciences has been growing at close to 10% per year. Some of that is from new journals being created, and some from more articles per journal. The revenue source for publishers is shifting from subscriptions paid by institutions such as university libraries to article publishing fees paid for each article published. Thus the desirability of our journal for any publisher depends on the revenue we generate for them, which increasingly depends on the number of articles we produce. When we get to the point where all articles are published open access, the revenue we generate for publishers will depend entirely on the number of articles and any publisher, including Wiley, will require us to publish significantly more articles. Springer, for example, has told us they are focusing their efforts on journals that publish on the order of 100 articles per year. We currently publish 15 to 20 articles per year in SDR.

We have two competing goals: publish more articles and maintain rigor and quality. At 20 articles per year, we need 40-60 reviews completed by reviewers qualified to evaluate and mentor papers if we strive for two to three reviews per article. If we were to try to publish 100 articles per year, we would need 200-300 reviews. This is extremely difficult with a volunteer network of busy editors and reviewers.

The Publications Committee is examining ways to address both goals through two sets of initiatives. The first is the creation of application and education categories for submissions to encourage the broader appeal of the System Dynamics Review to both authors and readers. Broadening the scope of articles also has the potential of broadening the pool of reviewers. The second is to work on the review process to make it more constructive and less burdensome. Both will also take some time to come to fruition, so

it is with some urgency that we recognize that we are preparing for the next publication contract period starting immediately.

In this context, we also need to revisit our Society goals for the journal. We should make sure we do not simply chase the pressure from external publishers to increase the number of articles but clarify what we want to achieve with the journal. Other potential structures for publishing the SDR, such as self-publishing, for example, could give us more control of our output. On the other end of the spectrum, we might also consider Springer's model of journal ownership. Many of Springer's journals that publish on the order of 100 articles per year are owned by the publisher rather than professional societies. Springer pays the editors a salary and controls the review process.

References and Additional Resources Explaining the OA landscape

1. Open Access Explained (8:23 min video), PHD productions

<https://youtu.be/L5rVH1KGBCY>

2. What are your Open Access Options? (article)
Ye Li, 2020, American Chemical Society (ACS)

<https://pubs.acs.org/doi/full/10.1021/acsguide.10503>

3. Working with transitional agreements (article)
Guidelines for evaluating and communicating transitional open access (OA) agreements.
6 October 2020
Jisc (UK body for digital technology and digital resources in higher education)

<https://www.jisc.ac.uk/full-guide/working-with-transitional-agreements>

4. Open Access Directory
The Open Access Directory (OAD) is a compendium of simple factual lists about open access (OA) to science and scholarship, maintained by the OA community at large.

http://oad.simmons.edu/oadwiki/Main_Page

5. Educational materials about OA
This list is part of the Open Access Directory. It is a list of materials for teaching, explaining or marketing open access.

http://oad.simmons.edu/oadwiki/Educational_materials_about_OA

6. Academic Libraries That Spent the Most on Subscriptions
Chronicle of Higher Education
MARCH 17, 2019

Twenty-two public universities and 18 four-year private nonprofit colleges spent more than \$10 million on subscriptions to scholarly journals and other serial titles in 2016-17. Such subscriptions represented nearly a third of all expenditures at academic libraries.

7. Buranyi, Steven. 2017. Is the staggeringly profitable business of scientific publishing bad for science? The Guardian, June 27, 2017.

<https://www.theguardian.com/science/2017/jun/27/profitable-business-scientific-publishing-bad-for-science>

Appendix 1: Details of the Approach the Publications Committee followed from March 2021 to March 2022

1. Identified criteria for choosing a publishing option
2. Developed a list of real options, including:
 - a. renew with Wiley (possibly with contract modifications)
 - b. find other publishers, established and perhaps new (fully open access?)
 - c. self-publication
 - d. others?
3. Decided to compare the two end-of-spectrum options: Wiley and Frontiers

Evaluation Criteria

Absolutes

- Impact Factor: the outlet must allow us to have one, need to keep our current one in the switch. (Clarivate)
- Should not look like a new start – Keep volume numbers in sequence
- Should be indexed in all the places we are currently
- Keep in current category: Management (156/226), Social Sciences: Mathematical methods (19/51)
- Strong preference to keep the name, but if we have to change the name, we must keep history of the publication.

