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“Subscribe to Open” (S2O): An Emerging Model for Transitioning Subscription Journals to Open Access Journals (Postprint)

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Abstract

[Purpose/Significance] There are multiple pathways for journals to transition from subscription-based models to open access models, among which “Subscribe to Open (S2O)” is an emerging model that is increasingly recognized and accepted by traditional publishers transitioning to open access. [Methods/Process] Using literature review and content analysis methods, this study examines the background and development of the S2O model and compares the circumstances of 75 journals from 9 publishers that have adopted the S2O model. [Results/Conclusions] The study identifies potential issues with the S2O model, including attrition of subscribing institutions, budgetary review obstacles for libraries/documentation centers, and poor transparency in subscription fees; solutions include supplementary funding mechanisms and providing usage data for S2O model journals. The S2O open access model is examined from two aspects: providing publishers with a new pathway for transitioning to open access and safeguarding the development of non-profit publishers, thereby offering important insights for open access theory and practice in China.

Full Text

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Abstract

[Purpose/Significance] There are multiple pathways for journals to transition from subscription to open access models. Subscribe to Open (S2O) is an emerging model that is gaining increasing recognition and acceptance among traditional publishers transitioning to open access. **[Method/Process]** Using literature research and content analysis methods, this paper examines the background and development of the S2O model and compares 75 journals from 9 publishers that have adopted the S2O model. **[Result/Conclusion]** The paper identifies potential issues with the S2O model including subscriber attrition, budget review obstacles for libraries/information centers, and poor transparency in subscription costs. Solutions include funding supplement mechanisms and providing usage data for S2O journals. The S2O open access model is proposed from two perspectives: providing publishers with a new pathway for open access conversion and supporting the development of non-profit publishers, offering important insights for China's open access theory and practice.

Keywords: S2O; open access; subscription; library; publisher

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1. Background

Reports indicate that between 1984-2010, the average price of U.S. academic journals increased more than 8-fold, while inflation was only 110%, with journal price increases far exceeding inflation [1]. Since the 1970s, large publishers have dominated academic publishing. As journal prices rose dramatically, even exceeding the growth rate of library acquisition budgets, documentation centers had to reduce the number and types of journals subscribed to. Most academic journals were locked behind “paywalls,” leading to the “serials crisis” [2]. Although the open access movement has accelerated academic exchange and dissemination in recent years [3], in 2019, 69% of journals worldwide remained behind paywalls [4].

In July 2004, Springer launched the “Open Choice” policy, allowing subscription journals to publish papers as open access—so-called “hybrid open access journals” that combine paid subscription content with open access articles. D. Willetts argued that shifting from reader-side to author-side charges could create a more transparent, competitive, and efficient market, likely reducing overall costs [5]. However, the increasing number of hybrid journals has not reduced subscription prices despite additional open access funding, creating a “double dipping” situation where publishers charge both subscription fees to institutions and article processing charges (APCs) to institutional authors [6].

In September 2018, the European Science Association launched a milestone open access initiative called “Plan S,” prompting many small and society publishers to explore business models for transitioning from subscription to open access journals. In addition to direct conversion to open access, other transition

models have emerged. Currently, common open access transition models mainly include “Read and Publish,” “Publish and Read,” “Offsetting Agreements,” and “Subscribe to Open (S2O).”

Among these, S2O is an emerging transition model from subscription to open access journals. Libraries essentially maintain their existing subscription model. When publishers can maintain their existing subscription revenue share, they can publish their journals’ content as open access without requiring authors from subscribing institutions to pay APCs or other additional fees. The rise of the S2O model has promoted a diversified academic communication landscape and provided a new pathway for non-profit academic publishers to transition to open access. As of March 10, 2021, according to publisher website data, 75 journals from 9 publishers worldwide have implemented S2O open access transitions.

