

# PUBLISHING COOPERATIVES: AN ALTERNATIVE FOR SOCIETY PUBLISHERS

A SPARC Discussion Paper

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February 2006

## Publishing Cooperatives: An Alternative for Society Publishers

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## ACKNOWLEDGMENTS

The author thanks the Scholarly Publishing and Academic Resources Coalition and SPARC Director Heather Joseph for funding the research on which this paper is based. The author also thanks the following people for their feedback on previous drafts of this paper: Karla L. Hahn (Director of the Office of Scholarly Communication, the Association of Research Libraries), Bruce L. Anderson (Professor Emeritus, Business Management and Marketing, Cornell University), Brian M. Henahan (Senior Extension Associate, Department of Applied Economics and Management, Cornell University), Howard Goldstein (Senior Consultant, SPARC Consulting Group), John Willinsky (Professor, Language and Literacy Education, University of British Columbia), Rebecca Simon (Assistant Director for Journals Publishing, University of California Press), Tom Moritz (Associate Director for Administration of the Getty Research Institute and Chief, Knowledge Management), David Prosser (Director, SPARC Europe), Rick Johnson (SPARC Senior Advisor), and Alison Buckholtz (SPARC Communications Consultant). Their insightful comments have strengthened and clarified the presentation of the proposal set forth here. Any errors of fact or misinterpretation that remain are the sole responsibility of SPARC and the author.

SPARC thanks James P. McGinty, Vice-Chairman of the Cambridge Information Group, for generously extending access to the *Ulrich's Periodicals Directory* via [ulrichsweb.com](http://ulrichsweb.com) for the purpose of the market analysis provided in this paper, and Laurie Kaplan of R.R. Bowker for providing guidance and support in the use of *Ulrich's*. Responsibility for the construction of the search queries and interpretation of the results remains that of the author.

## ABSTRACT

This SPARC discussion paper proposes a federation of discipline-specific publishing cooperatives as an alternative operating model for society publishers. Publishing cooperatives would be owned, capitalized, and controlled by nonprofit publishers as users, with publishers sharing risks and benefits proportional to their use of the cooperative. Such publishing cooperatives can provide a scaleable publishing model that aligns well with the values of the academy while providing a practical financial framework capable of sustaining society publishing programs and supporting their transition to non-subscription funding models.

## EXECUTIVE SUMMARY

This paper makes three points:

- 1) The ability of scholarly and scientific societies to continue publishing journals has significant financial implications for universities, their libraries, and for the societies themselves;
- 2) Most society publishers face structural constraints—including insufficient market leverage, low tolerance for risk, undercapitalization, and lack of specialized business expertise—that prevent them from sustaining themselves effectively in an increasingly competitive market for academic journals, thus jeopardizing the sustainability of society publishing in the long-term; and
- 3) Publishing cooperatives have the potential to provide a powerful financial and organizational model that will allow society publishers to serve their dual imperatives of honoring their missions while remaining financially sustainable.

## I. INTRODUCTION

### 1.1 The Importance of Society Publishers

Societies and other nonprofit organizations publish over half the peer-reviewed scholarly and scientific journals published today. However, while the number of such journals continues to grow in absolute terms, the proportion of nonprofit journals is declining relative to those published by for-profit firms. This gradual shift from self-publishing has profound implications for society publishers and—given the price differential between nonprofit and for-profit journals—for libraries and their host institutions as well. The centrality of societies to publishing peer-reviewed research, and the economic implications of a continued shift toward commercial publishers, make addressing the future of society programs a prerequisite to effecting meaningful change in the academic journal publishing system.

Many society publishers seek a model that allows them to retain control of their publishing programs while remaining (or becoming) financially self-sustaining. Such publishers face considerable challenges maintaining their operations in an increasingly tight and competitive market. For many journals, aggressive competition for market share, perennially tight library budgets, and the complexity of managing a transition to electronic distribution have led to annually slight—but cumulatively critical—declines in institutional library subscriptions.

At the same time, societies are struggling to retain members while under pressure to transition to electronic publishing and to explore new pricing and access models. In this market context, publishing cooperatives offer a flexible collective resource capable of helping society publishers respond to the financial and organizational challenges they confront. Publishing cooperatives will help small society publishers sustain themselves under current subscription models and can support potential migrations to new business and access models.

### 1.2 Structural Constraints of Society Publishers

The ability of society publishers to compete effectively in a market dominated by large commercial publishers, and to adopt alternative business models that support both their mission and financial sustainability, has been limited by structural constraints inherent in the society publishing operations themselves:

- The vast majority of society and nonprofit publishers run independent and very small journal publishing operations. Over 97% of society publishers publish three or fewer journals, with almost 90% publishing just one title. Individually, these societies enjoy little market presence when disseminating their content and wield slight economic leverage when purchasing technology, printing, and other publishing services.
- Unlike commercial publishers, nonprofits do not have ready access to equity markets and other sources of capital. Nor do most societies have substantial endowments or capital reserves. Given the difficulties nonprofit publishers face in raising capital, the investments required to meet the demand driven by the rapid growth of the journals market and the demand for digital dissemination put society publishers at a disadvantage vis-à-vis for-profit publishers.

- Publishing societies naturally devote more resources to their core competencies in the publishing value chain—content acquisition and certification—than on business planning and publishing support functions. This lack of publication management resources becomes especially critical as the transition to electronic dissemination accelerates and the efficacy of traditional subscription models declines for many small publishers.
- Most societies—both by design and necessity—act as conservative stewardships, rather than as risk-taking entrepreneurial organizations. This attitude, coupled with the resource scarcity already described, often amplifies the perceived risk of change, including migration to a new publishing financial model.