Operations

- No worse than the current ongoing operational headaches regarding journal production
- Prefer something smoother
- Speed of response
- How responsive they are
- Any additional production services beyond what we currently get
- Need good manuscript mgmt system (Scholar One) for both production (review) side and authors
- Support available for production

Financial

- Cost of production, cost to SDS
- Cost to authors
- Revenue
- Support for publication/production

Market

- How does format of pub (trad vs open access) affect how people can access
- Customer relations – how do we get journal in front of people who might be interested
- Visibility

Reputation of the journal

- How does the format/publisher affect the journal's reputation

Reputation of the Publisher

- How affects submissions

List of Options Considered

- renew with Wiley (possibly with contract modifications)
- find other established “traditional” publishers: SAGE, Springer,
- perhaps new (fully open access?) publishers: Frontiers, MDPI (Sustainability, Systems)
- Completely non-traditional publishers: open reviews?
- “self-publication”
- INFORMS or some other joint organization
- others?

Considered several Open Access publishers

- Met with MDPI
- Met with Frontiers
- Investigated Copernicus – too science-focused

Decided to compare two end-of-spectrum options: Wiley vs. Frontiers

Wiley analysis

Reasons we may want to stay with Wiley

- Inertia
- Good academic reputation of Wiley
- Wiley is starting to address author costs by creating partnership agreements to pay or subsidize APCs for OA

Reasons we may want to leave Wiley

- Operational issues
- In the past 10 years, the support system at Wiley (and other established publishers, e.g. Springer) has changed such that editorial and production assistants are not “in-house” but are spread around the globe. There has been a high turnover, which has made interacting with them frustrating at times.
- Uncertainty about how Wiley’s business model is changing with respect to the broader landscape of journal publication to Open Access
- Uncertainty about Wiley’s plans for the future
- Wiley OA fees are high: SDR now \$2950 (members get 20% discount)
- Under OA, there might be financial pressure on SDS to publish more articles
 - Can we? We have a perpetual problem of low number of appropriate submissions and slow review time. This might be a function of our volunteer structure.
- Better options for outreach of SDR through alternative platform

Potential Issues and Options for renegotiation with Wiley

Operational issues
APCs: current rate, member discount (now 20%),
Royalty rate
Editorial support

Open Access Pros and Cons

- Higher citation rate: most studies support this, particularly for hybrid and green OA articles, some dispute it
- More access
- Most OA articles are published in high-income countries
- More impact
- More equitable: yes, for gender
- Question about how to ensure publishing from low-income countries

Frontiers, an example of a fully Open Access publishing platform

Frontiers is a publisher of Peer-reviewed OA journals. It was founded in 2007 with a neuroscience journal and has grown to many journals in diverse fields. The Nature publishing group acquired the controlling interest in the Frontiers publishing group in 2013.

Publishing terms with Frontiers

Their revenue model: they charge a flat per article fee that covers their cost which they estimated in our discussions would be around \$1500. There are no setup fees, no minimum number of articles and no extra fees. It would be a five-year contract, with the paper fee fixed for the first couple of years and potentially adjusting for inflation after that.

They handle communication w/editorial staff, light copy editing, typesetting, iThenticate, scope check, some author services, AIRA Artificial Intelligence Reviewer Access system to identify potential reviewers based on article content, and have many institutional agreements where institution pays or gets discount for APCs (e.g., UCL author publishes for free, MIT author gets 15% off APC).

We would generate any revenue by setting an APC higher than the base (\$1500) cost. We would keep anything above the base per paper fee charged by Frontiers.

Print on demand is available for ~ 20 GBP per issue.