2. Literature Review

The concept of the S2O transition model originated in late 2018 and has only gradually developed in the past two years. Therefore, research on the S2O open access transition model remains in its early stages. In foreign literature, T. Mellins-Cohen et al. explored business models for society publishers transitioning to open access, using the American Society for Microbiology as a case study to examine “Publish and Read” pricing models [7]. R. Crow et al. summarized the pilot implementation and operational mechanisms of the S2O model by Annual Reviews [8]. M. Legge discussed how society publishers are re-evaluating “Read and Publish” and “Publish and Read” models during their open access transition, closely monitoring the development of the S2O model [9]. A. Wise et al. introduced 27 business models and strategies for transitioning from subscription to open access journals, emphasizing that the S2O model provides predictable and stable funding streams and may be the most promising open access transition model [10].

In Chinese literature, Zheng Jiancheng et al. analyzed the feasibility of converting academic journals from subscription to open access models from a practical perspective [11]. Zhao Yan et al. examined practical cases of converting library literature acquisition funds to institutional open access journal publishing funds [12]. Zeng Yan et al. introduced the SCOAP3 open access transition model from theoretical and practical perspectives [13]. Zhao Kunhua analyzed the advantages and disadvantages of “offsetting agreements” in open access transition models [14]. Chen Xinlan et al. introduced practical cases of the “Read and Publish” open access transition model [15]. Yu Linxi briefly introduced the Subscribe to Open (S2O) model when examining five global open access models, noting that it belongs to a crowdfunding model that can encourage existing library users to continue subscribing and stimulate collective library action, but pointed out that the model relies on users’ sense of responsibility and self-discipline, potentially leading to free-rider behavior [16]. Additionally, on April 11, 2019, the WeChat public account “OA2020” published the article “Sub-

scribe to Open: Annual Reviews' Open Access Action," first translating S2O as Subscribe for Open [17]. On March 11, 2020, the WeChat public account "Those Things About Library and Information Science" briefly introduced the S2O model implemented by Annual Reviews [18].

In summary, foreign research on the S2O model is just beginning. Compared with international research, China has relatively few reports and studies on the S2O model. Moreover, there are still certain gaps between domestic open access practice and foreign countries. Chinese English-language journals account for a small proportion of the total number of journals, and in practice, there is a lack of mandatory policies for open access transition. Currently, as a transition model from subscription to open access journals, S2O is gradually being recognized and adopted by publishers. This study analyzes the connotation, practical development, characteristics, potential problems, and solutions of the S2O model, aiming to provide important inspiration for China's open access theory and practice.

3. Connotation of the S2O Model

The S2O model is a transition model from subscription journals to open access journals that still belongs to the "institutional subscription" model [19] rather than a true "open access" publishing model. Its characteristic is that institutional users subscribe in the normal manner. Assuming the number of journal subscriptions reaches a predetermined threshold, publishers can publish their subscription journals as open access without requiring authors from subscribing institutions to pay APCs or other additional fees [20-21]. That is, while maintaining existing institutional users, institutional relationships, and existing workflows, the model waives authors' open access publishing APC fees or other additional fees, which helps maintain the academic independence of the scientific community.

The S2O model is essentially also a crowdfunding model, but not a voluntary donation model [22]. The S2O model is not suitable for all publishers, but for publishers whose subscription prices are close to their publishing costs, with small price increases and low overall costs, and who currently rely little on APC income, the S2O model is suitable as a transition model to open access. At the same time, publishers adopting the S2O model do not need additional technical support equipment costs (such as APC management software). Publishers can convert all their subscription journals to open access journals at once, or complete the conversion in stages over a certain number of years. Currently, publishers adopting the S2O model are mainly non-profit publishers or small academic publishers, which can accelerate their open access conversion process. Meanwhile, S2O model journals cover a wide range of disciplines, including not only biomedicine, physics, and mathematics, but also humanities and social science journals from multiple publishers, such as anthropology, politics, law, and political economy.