Given their relatively small size, low risk tolerance, undercapitalization, and lack of business management depth, individual society publishing programs rarely command the resources necessary to compete effectively under current business models, let alone to evaluate, design, and implement alternative publishing models. Any proposal encouraging society publishers to adopt new business models—including a potential transition to open access—must be both economically compelling and recognize the structural constraints described above. Advocating alternative business and access models while failing to appreciate and mitigate the real risks that publishing societies face could result in an accelerated exodus of societies from self-publishing to less academy-friendly (and significantly more expensive) publishing channels.

### 1.3 Publishing Cooperatives: A Comprehensive & Scalable Solution

Federated publishing cooperatives—with shared services cooperatives supporting multiple subject-oriented satellite cooperatives—offer an alternative operating model for society publishers. Publishing cooperatives can provide a scaleable publishing model that aligns with the ethos of learned societies while providing a financial framework capable of sustaining society publishing programs.

Publishing cooperatives—owned and controlled by nonprofit publishers—will allow those publishers to act collectively to compete more effectively. Society publishers will gain multiple benefits through participation in cooperatives, including:

- Lower costs, via economies of scale and increased bargaining power, for a comprehensive set of publishing services;
- Increased market visibility and leverage to compete against for-profit publishers under current subscription models;
- Risk analysis and mitigation to support transitions to new business and access models;
- Professional business management expertise and a broader strategic perspective; and
- Access to capital to allow a greater role in serving growing market demand.

Publishing cooperatives will also be in the best interests of universities, academic libraries, and other stakeholders in scholarly and scientific publishing. Cooperatives will:

- Provide societies with an alternative to publishing through commercial channels and slow the exodus of society publishers to commercial outsourcing. The substantial price differential between self-published society journals and society-sponsored journals outsourced to for-profit firms makes an alternative channel attractive to libraries and other stakeholders.
- Expand the capacity of societies to meet the growing demand for new journals and scholarly communications channels, rather than ceding that expansion to for-profit publishers. Whether these new society journals are available open access or simply at reasonable prices, the result would still be preferable for universities and their libraries.
- Offer a framework that makes a transition to new funding and access models more practically feasible. Although the cooperative model does not eliminate the barriers to open access and/or new funding models, it can provide society publishers the wherewithal to address such issues constructively.

This paper focuses on how publishing cooperatives could address the issues confronting nonprofit publishers of scholarly and scientific journals. However, the model also supports the publication of monographs, conference proceedings, and gray literature, as well as new scholarly publishing channels as they evolve. Publishing cooperatives might also provide an attractive alternative publishing channel for other nonprofit publishers as well, including non-governmental organizations (NGOs) and university presses.

## II. THE MARKET CONTEXT FOR SOCIETY PUBLISHERS

### 2.1 The Mixed Market for Journals

Nonprofit publishers operate in an increasingly competitive environment, including a market characterized by significant ownership concentration, dominant commercial publisher market share, flat library acquisitions budgets, and aggressive commercial publisher pricing and demand leverage strategies. These market factors make it increasingly difficult for society publishers to compete successfully on their own.

The scholarly and scientific journal market comprises both for-profit and nonprofit publishers, each group with its own organizational imperatives.<sup>1</sup> Understanding the composition and dynamics of this mixed market will help us understand the pressures that societies face and identify the underserved and unserved market needs that publishing cooperatives can address. It will also help us appreciate the economic significance of society publishers for academic libraries and other stakeholders.

An analysis of the academic journals market<sup>2</sup> reveals the following:

- Fueled by the expansion of scientific research, the number of scientific and scholarly journals continues to grow at a steady rate of 3.25-3.50% per year.<sup>3</sup> On the current base of some 20,000 active peer-reviewed journals, this translates into a doubling in the number of journals approximately every 20 years.<sup>4</sup>
- Commercial publishers now play a role in publishing over 60% of all peer-reviewed journals, owning 45% outright and publishing another 17% on behalf of nonprofit organizations. Nonprofits self-publish the remaining 38% of peer-reviewed journals (see *Figure 1*).

The market's current complexion reflects a gradual shift over the past century toward greater commercial publisher participation. Commercial journal publishers actively seek to add society-sponsored journals to their lists in response to market demands for more comprehensive digital aggregations of journal content. While it is difficult to gauge the rate at which nonprofit publishers are abandoning self-publishing in favor of commercial co-publishing or outsourcing arrangements, it is clear that many societies are finding such an alternative attractive. If current market trends continue, by 2025 for-profit publishers will account for almost 70% of a projected universe of 38,000 journals.

- The per-page prices for commercially owned journals average four to five times higher than prices for journals published by societies, and the prices for journals published by commercial publishers on behalf of societies average three times those of journals published by the societies themselves (see *Figure 2*).<sup>5</sup> Further, prices for journals published by for-profit publishers have increased at a faster rate than those of self-published society journals.<sup>6</sup>
- With college and university library serials budgets remaining essentially flat for the past 20 years, the rapid climb in academic journal prices has forced institutions of all types and sizes to cancel existing subscriptions and to forgo new titles.<sup>7</sup> Larger publishers have the market and pricing power to survive these market dynamics, while small nonprofit publishers do not.