Appendix 2: Publication and Financial History of the *System Dynamics Review*

Publication History

The development of the *System Dynamics Review* began in 1984, led by George Richardson. The first issue was published in Summer 1985. The first volumes, from 1985 to late 1987, were self-published by the System Dynamics Society. Starting in 1987, we contracted with Wiley publishing to produce the journal. In the early years, 1985 to about 1995, the journal was available only in print form. Electronic versions began to be available in the late 1990s for libraries. Online subscriptions became available in the early 2000s and now most of the individual and institutional consumers get only online versions.

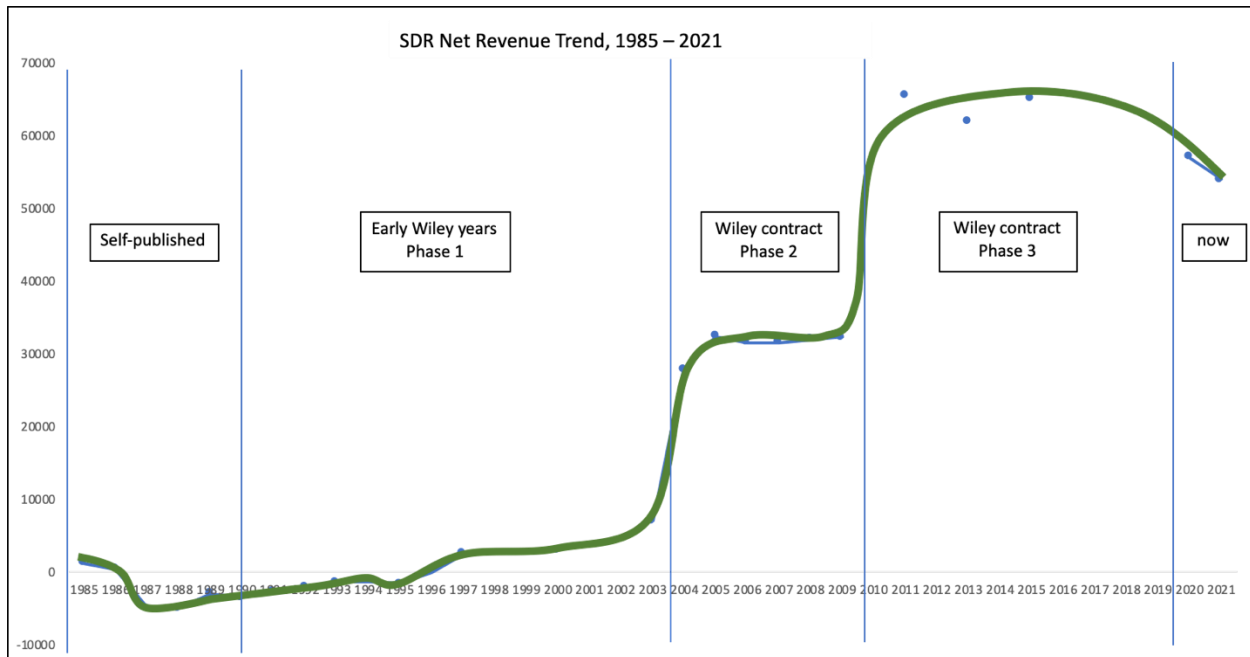
Financial Picture

The Society subsidized the journal for its first 10-11 years from 1985 through about 1996. The journal essentially broke even for the next 6 years (1997-2003) and then generated a significant net revenue for the next 15 years (about 2004-2019). Now it still "makes money" for the Society, but that amount is declining. We are looking at a future when the amount of revenue may not exceed expenses again.

Producing the journal has always generated some income, incurred expenses and relied on significant unpaid labor. In the 37 years SDR has been published, tangible expenses have exceeded or roughly equaled income for about half the time. Because of differences in the way income and expenses were accounted for over time, it is not straightforward to determine the exact numbers in every year. However, the overall relationship is clear. Figure 1 shows the trend in net income between 1985 and 2021. In the late 1980s, income was on the order of \$3,000-\$5,000 while tangible expenses were on the order of about \$8,000. In the 1990s, income ranged from about \$6,000 to \$12,000 and expenses were about \$12,000. From about 2000 to 2007, income began to exceed expenses consistently. For the last 15 years, income has exceeded expenses. Net revenue peaked at a high of \$65,000 in 2015. However, net revenue is now falling (approximately \$57,500 in 2021) and is most likely to fall considerably more in the near future. (Note that these figures do not include any costs of SDS staff time spent on journal-related activities or any accounting for the significant amount of unpaid volunteer time spent on the various production tasks.)