For subscribing institutions, the complexity of S2O is lower compared to other open access models because institutions only need to pay a single subscription fee. The agreement is renewed annually, and each year the publisher decides whether to provide the journal as open access or subscription based on that year's subscription income [23]. The S2O model relies on the participation of subscribing institutions and uses existing institutional procurement processes to coordinate payments, aiming to obtain stable income with low management costs over time, while allowing publishers to control financial risks. Due to its flexibility, simplicity, low financial risk, no need to change equipment or processes, and avoidance of double charging in hybrid journals, the S2O model has gradually gained acceptance and recognition from subscribing institutions. By adopting the S2O model, subscribing institutions do not need to calculate publishing costs, the number of articles from their institution, or require authors or institutions to pay APCs, saving significant time, financial resources, and energy [24].

4. Categories of the S2O Model

4.1 One-Time S2O Conversion Model The one-time S2O conversion model refers to publishers with multiple publications that can convert all journals at once, with very flexible implementation methods. Assuming Publisher X plans to adopt a one-time S2O conversion for all journals in 2021, Publisher X needs to count the number of subscribing institutions before December 31, 2020. Only when almost all subscribing institutions participate can the critical mass be reached, allowing Publisher X to convert all journals to open access in 2021 for readers to access for free. If the number of subscribing institutions is insufficient, access to content in the following year will be restricted and remain behind the “paywall” (see Figure 1 [Figure 1: see original paper]). Currently, some publishers have adopted the one-time S2O conversion model to convert subscription journals to open access journals. In the practical application of the S2O model, publishers set subscription deadlines according to specific needs. Among them, the European Mathematical Society Publishing House adopted a one-time S2O conversion for 10 subscription journals in 2020 and successfully completed the conversion in 2021 [25]. Pluto Journals announced a pilot program in August 2020 to convert all 21 subscription journals to open access journals in 2021.

4.2 Phased S2O Conversion Model In Table 1, assuming Publisher Y plans to convert 10 subscription journals to open access in phases over 4 years. Assuming an annual inflation growth rate of 3% and a 5% price discount for S2O model journals.

Assuming in Year 1, there are 7 subscription journals and 3 S2O journals, total income: $1000 \times (1+3\%)^7 + 1000 \times (1 - 5\%)^3 = 10,145.50(\text{yuan})$; Year 2, 4 subscription journals and 6 S2O journals, total income: $1000 \times (1+3\%)^4 + 1000 \times (1+3\%)^3 \times (1-5\%)^6 = 10,290.73(\text{yuan})$; Year 3, 0 subscription journals and 10 S2O

$0 + 1000 \times (1 + 3 \times (1 + 3 \times (1 + 3 \times (1 - 5 \times 10 = 10, 381(\text{yuan}).$ *Publisher Y's total income loss in Year 1* : $1000 \times (1 + 3 \times 10 - 10, 145.50 = 154.50$; *Year 2 loss* : $1000 \times (1 + 3 \times (1 + 3 \times 10 - 10, 290.73 = 318.27$; *Year 3 loss* : $1000 \times (1 + 3 \times (1 + 3 \times (1 + 3 \times 10 - 10, 380.90 = 546.37$ (yuan).

Publisher Y implements phased S2O journal conversion over a certain number of years, adjusting its internal business model over time to compensate for small declines in publishing revenue. Uniform pricing or moderate inflation-based price increases may attract sufficient publishers to join, especially for those with lower subscription prices. Annual Reviews completed conversion of 4 journals in 2020 and 3 journals in 2021, planning to gradually complete S2O model conversion for its remaining journals over a certain number of years.

EDP Sciences also adopts a phased S2O model to achieve the conversion from subscription journals to open access journals [27]; Amsterdam University Press converted 5 journals to the S2O model at once, then continued to adopt a phased S2O conversion model for other subscription journals under its umbrella [28].