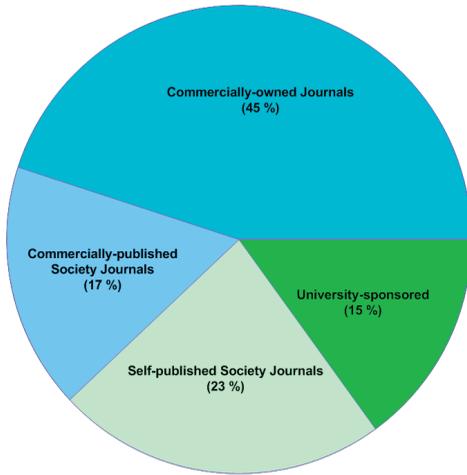


Figure 1: Academic Journals Market, 2005

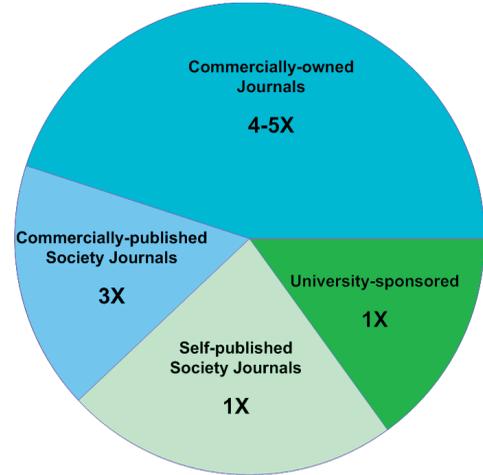


Figure 2: Relative Price per Page by Publisher Type

- Although self-published nonprofit journals represent almost 40% of the total number of titles, commercial publishers control a disproportionate market share in terms of revenue. Six major commercial publishers, responsible for approximately 30% of all peer-reviewed titles, account for over 60% of the market's total revenue. In the science, technology, and medicine (STM) market, nonprofit publishers claim just 18% of revenue, and only the largest—the American Chemical Society—can begin to compete with for-profit publishers.<sup>8</sup>
- The vast majority of self-publishing societies run very small journal publishing operations. Almost 90% of such societies publish a single journal and over 97% publish three or fewer journals (see *Figure 3*).

While the for-profit segment comprises a relatively small number of large commercial publishers, the nonprofit segment represents a very large number of mostly small publishers. The commercial concentration of journal ownership has increased dramatically as a result of corporate mergers and acquisitions coupled with commercial publishers launching a larger share of new journals.<sup>9</sup>

This ownership concentration allows large publishers to bundle journals in aggregations that offer libraries discounts relative to the prices of individual journals but limit a library's ability to cancel individual titles. Bundled contracts capture a disproportionate share of library budgets and reduce the funds available to purchase journals from smaller publishers with little market power.

- Approximately 40% of peer-reviewed journals remain available only in print editions. As most commercial publishers have already moved to online distribution, this suggests that several thousand society publishers have yet to move to online content distribution.<sup>10</sup> A variety of factors have slowed society publisher migration to online distribution, including cost issues, fear of losing society members by decreasing the perceived value of their publication benefit, and concern for undermining existing print income streams.

As this market description indicates, society publishers face considerable hurdles in competing with large commercial publishers for available institutional budgets. Additionally, nonprofit publishers face inherent structural constraints that hinder their ability to overcome the market barriers outlined above. Despite frequent editorial excellence, many small society publishers do not have the resources to compete in this market on their own.

## 2.2 Pursuing Society Missions in a Mixed Market

Those nonprofit publishers that do compete effectively in the mixed market for academic journals typically display the same traits of effective and efficient business operation as for-profit publishers. These include an entrepreneurial approach, strategic awareness, competitive response, and attention to profitability. However, for society publishers, participating simultaneously in the market economy and the intellectual commons of the university, profit-seeking business imperatives are neither wholly appropriate nor wholly irrelevant.<sup>11</sup>

Commercial publishers have a responsibility to generate profit and build value for their shareholders. For society publishers, however, profit maximization is not the principal goal. Publishing societies typically operate under charters dictating that they promote research and scientific advancement in their field, and a society's publications typically represent the most visible manifestation of the organization's mission beyond its membership. Although income surpluses generated by journal publishing may provide an important source of non-dues revenue for some societies—for many organizations publishing represents the second largest source of revenue after dues—few societies initiate journal publishing programs in order to generate profit. Most surpluses represent an incidental result, rather than the intent, of the publishing program.

Society publishers must balance their distinctiveness as nonprofits against the need to survive financially. Pursuit of a profit-maximizing strategy can result in pricing and market practices that compromise the society's mission by limiting its ability to disseminate research broadly.<sup>12</sup> At the same time, competitive market pressures require society publishers to operate efficiently to ensure financial sustainability. Institutional subscription fees that originated to partially offset publication costs and cross-subsidize mission-related services have become core revenue sources critical to many societies' survival.