The trend in Figure 1 is primarily a function of two things: the underlying revenue model and the terms of our contract with Wiley. The large increases in 2003-2004 and 2009-2010 represent a change in both the type and cost of subscriptions in the revenue model and the royalty percentage in our contract, shown in Figures 2 and 3.

Currently, income derives from subscriptions, both individual (mostly members) and institutional (mostly academic libraries). In the early years of the journal, revenue came mostly from membership dues and a few institutional subscriptions. Until the early 2000s, individuals and institutions subscribed to individual journals. Since then, publishers have strongly marketed package subscriptions. These package subscriptions have increased in cost over time as features such as digital access have been added. Since we began publishing with Wiley, institutional subscriber income has gradually become much larger than individual subscriptions. In recent years, the largest category of subscription income for Wiley has come from institutional subscriptions to packages of journals.



Expenses for producing the journal include the cost of formatting, typesetting and other tasks for producing a coherent “look” for the journal, printing and distributing the print versions, plus an amount the SDS pays toward support of editorial functions. In self-published years, the amount allocated for this in the budget increased from none (all volunteer labor) to \$8,000. By 1990, it was \$12,000 and by 2009 it had increased to \$20,000. For a number of years, the practice of the Society has been to give the Executive Editor discretion about how best to use this editorial support budget in order to make the journal happen. It can be used for things like computer hardware and software, administrative support, or editing or authoring incentives. In recent years it has been primarily used for honoraria for the Managing Editors, with the remainder providing a stipend for the EE.

Under our publishing relationship with Wiley, SDS expenses for SDR consist of two things: the cost of member subscriptions we pay TO Wiley (which are currently \$30 per print subscription; online only subscriptions are free) and an amount we allocate to our EE for editorial support. Our income FROM Wiley includes a royalty payment from non-member subscription and other revenue Wiley gets from SDR plus a stipend Wiley gives SDS for editorial support. In recent years the amount we receive for editorial support equals the amount we give to the EE for editorial support.