4.3 S2O 90/3 Model Professor M.P. Eve from University College London believes that not all subscribing institutions endorse the S2O model. He proposed an S2O 90/3 model, assuming that if 90% of institutional users agree to the S2O model, the journal can convert from subscription to open access mode, and participating institutions will receive a 3% discount on their current subscription fees. The principle of the S2O 90/3 model is: assuming subscribing institutions agree to open access, their annual costs will be reduced by 3%; assuming subscribing institutions do not agree to open access, their annual fees will increase by 3%, and the journal will remain in subscription mode [29]. Currently, this theoretical model remains hypothetical, with no publishers actually adopting it.

Assuming Publisher Z: (1) converts subscription journals to open access for the purpose of disciplinary dissemination; (2) has an existing base of subscribing institutions; (3) can obtain 3% revenue from its subscription fees; (4) can achieve a 90% renewal rate and 3% revenue; (5) if Publisher Z's society publications convert to open access, the society need not worry about losing individual members. The implementation steps for the S2O 90/3 model are as follows: (1) Publisher Z makes an offer to subscribing institutions: if they continue to pay subscription fees, they will enjoy a 3% discount, and Publisher Z will convert the journal to open access; (2) The offer is only valid if 90% of subscribing institutions agree in advance; (3) The offer is for a 3-year period, after which Publisher Z will revert to subscription mode unless the subscribing institution community agrees to continue providing open access services; (4) If 90% of subscribing institutions do not agree to open access, they can choose a 3% price increase and continue with subscription mode.

5. Features of the S2O Model

5.1 Maintains Existing Subscription Processes, Simple Transactions and Operations The S2O model utilizes conventional subscription processes and existing library budgets, avoiding investment in transaction payment infrastructure. By using conventional library accounts payable processes, it minimizes disruption to institutional users. The advantage of the S2O model is that it can easily convert all journal content to open access without additional costs. Since the S2O model relies on existing subscription processes and systems, it does not require expensive APC payment software or generate additional management costs, making the model easier to manage. The S2O model is not altruistic and does not require coordination from other institutions, aiming to stimulate collective library action through crowdfunding [30].

5.2 Overcomes High-Profit-Driven Academic Publishing Defects, Maintains Researcher Independence, Wide Applicability Implementing the S2O model differs from the “publish and subscribe” model of open access journals. Although open access journals do not charge institutional subscription fees and allow readers free access, the cost is that institutional authors must pay high open access publishing fees [31]. Driven by high profits, this may sacrifice journal quality, which is the essence of predatory journals. The S2O model can avoid the commodification of papers (article-level transaction) and potential new workflow change costs (workflow costs) brought by APCs [32]. For publishers with high publishing costs, the pay-to-publish model may face uncontrollable cost growth each year; for publishers with low publishing costs, there is no motivation to continue subscriptions after free reading. Both can adopt the S2O model as a transition to open access. Additionally, S2O is a relatively fair model where researchers from subscribing institutions can publish in open access journals without paying APCs, thereby strengthening researchers’ independence in choosing academic publishing pathways.

5.3 “Carrot and Stick” in the S2O Model Many publishers adopting the S2O model face concerns about the “prisoner’s dilemma” and “free riders.” In the S2O model, a journal will only become open access when enough subscribers agree to participate. The S2O model is not fundraising but voluntary behavior; S2O is an option for each subscribing institution when placing orders. In P. Allison’s paper, F. Ellen’s view is mentioned, describing Annual Reviews’ S2O model as a “carrot and stick” policy [26]. The “carrot” refers to the 5% discount of S2O, and the “stick” refers to the fact that if original subscribing institutions are lost and no longer renew, the S2O model will not be implemented, and the journal will not be open access, remaining locked behind the “paywall.” S2O is also not a pure voluntary donation model, as the S2O model can be launched even when not all institutional users renew [26]. The S2O pricing model encourages and takes measures to motivate more institutional users to participate to reach the critical mass, generally 90% of previous subscription users. If too many institutional users cancel their subscriptions, the journal will

revert to the traditional subscription model. The “carrot and stick” provides a flexible and feasible implementation plan for the S2O model.