Publishing cooperatives will allow society publishers to reconcile efficient market performance with serving the organizations' missions. Publishing cooperatives assume that participating publishers seek a set of benefits, both tangible and intangible, not simply the highest possible return on their investment. These benefits might include production cost

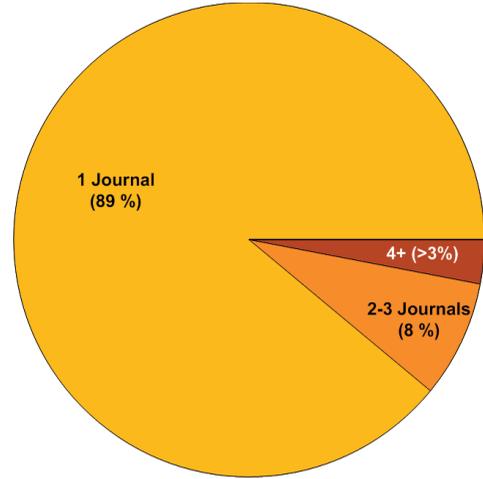


Figure 3: Average Journals per Society

reductions, access to otherwise unavailable business management services and resources, increased market presence and access to markets, risk sharing and mitigation, and alignment with the society’s mission and nonprofit ethos—as well as an adequate and reasonable return on the capital invested.

## 2.3 Structural Constraints of Society Publishers

The ability of society publishers to compete effectively in the mixed market for academic journals, as well as the capacity of societies to adopt alternative business models, have been limited by structural constraints inherent in the society publishing operations themselves.

### 2.3.1 Low Market Leverage

The vast majority of society publishers run very small journal publishing operations. The small size and limited capacity of these operations place them at a disadvantage relative to larger publishers in terms of market leverage, business expertise, access to capital, and competitive response.

Individually, small societies enjoy little market presence when disseminating their content, rendering it difficult for them to compete effectively in a rapidly changing, highly competitive, subscription-driven market. The consolidation of large commercial publishers, and the cumulative effect of their pricing and bundling practices, has led to decreased market access for society publishers.

Large commercial publishers, controlling thousands of journal titles, exercise greater market power than individual small societies publishing one or two journals. The effect of this imbalance becomes more pronounced in an online distribution environment where large electronic journal bundles absorb a disproportionate share of acquisitions budgets. A number of nonprofit initiatives—including the Association of Learned and Professional Society Publishers (ALPSP) Learned Journals Collection, BioOne, and Project MUSE—bring together journals from multiple society publishers to afford a collective market presence. Many society publishers, however, continue to compete on their own or gain only a diluted market presence via large multi-subject online aggregations.

Besides a limited market presence, society publishers also exert slight economic leverage when negotiating printing and digital distribution services, marketing and sales agency relationships, and other publishing services. Some nonprofit organizations—including university presses and society federations—seek to provide scale economies for negotiating and purchasing not available to small publishers acting on their own. Other nonprofit initiatives focus solely on providing online distribution services (see Section 3.6). Despite the best efforts of these current collective purchasing channels, many society publishers remain unserved.

### 2.3.2 Lack of Business Expertise & Staff Resources

Publishing societies naturally devote more resources to their core competencies in the publishing value chain—content acquisition, certification (typically via peer review), and other editorial functions—than to business planning and publishing support activities. Societies with sufficient staff dedicated to business-related issues are the exception rather

than the norm. This lack of in-house resources becomes especially critical as the transition to electronic dissemination accelerates and the efficacy of subscription models declines for many small publishers.

The mission focus of society publishers, compounded by a lack of deep in-house publication management resources, can lead to a somewhat passive management of institutional subscription bases. Although society member subscriptions typically remain stable, in many cases member dues allocations barely cover the incremental cost of printing and delivering the journal. In these instances, societies rely on institutional subscriptions to sustain journals financially.<sup>13</sup> In a market where new subscriptions to a mature journal are quite low, even a seemingly high institutional renewal rate of 95% can result in a potentially ruinous decrease in revenue over time.<sup>14</sup>

At the same time, few small society publishers have the operational resources necessary to migrate confidently to online publishing. Such a transition requires that a society assess the implications of online access on its member base, implement a rational and equitable institutional pricing model, and understand the direct and indirect returns on the new costs incurred. A lack of resources to undertake such an assessment will increase a society's understandable reluctance to change the basis of its journal income.

Given that most societies do not have the resources to manage their current subscription model as actively as they might like, it should come as no surprise that few societies command the resources to develop alternative funding and access models on their own. Even societies sympathetic to open access and other liberal content access policies will find them difficult to implement without the resources to assess and manage the financial risk involved.

### 2.3.3 Low Tolerance for Risk

Most societies—both by design and necessity—act as conservative stewardships, rather than as risk-taking entrepreneurial organizations. Due in large part to their nonprofit cultures, volunteer leadership, and lack of capital reserves, publishing societies are often poorly positioned to assume risk, whether real or perceived. Coupled with the lack of business management resources already noted, this often amplifies the risk perceived in implementing change in response to market forces. Yet, a society that manages risk solely by avoiding or minimizing it may forgo opportunities to strengthen its publishing operations in the long term by better positioning itself to serve members, fulfill its mission, and remain financially self-sustaining.

### 2.3.4 Undercapitalization

Unlike commercial publishers, nonprofits do not have ready access to equity markets and other sources of capital. Although many societies have modest endowments or reserves, these are rarely of a scale sufficient to fund substantial investments in new products or publishing technologies. Given the difficulties nonprofit publishers face in raising capital, the investments required to meet the market demand for new journals and to keep pace with ever-evolving publishing technologies put society publishers at a strategic disadvantage relative to for-profit publishers.<sup>15</sup>

The inability of nonprofit publishers to accommodate the rapid increase in the overall scope and scale of scientific research is one reason behind the increasing participation of commercial publishers in the academic journal market over the past 50 years. Only large and well-funded societies can readily assume the financial risk of launching new journals.<sup>16</sup> The ability of society publishers to capture a larger proportion of the growing journals market will depend, in part, on societies having access to adequate capital to launch new journals. Given the price differentials between society and commercially published journals, the ability of societies to launch new journals will have significant financial implications for universities, libraries, and other research consumers.