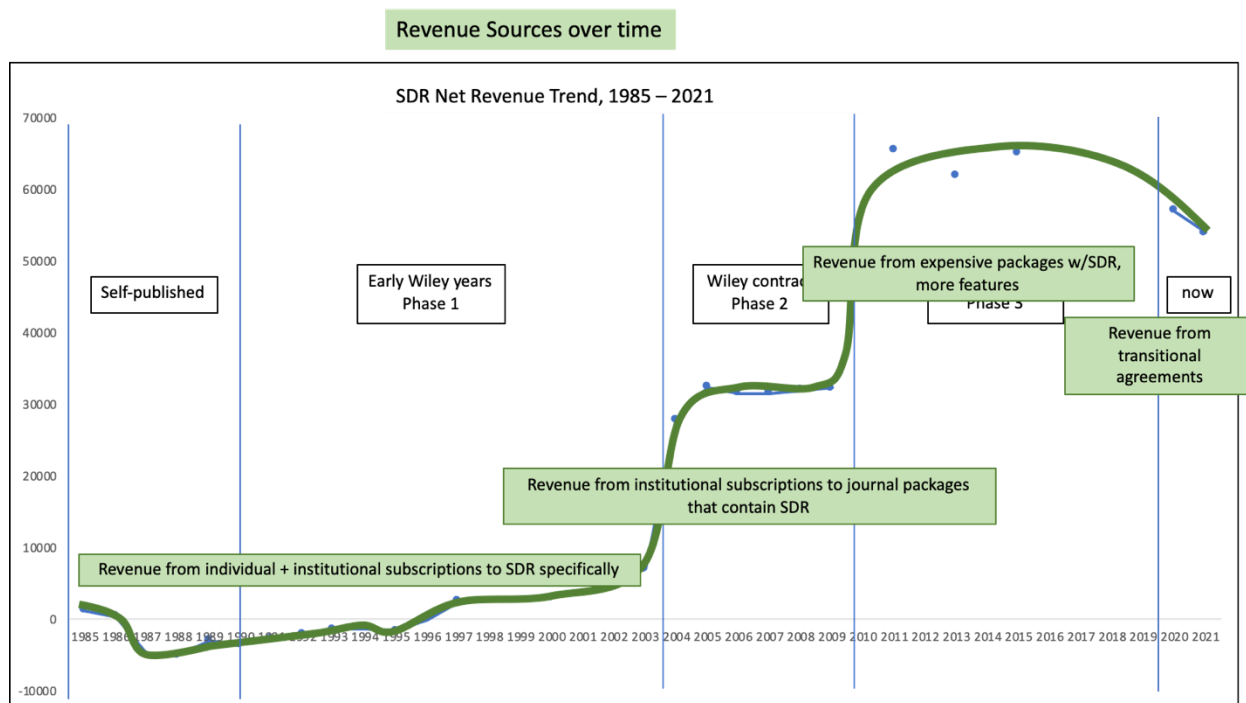


Figure 2. Main sources of revenue from the journal over time

Figure 3. Changes in royalty rate governing amount allocated to SD Society from Wiley revenue [deleted for confidentiality]

How WILEY makes money publishing SDR

Wiley sells subscriptions to their journals to academic libraries and other institutions. Until the early 1990s, libraries subscribed to individual print journals, then publishers began to sell subscriptions to bundles of journals. By the early 2000s, subscription packages included electronic access, shifting to primarily electronic forms in the 2010s. These subscriptions are expensive, with costs rising at 6-7% per year. The Chronicle of Higher Education (2019) reported that 40 public universities and private nonprofit colleges spent more than \$10 million on subscriptions to scholarly journals in 2016, which was nearly a third of all expenditures at academic libraries.” This makes scientific publishing what Steven Buranyi, in a 2017 Guardian article called a “staggeringly profitable” business:

“With total global revenues of more than £19bn, it weighs in somewhere between the recording and the film industries in size, but it is far more profitable. In 2010, Elsevier’s scientific publishing arm reported profits of £724m on just over £2bn in revenue. It was a 36% margin – higher than Apple, Google, or Amazon posted that year.”

He notes that this is possible largely because of the structure of scientific publishing:

“Scientists create work under their own direction – funded largely by governments – and give it to publishers for free; the publisher pays scientific editors who judge whether the work is worth publishing and check its grammar, but the bulk of the editorial burden – checking the scientific validity and evaluating the experiments, a process known as peer review – is done by working scientists on a volunteer basis. The publishers then sell the product back to government-funded institutional and university libraries, to be read by scientists – who, in a collective sense, created the product in the first place.” (Buranyi 2017)

How the SD Society “makes money” publishing SDR

Traditionally, individuals and institutions pay subscription fees to the publisher to read SDR. When we were the publisher, we got all the fees, mostly from member dues. With Wiley, we get part of the subscription fees according to the royalty rate in our contract. Under our 2019-2023 contract, the SD Society gets a 35% royalty for subscriptions Wiley sells either to the SDR itself or to the bundles of journals that include SDR. We thus benefit from the structural changes in Wiley’s revenue model and its aggressive subscription marketing and pricing, which generates the overall rise in the trendline in Figure 1 from about 2000 to 2015. More money for Wiley in the current structure means more money for us. The rise in our revenue during that time also accelerated due to changes in our royalty rate, from 20% in the early 2000s, to 25% in 2004 and 35% in 2010.

So why not just stay with Wiley?

The context and revenue model of academic journal publishing are changing rapidly away from the subscription model (pay-to-read) toward open access (pay-to-publish), which is changing the revenue picture for Wiley and, therefore, for us. At the same time, the maturation of open access publishing is providing new opportunities for sharing our work.