6. Practice and Development of the S2O Model

6.1 Practice of the S2O Model In recent years, with the development of the open access movement and the launch of Plan S, many transition models have emerged for society publishers converting to open access. Currently, the APC-based “Publish and Read” model is one of the mainstream methods for converting subscription journals to open access journals. The core content of the open access Plan S is to promote the transformation of the business model for academic paper publishing from subscription to “Publish and Read,” replacing subscription fees with APCs [27]. However, the “Publish and Read” model also has certain problems, such as institutional authors being unable to afford high APC fees and the existence of predatory journals. Additionally, each publisher needs to consider its own situation, especially social and non-profit organizations that have established cooperative relationships with subscribing institutions.

In the journal transition process, non-profit academic publishers and small academic publishers lack funds and bargaining chips with documentation institutions, while also needing to consider factors such as publishing culture, financial risk, readers, authors, and institutional users. Therefore, the S2O model, as a convenient and practical journal transition model, has gradually been adopted by many publishers.

In August 2018, at the European Association of Social Anthropologists conference, Bergahn journal editors and Libraria open access program personnel jointly proposed S2O. Participants criticized the APC-dominated open access model while expressing doubts about the sustainability of the S2O model [33]. In October 2018, L. Allen represented Annual Reviews in proposing S2O during “Open Access Week,” arguing that APCs are not suitable for review journals because internationally, authors of review content are generally invited to contribute. Since publishers cannot require an author to write a review, they also cannot require the author or their institution to pay for it. Additionally, review papers are generally comprehensive reviews of research results, and review journals do not fall within the scope of open access funding authorization. Therefore, for review journals, the S2O open access transition model is very suitable [34].

In April 2019, MIT held a workshop titled “Moving the Discipline’s Journals to an Open-access Model” [35]. Participants included representatives from funders, librarians, journal editors, and publishers. Most participants were encouraged and followed some valuable tips proposed by Annual Reviews to further improve the S2O model and identify action points for the coming months. In March 2020, Annual Reviews put the S2O model into practice, allowing non-profit publishers to transition from traditional subscription to open access without increasing library costs or reducing publisher revenue [36].

In summer 2020, the Subscribe to Open Community of Practice (S2O CoP) was

established, consisting of 9 publishers, librarians, and funders interested in the S2O model [21]. By launching S2O CoP, the organization supports publishers in implementing the S2O model, promotes experimentation with the model, and explains the model to university libraries, research funders, and scholars interested in innovative open access methods. Subsequently, S2O CoP conducted online surveys on how different types of institutions and librarians internationally view the S2O model [37].

6.2 Analysis of Publishers and Journals Implementing the S2O Model

Since 2019, 9 publishers have successively launched S2O model pilot projects. The number of pilot journals ranges from 1 to 21. Most publishers encourage authors to choose the most permissive CC BY license to maximize content reuse and distribution. The International Water Association Publishing and Bergahn Journals give authors the right to choose licenses, allowing them to select appropriate licenses based on actual circumstances.

The official websites display 75 S2O journals, but specific catalog information can be retrieved for only 72 journals. Currently, S2O model journals cover disciplines including medicine, biology, mathematics, physics, environmental science, engineering technology, library science, anthropology, law, history, political science, and social sciences. Among them, 25 journals are indexed in Web of Science, accounting for 32.89% of the total; 5 journals belong to the Chinese Academy of Sciences Literature and Information Center Journal Partition Table (upgraded version) Zone 1. The language is primarily English, with 2 bilingual journals and 6 minority language journals (1 German and 5 Dutch). The journals are concentrated in Europe and the United States.

7. Potential Problems and Solutions of the S2O Model

The S2O model's convenient management based on existing procurement processes, lack of APCs, and maintenance of researcher independence have gradually attracted publishers' attention and adoption. However, in the actual operation of the S2O model, potential problems may exist in terms of subscriber attrition, budget review obstacles for libraries/information centers, and poor transparency in subscription costs.