The ongoing shift to digital dissemination, value-added content, and enhanced online service functionality has also put pressure on nonprofit publishers to incorporate new technologies into their operations.<sup>17</sup> Because such publishing technologies are resource intensive—they can entail significant initial development or acquisition costs, ongoing operating and staff training requirements, and frequent replacement and upgrade cycles—they have also given for-profit publishers another competitive advantage over nonprofits. Large commercial publishers invest considerable sums to develop and maintain their electronic journal systems, and few nonprofit publishers command the capital required to compete with this investment.

### III. PUBLISHING COOPERATIVES AS AN ALTERNATIVE MODEL

The structural constraints described above, along with the strategic barriers to competition such as ownership concentration and price bundling, make it difficult for society publishers to survive on their own. Publishing cooperatives will allow small society publishers to operate collectively to overcome both structural and strategic disadvantages and to address the inefficiencies and imperfections in the market for academic journals.<sup>18</sup>

#### 3.1 Basic Cooperative Principles

Cooperatives, as a special type of corporation owned and controlled by the members that use their services, have existed formally since the industrial revolution. Typically, cooperatives have formed to promote the shared economic welfare of individuals and groups that have determined that they can wield more market influence collectively than individually.<sup>19</sup>

Conventional businesses return net income to investors on the basis of their common equity investment. In contrast, cooperatives return net income (and other benefits) to members based on their patronage or use of the cooperative's services. Thus, cooperatives differ fundamentally from non-cooperative enterprises in that they exist not to maximize their own profits, but to promote the economic success of their members. This economic linkage creates reciprocal incentives for the cooperative to serve its members and for the members to patronize the cooperative.

Several principles guide virtually all cooperatives:<sup>20</sup>

- **Member ownership:** Members contribute equitably to the capital of the cooperative and finance the cooperative by transacting business with it. The cooperative gets operating capital by retaining a portion of its net income.
- **Member control:** Members exercise collective control over the cooperative via an elected board of directors and democratic participation. Most cooperatives operate on a one-member, one-vote basis, though some permit a limited proportional vote based on a member's patronage level. The cooperative's governing board sets policies, manages the distribution of member benefits, and hires and oversees professional management to handle day-to-day operations.
- **Member-benefited:** Cooperatives provide benefits to members as users, not investors. Unlike investor-owned firms, which distribute returns in proportion to the amount invested, cooperatives distribute the financial benefits to members in proportion to their use of the cooperative.

Nonprofit publishers will support a cooperative to the extent that they perceive it as an effective agent representing their interests. A successful cooperative is essentially a projection of the economies and interests of its individual members. These strong economic, philosophical, and cultural linkages allow cooperatives to integrate member economic activity and gain efficiencies and scale economies that conventional nonprofit business models can seldom

match. Over time, the economies of the members and the cooperative may even evolve and integrate to form a single, unified system.<sup>21</sup>

Cooperative organizational structures have proven readily adaptable and able to address the requirements of a variety of market sectors. Although few publishing cooperatives provide precedents,<sup>22</sup> the cooperative model appears well suited to the needs of the nonprofit section of the academic publishing market.<sup>23</sup> Cooperatives in other industries sometimes combine both social and economic objectives, which suggests that the cooperative model should be well suited to balancing society publishers' twin imperatives of financial sustainability and mission fulfillment. Publishing cooperatives will be governed by principles similar to those guiding cooperatives in other market sectors. Here, too, the cooperatives will be owned by their members and the financial benefits of cooperative membership will be distributed to members in proportion to their use of the cooperative.

For society publishers, cooperatives can offer significant benefits over conventional business models. In the absence of market dysfunctions, an efficient market would obviate the formation of cooperatives. In journal publishing, however, the oligopolistic market power wielded by a core group of large commercial publishers, combined with the structural limitations of society publishers, prevents societies from competing effectively to sustain their journals financially. The collective power of cooperatives will help nonprofit publishers counter these market constraints and imbalances.

Publishing cooperatives will typically have defined or closed memberships; that is, membership will be limited to organizations that fit the cooperative's member profile, with the type and (perhaps) number of members determined by the capacity of the cooperative's operations. Membership would not need to be permanently limited. If the cooperative were to expand its scope or capacity, it could seek participation from publishers outside the initial membership. As we will discuss below, defining and maintaining a membership with mutual interests can be critical to a cooperative's success and long-term organizational resilience.

### **3.2 Publishing Cooperative Structures**

Options for structuring a publishing cooperative range from a unitary structure to networks of discrete yet interrelated cooperatives. Given the lack of publishing cooperative precedents, no single structure can yet be advanced as demonstrably superior to another. However, the experiences of cooperatives in other market sectors makes it possible to suggest which cooperative structures might be appropriate for society publishers.

For a cooperative to succeed, its members must perceive it to be committed to their best interests and to be an effective agent acting on their behalf. Therefore, cooperatives with relatively homogenous memberships are more likely to succeed than cooperatives with heterogeneous memberships. These mutual interests will allow publisher cooperatives to develop strong economic linkages with their members—for example, via patronage refunds, cross-subsidies, and risk pooling—serving their members' collective interests. The more closely coordinated and integrated the economic linkages of the publishers and the cooperative, the more efficient and useful the cooperative relationship will become.