Three pressures are coming together to bring open access increasingly into the mainstream of academic publishing: government and private funding agencies are requiring the research they pay for to be communicated freely to the public, academic libraries are less willing to pay hefty subscription fees for articles their consumers can read for free, and an increasing number of highly regarded fully open access journals is decreasing the early stigma and increasing the perceived legitimacy of publishing in open access journals.

The change in revenue model for traditional publishers shifts the costs of publishing an article from the consumers (primarily through institutional subscriptions) to the authors, through Article Processing Charges (APCs). APCs can range from several hundred dollars to \$3,000 or more and can often be waived in cases of hardship. (See Ye Li 2020 for a great primer on open access).

Who pays Article Processing Charges (APCs)?

APCs are paid by authors. However, this money does not usually come out of the author’s pocket. Funders who require their grantees to publish open access articles expect that grant budgets will include money for APCs. Universities and governments are beginning to provide funds authors can use for APCs. Academic libraries are beginning to shift the money they paid for subscriptions to funds available for researchers at that university to use for paying APCs.

In response, traditional publishers, including Wiley, are developing agreements, called transformative or transitional agreements, with the institutions that were paying subscription fees in which the libraries pay for publishing rather than reading. Authors from those institutions can then publish open access for free. These agreements are meant to be transitional during some period of time when the publisher's revenue model shifts fully from the institutional subscription model to the author Article Processing Charge model. Many of the current transitional agreements in place expire in 2023 or 2025.

How does this affect the revenue the SDS gets from our Journal?

At some point down the line, the publisher's revenue will come fully from APCs paid per article published rather than from subscriptions. SDS will likely get some royalty from that revenue. That revenue is likely to be much smaller than the revenue under a subscription model (see Figure 4). The question isn't whether this change will happen but when.

How this might affect the pressure on the number of articles we publish in SDR

Until now, our revenue from the journal has not depended directly on the number of articles we publish. Under an Open Access model, it will be directly tied to that number.

We may not have the choice to stay with Wiley or may face less generous contract terms

Under the revenue model of the past 15 years, Wiley has made upwards of \$100,000 per year on SDR. That has enabled them to be generous with our contract terms such as the royalty rate and editorial support subsidy. Under an APC-based revenue model, Wiley will make much less on SDR. We publish about 20 articles per year. If the APC remains at about \$3,000 per article, Wiley's revenue will be more like \$60,000 per year from SDR. This is likely to affect what they are willing to give back to us.