7.1 Potential Problems 7.1.1 Subscriber Attrition

Any open access model carries risks. For the S2O model, a sufficient number of institutional users is a necessary condition. The longer a journal implements the S2O model, the weaker the subscription sales promotion to institutions such as libraries, universities, companies, governments, NGOs, schools, and hospitals, and the less motivation to continue payment, further leading to subscriber attrition. S2O journals require a certain number of institutional users to ensure the model's operation. When the number of institutional users falls below the threshold the publisher can bear, S2O journals will revert to subscription mode, where only paying institutional users can access them.

7.1.2 Library/Information Center Budget Review Obstacles

Libraries face financial pressure from their institutions. Due to the special nature of S2O journals, some libraries can still access journal content for free even without paying subscription fees. With limited or reduced procurement funds, libraries/information centers may prioritize canceling subscriptions to S2O journals. As D. Crotty commented on H. Lisa's blog, "If librarians must choose which publications to cut from the budget, who wouldn't want to cut publications that remain accessible after canceling the subscription?" Librarians find it difficult to convince decision-makers with the answer "we are contributing to maintaining an open access publishing environment." Publishers need to provide sufficient evidence to increase the number of subscribing institutions willing to subsidize others [38].

7.1.3 Poor Subscription Cost Transparency

The public interest requires not only that publicly funded research results be open, but also that the costs, details, and progress of open access transitions be publicly available to facilitate stakeholders' understanding and evaluation of corresponding investments. Since publishers have decision-making power over S2O journal subscription prices and must consider inflation in the pricing process, there may be cases of inflated subscription fees without direct oversight from other institutions. A. Jobmann believes that the S2O model's reliance on existing workflows is also its greatest weakness—that S2O remains an "old-school" subscription model, and without per-article billing, the subscription cost transparency of S2O model journals is poor [20].

7.2 Solutions

7.2.1 Funding Supplement Mechanisms

Although the current S2O model does not rely on other revenue sources, funding supplement mechanisms can be appropriately added when subscription revenue decreases. The S2O model limits publishers' revenue potential, with diminishing expectations for institutional user growth after the initial stage [26]. Consider seeking alternative revenue sources to ensure long-term effectiveness, such as price increases, pay-per-view charges, copyright, member subscriptions, etc., not only to ensure the S2O model but also to raise more funds to compensate for the "revenue gap" [39].

7.2.2 Providing Usage Data for S2O Model Journals

- (1) **Increase Subscribing Institutions:** After adopting the S2O model, users no longer need identity verification systems to access journal content. Off-campus mobile device usage may ultimately fail to identify the user's institution. If institutional user usage declines, even if overall content usage increases due to open access, it may lead institutional users to stop subscribing. Therefore, publishers need to provide detailed usage data and try to offset exiting subscribers by signing new institutional users, identifying which institutions have high usage but have not yet subscribed.

- (2) **Provide Detailed Usage Data for Institutional Users:** Under open access, the level of detail in usage data for S2O model journals is limited. Publishers need clear and accurate data on usage to understand who uses and authors journal content. However, currently generated reports only provide usage information within two years, making it difficult to distinguish between actual article downloads and quick visits to article pages. The International Water Association Publishing collects some data on website visitors and IP ranges of individual journal article visitors. By cooperating with the PSI Registry, it identifies institutions associated with these IP ranges. Initial data provides valuable information for potential institutional users that currently do not subscribe but may subscribe. Through usage data reports, institutional users recognize their institutions' high download and usage volumes, realize the value of their subscription payments, help achieve their institutional goals, and continue supporting the S2O model.

8. Implications for China's Open Access Development

The practice and development of the S2O model have profound implications for the development of open access in China. The author analyzes from two aspects: providing publishers with a new pathway for open access conversion and supporting the development of non-profit publishers, aiming to provide reference for establishing open access policies, mechanisms, and infrastructure environments in China.