This suggests that cooperatives comprising publishers from cognate disciplines, and sharing similar editorial experiences and the same niche publishing environment, will experience greater member cohesion and generate stronger member commitment than cooperatives with members from disparate fields.<sup>24</sup> Defining a cooperative's field of membership to maintain member compatibility also supports the cooperative's marketing function by yielding coherent content aggregations and by supporting the manner in which researchers use online journal collections.

At the same time, individual discipline-specific cooperatives are unlikely to have sufficient scale to offer shared publishing services as cost-effectively as larger organizations comprising multiple affiliated cooperatives. The need to accommodate publishers from multiple fields with discipline- or geographically specific needs, to provide a comprehensive suite of publishing services, and to support a scaleable cooperative network, all combine to suggest a federated cooperative structure. Federated cooperatives are organizations whose membership comprises other cooperatives rather than individual publishers. By supporting multiple affiliated or satellite cooperatives, federated cooperatives can facilitate intercooperative coordination to provide a greater range of services more cost-effectively.<sup>25</sup> By providing a model that can be replicated across multiple disciplines, organization types, and geographic regions, federated cooperatives can create a network of publishing cooperatives, with individual satellite cooperatives within the network remaining autonomous.

*Figure 4* illustrates how federated publishing cooperatives can support an extensible network of interrelated cooperatives. Federated cooperatives can be extended by accreting multiple satellite cooperatives—for example, clusters of cooperatives representing cognate disciplines—further extending scale economies and market power. A federated structure will allow satellite cooperatives to share scale resources while maintaining equity allocation and content distribution policies that serve their specific requirements. The satellite cooperatives will also provide a communication channel to the member publishers that will increase the transparency of the federated cooperative's operations. A federated structure can thus support both local accountability and centralized operating efficiency, both of which are important to maintaining member commitment and loyalty.

Satellite cooperatives could collect the member equity investments necessary to purchase membership in the federated shared-services cooperative. A satellite would then adopt member equity allocation and redemption policies—based on the model(s) supported by the federated cooperative—and elect a board of directors to manage the satellite's interests, both independently and vis-à-vis the federated cooperative. In addition to providing shared services, the federated cooperative could manage the equity accounting and redemption process for the satellite cooperatives, including management of a satellite's finances.

Relying on a larger federated cooperative to provide publishing, bargaining, and marketing services would allow satellite cooperatives to adopt a relatively simple administrative structure. This would permit them to form more quickly and to focus their energies on the patronage commitment and governance issues critical to the cooperative's success. Lowering the barriers to launching satellite cooperatives would also increase the economies of scale available to the federated cooperative with which they affiliate. At the same time, a federated

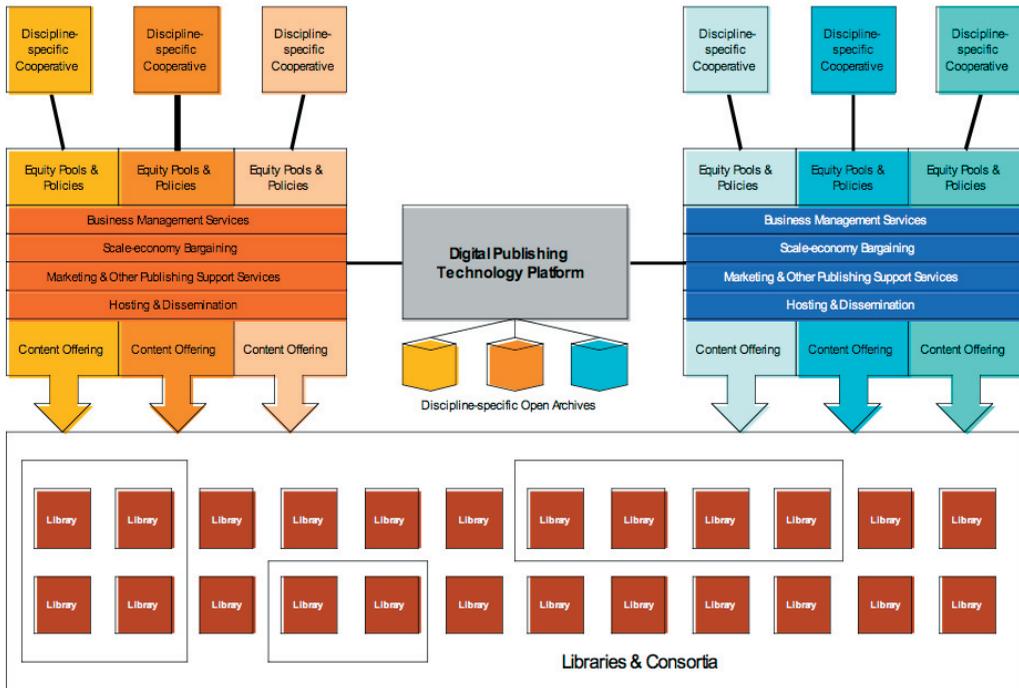


Figure 4: Federated & Scalable Publishing Cooperative Model

cooperative can provide new satellite cooperatives with organizational models and communications support to reach and educate potential participating publishers.

Besides specific disciplines, membership in satellite cooperatives can be defined in a variety of other ways, including national or regional groupings, organization types (e.g. NGOs or university presses), or other logical affiliations. Direct government subsidies play a greater role in scientific and scholarly publishing in some countries than in others, and centralized or coordinated national publishing initiatives might lend themselves to country-specific publishing cooperatives. Further, publishers of journals in local languages might consider the benefits of local collaboration to outweigh (or complement) the advantages of discipline-specific satellite cooperatives. Whatever their basis, the publishers’ mutual interests and shared characteristics will lend a greater sense of common purpose and ease the launch and governance of the cooperative.