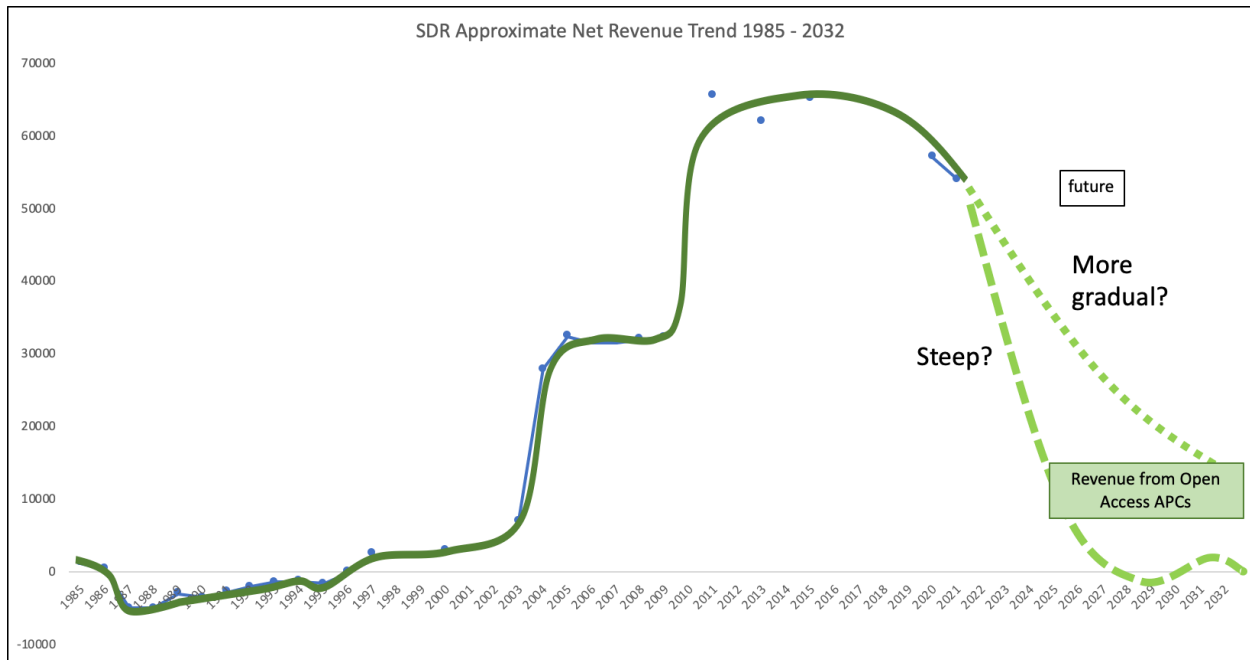


Figure 4. Potential revenue ten years into the future under a fully Open Access revenue model

The bottom line is that this is the new landscape. We have to adapt, whether that is now or in the next five or so years.

Publisher choice is not all about money

Other considerations include the reputation of the publisher, potential for reaching a broad audience, credibility of the publication with tenure and promotion committees, utility for non-academic readers, services the publisher provides, and equity and access for readers and authors.

To fully analyze publishing options, the SD Society needs to consider what we need to achieve with the journal.

APPENDIX 3: Understanding the tasks needed to produce a Society journal, who does them, and who pays for them in the current system

Table 3 lists the tasks required to produce and manage the SDR, who does each task, and who covers the tangible and intangible cost of doing the task now. Some of the tasks are done by volunteer editors and reviewers on their own time and therefore, “paid” by themselves or by their employers if they do it as part of their job (e.g. academics). Some of the tasks are done by paid SDS staff and are thus paid for by the Society. Some of the tasks are done by the publisher and are paid for by their revenue source.

Table 3. General overview of tasks required to produce and manage SDR

Task	Who does it	Who pays for it now
CONTENT CREATION		Mostly AUTHORS and VOLUNTEER EDITORS
Recruit articles	Volunteers, Society staff, organic through word-of-mouth or norms of the field, sometimes publisher through marketing	Individual volunteers donate their time to do this
Write articles	Authors	Individual authors do this on their own time, or on their employer’s time if done during work time
EDITORIAL REVIEW		Mostly the SOCIETY
Manage editorial review process: desk review initial submissions, assign reviewers, summarize external reviews and write decision letter, communicate with authors and reviewers, manage revisions communicate with production process Manage submission and review software platform	Volunteer Executive Editor, Managing Editors Publisher does some of these things	Individual volunteers donate their time to do this, sometimes small stipend from Society for Executive and Managing Editors, Publisher
Review article content	Volunteer reviewers	Individual volunteers donate their time to do this
PRODUCTION		Mostly SUBSCRIBERS
Manage production process: oversee production staff, assign tasks	Publisher	Publisher
Production tasks such as formatting, typesetting, sometimes plagiarism-checking, making digital versions available, producing print versions.	Publisher staff	Publisher
Author services including copy editing, etc.	Publisher, volunteer mentors and reviewers	Publisher, volunteers
DISTRIBUTION		Mostly PUBLISHER
Manage mailing list	Publisher, Society staff	Publisher, Society
Distribute digital versions through publisher platform,	Publisher	Publisher

Maintain digital platform		
Distribute print version	Publisher	publisher
Maintain archive	Publisher	publisher
MARKETING		Mostly Publisher
Notifications of published content (e.g., email, social media)	Publisher, Society staff, Authors	Publisher, Society, individual authors