8.1 Providing Publishers with a New Pathway for Open Access Conversion University Librarian J. Mason from UC Berkeley believes that “the S2O model provides a feasible pathway for non-profit publishers to convert from subscription to open access. Achieving large-scale journal transition to open access requires multiple strategies, especially considering disciplinary and regional differences in research funding” [40]. Based on traditional subscription payments, publishers with multiple publications can convert all journals at once or phase publications over several years, considering financial risk control, and can also adopt the 90/3 transition model. This diversifies pathways for journals to transition from subscription to open access, providing different solutions for different types of publishers. In the social sciences and humanities, where funding is lacking and funding distribution is unfair, adopting the S2O model is advocated as it does not create the same financial burden for authors as APCs. D. Pieper, head of the German Open Access National Contact Point, points out that De Gruyter's adoption of the S2O model signals to other library science journals and all humanities and social science journals not yet open access, especially for small and medium-sized German journals, as an active and sustainable opportunity to shape open access [41]. Due to its simplicity, low financial risk, and no need to change equipment, the S2O model can replace APCs in some publishers, preserving a rich and diverse academic communication landscape including libraries, journals, societies, publishers, and intermediaries of various

sizes.

8.2 Supporting the Development of Non-Profit Publishers Publishing institutions should choose appropriate open access transition models based on their own circumstances, such as operating costs, whether funding sources are sufficient, and the degree of closeness to academic societies. Non-profit publishers, acting as “academic production value-adders,” are gradually being monopolized by large publishing groups in the academic publishing market, creating an academic communication crisis that requires new academic communication models. E. Nogales, President of the American Society for Cell Biology, states that maintaining non-profit publishers’ subscription revenue sources is important because it enables societies to fund important activities such as public policy work and professional development programs that benefit readers and institutional users [42]. Society publishers that achieve target surpluses financially will bring these funds back into publishing programs and use them to support book publishing, conferences, awards, and other activities. R.V. Zwanenberg, Managing Director of Pluto Journals, states that open access journals will greatly benefit the global academic community and find fair open access solutions for authors. The S2O model may provide a sustainable solution for publishers’ open access, replacing the “publish and read” model that has begun to dominate the open access landscape, thereby reducing damage to the interests of small academic publishers [43]. Therefore, the S2O model provides an effective method for non-profit publishers to transition from subscription to open access.

The characteristics of China’s academic publishing are that publishing institutions are scattered and generally small-scale, mostly existing as journal editorial departments within universities or societies, and journals implement a supervisory sponsorship system. Therefore, most editorial departments rely heavily on their sponsoring units during open access transition, and most editorial departments find it difficult to change without financial support from their sponsoring units. The S2O model provides Chinese university presses and society presses with another new open access path suitable for non-profit publishers, in addition to green and gold open access [44].

S. Laura mentions the view of M. Volker, President of the European Mathematical Society Publishing House, that the S2O model represents a fair and just publishing method that charges no fees to authors. Journal quality determines where authors publish, not cost. By solving funding barriers, researchers can publish papers even without funding [45]. Each publisher needs to consider its own special factors, especially social and non-profit organizations that have established cooperative relationships with institutional users. Supporting diverse ways to achieve open access, the S2O model may be an effective method for transitioning from subscription to open access. When considering various open access models, the S2O model is a promising change model that encourages institutions and publishers to view the S2O model as a feasible option for transitioning to open access. A. Henri, Managing Director of EDP Sciences,

believes that although the S2O model cannot guarantee success in every field or every journal, active participation helps develop the model, and the diversity of open access models ensures researchers' long-term scientific independence [46]. Currently, S2O is a model in its infancy with an uncertain future. Only after several years will we know whether the S2O practice of 2020 marks the success of a new open access transition model. Looking ahead, we will explore how to make S2O a sustainable model that can be conveniently adopted by libraries and publishers, benefiting all stakeholders.

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Note: Figure translations are in progress. See original paper for figures.

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