### 3.3 Publishing Cooperative Services

Nonprofit publishing cooperatives can offer a range of functions that address the needs of their members. These functions can include providing shared services, including strategic planning and management; adding value to publisher content; bargaining, negotiating, and purchasing on behalf of members; marketing, selling, and distributing publisher content; and grant-seeking and administration.<sup>26</sup> A federated cooperative structure would allow multiple cooperatives to collaborate to provide a wide range of capital-intensive services cost-effectively.

### 3.3.1 Shared Services

The shared-services component can provide publishing services at a lower cost than the cooperative's members could achieve themselves, and can also deliver resources that society publishers often cannot afford individually. The services a cooperative might efficiently provide include strategic planning; business and publishing management; capital budgeting support; copyediting and other editorial services; online submission and peer review systems; digital distribution platforms; legal, finance, accounting, and other professional services; customer service and support; subscription and membership management; and virtually any other publishing support service that the participating publishers may require. Depending on the cost-effectiveness and efficiency in each case, these services could be performed by a cooperative's staff, delivered by other federated cooperatives, or contracted from third-party providers. The sourcing of services will be a matter of the cooperative's size and scale and might change over time to serve evolving needs.<sup>27</sup>

### 3.3.2 Bargaining & Purchasing

The cooperative can provide bargaining and purchasing assistance for any services that the cooperative cannot provide as efficiently itself. For example, the cooperative can negotiate for printing and print and digital pre-press services, copyediting and pre-press services, retrospective digital conversion, and other publishing services. The cooperative will realize savings for its members through lower administrative costs (by managing bid development, tabulation, and evaluation), volume purchase discounts, and assured levels of business for vendors. Whether a cooperative provides services itself or secures their provision by third parties, it will allow publishers to address supply chain issues from a well-coordinated position of strength.

### 3.3.3 Marketing

Publishing cooperatives could also allow society publishers to exercise greater market power in competing against larger publishers for a share of library acquisition budgets. As some nonprofit journal aggregations have already demonstrated, acting collectively increases the visibility of society-sponsored journals and allows society publishers to compete more effectively for limited library budgets.

The cooperative's marketing services can offer publisher content to libraries and end users, both as individual print or online journals and as part of an online aggregation. As with all cooperative services, this marketing and sales function can be performed by a cooperative's in-house staff or negotiated with third-party sales agents and distributors. Shared marketing services can negotiate prices and license terms with libraries, library consortia, and other users and serve as a clearinghouse for contract and licensing information. The cooperative can also support article-level distribution through pay-per-view channels and permissions clearinghouses.

While cooperatives can offer a comprehensive range of services, participating publishers should be able to pick and choose the cooperative services they require. This will lower the barriers to publisher participation and help ensure that the cooperative's services remain competitive.

Whatever group of services a cooperative offers, it must serve the specific needs of its members. Offering a generic service, without sufficient differentiation, would open the cooperative to price competition. Leaving some member needs unserved would subject the cooperative to poaching from more specialized competitors. Publisher ownership and control will allow the cooperative to avoid such competition by offering services that serve the society publishers' best interests, rather than services that maximize the profit of the cooperative itself.

### **3.4 Cooperative Benefits to Society Publishers**

Publishing cooperatives would allow societies to retain control of their publishing operations while benefiting from the reduced costs, greater income stability, and lowered risks attendant on collective action. We describe below some of the major benefits that publishing cooperatives could deliver to their member-owners.

#### **3.4.1 Improved Bargaining Power & Reduced Publishing Costs via Scale Economies**

Collective action via publishing cooperatives will give society publishers greater market leverage and presence. Publishing cooperatives can negotiate lower costs for mutually required services and resources than societies could achieve individually. Representing a larger number of journals will give cooperatives more bargaining power and allow them to be more effective in their negotiations with service providers.

Cooperatives can deliver scale efficiencies for both print and online distribution. As online journal dissemination is more dynamic than print publishing, the need for such shared services becomes even more acute in an online distribution environment.<sup>28</sup> Besides ongoing technology upgrades, digital distribution requires an ongoing revision of a publisher's licensing policies and pricing. This reworking requires legal support, the cost of which can be shared via a cooperative. Similarly, customer service and user support is typically more intensive in an electronic distribution environment.

The cooperative will provide goods and services to members at cost. In practice, this will be effected by setting prices at a level sufficient to cover costs plus a reasonable return on invested capital, and then refunding to members at the end of the year the net returns in proportion to the volume of business each member has done with the cooperative. Such payments, called patronage refunds, are discussed more fully below.

Many cooperatives have moved to differential pricing, where prices may vary by the size or patronage of each member organization. This often means lower prices for larger organizations that make significant use of the cooperative. This completely satisfies cooperative principles and the goal of service-at-cost because it recognizes that different members will impose different costs on the cooperative. Also, differential pricing will encourage larger nonprofit publishers to patronize the cooperative, which benefits smaller members by increasing economies of scale.<sup>29</sup>

#### **3.4.2 Increased Society Publisher Market Presence & Circulation**

Publishing cooperatives can increase publisher market reach and end-user content access in several ways. Collective activity and shared marketing support resources will increase the publishers' market visibility and allow them to wield greater market leverage than they

would possess individually. Representing a larger number of journals will give the cooperative more market presence and make the aggregation more attractive to libraries and library consortia.

Although the market appeal of such aggregations has been proven, aggregations must often overcome publisher aversion to financial uncertainty and reluctance to cede control of their content.<sup>30</sup> Given that an online aggregation may provide a ready substitute for the primary journal, member publishers must trust the cooperative to manage and protect the value and income of their journals. A cooperative's member ownership and democratic nature should assuage publisher concerns about relinquishing control and jeopardizing income streams. Further, by increasing their control over how their publications reach end users, and allowing them to bypass intermediaries in the market channel, nonprofit publishers can capture more of their returns, allowing them to pass some of this savings on to libraries and end users.<sup>31</sup>

#### 3.4.3 Provide Specialized Business Management

Cooperative participation would allow a society to focus on its core publishing competencies of content creation and certification while relying on the cooperative to support aspects of the publishing process not directly related to the society's mission. Through a publishing cooperative, societies can pool their resources to secure access to professional business and publication management services that they could not otherwise afford. These services could include business and financial management, technical expertise, pricing and value management, legal and intellectual property advice, society membership and non-member subscription management services, contract and license negotiating, strategic insight and tactical guidance, and other services identified by cooperative members.

A publishing cooperative could also serve as a communications and information nexus, providing members with a forum for addressing issues of mutual concern. Publishing cooperatives can inform their members about developments in the academic publishing market, educating them to ensure that members understand the market's issues and trends. Access to this information and to the cooperative's professional management resources would also promote conformity with industry best practices and promote greater financial and operating efficiency for each participating publisher.

#### 3.4.4 Ability to Manage & Mitigate Risk

Society publishers operate in a market environment of considerable uncertainty and risk, including:

- Increasing pressure on traditional subscription-based income models;
- A rapid rate of change in publishing technologies;
- A decline in the demand for print editions;
- Mounting market pressure for lower access barriers to content;
- Aggressive competitive behavior by other publishers;
- Competition from innovative online scholarly communications channels; and
- Changing value perceptions of society members toward the society's publication benefit.

Society publishers must be prepared to make decisions about these and other issues in an overall environment of change, while reducing the uncertainty associated with any specific decision. The potential losses that societies confront are not limited to financial assets; they can also suffer loss to their reputations, membership bases, external funding sources, and other tangible and intangible assets.

Federated cooperatives can help society publishers address risk constructively through both risk retention and risk transfer financing methods. With risk retention, the funds needed to offset potential losses would come from the cooperative members themselves. The cooperative could assess the risk profile of any particular activity, line of business, or environmental threat and implement an appropriate retention technique to offset the loss.<sup>32</sup> The cooperative's board could fund such retained risk reserves by managing the cooperative's equity generation and equity redemption policies.<sup>33</sup> The cooperative might employ this approach to manage risk stemming from the migration from print to digital distribution, the adoption of new journal income models, the introduction of new publications and new types of content channels, and other activities with a potentially substantial impact on publisher income.

Risk transfer would seek funds from beyond the cooperative's membership, with external organizations indemnifying the publishers against loss. Such risk transfers could provide a means by which libraries and other stakeholders could indemnify publishers against financial risks incurred in the transition to a new funding or content access model. If libraries and other stakeholders are unwilling to share the publishers' risk, they can anticipate publisher adoption of more liberal access policies to be slow and halting. Even publishers sympathetic to the concept of open access might consider the risk inherent in transitioning from subscription-based income to a new business model too great to risk unilaterally. As institutional libraries and their users would benefit directly from a shift to open access distribution, libraries might expect to share the publishers' risk in moving to new business models capable of supporting open access. Federated cooperatives could act as agents for contractual risk transfers between libraries and a cooperative's publishers.<sup>34</sup>

### 3.4.5 Stabilized or Improved Financial Performance Under Current Business Models

As already noted, subscription income models are becoming increasingly difficult to support for many society publishers, especially those lacking active sales and marketing programs. By applying a federated cooperative's shared marketing services, society publishers will be able to perform better financially under a subscription model, slowing or even reversing the decline of institutional subscriptions bases.

A federated cooperative's greater marketing and sales resources can also create supplemental income streams, which individual societies would not have the in-house capacity to pursue effectively. A variety of revenue sources—including corporate sponsorships, advertising, and commercial use licenses—might reduce the upward pressure on subscription prices or help support alternatives to subscription-charging models.

### 3.4.6 Support a Framework for Long-term Structural Changes in Access & Funding Models

The initial reliance of cooperative publishers on a subscription model would not preclude their subsequent migration to alternative business and access models. In a market of declin-

ing subscriptions and rising prices, new income models might well be in the publishers' best interests. A cooperative can provide the strategic vision that will allow society publishers to move from a defensive posture to a more proactive approach. Without the management, business analysis, and risk mitigation capabilities afforded by a federated cooperative, most society publishers will lack the means to evaluate or effect such a transition.

#### 3.4.7 Provide Access to Capital

Publishing cooperatives can help societies overcome the competitive disadvantages that stem from undercapitalization. Cooperatives can address this issue indirectly by lowering costs and capital requirements through shared services and scale economies and directly through their own capital generation methods.<sup>35</sup>

Publishing cooperatives can obtain equity capital by retaining a portion of the cooperative's operating surplus (e.g. through retained patronage refunds), by retaining a percentage of fees levied on members for cooperative services, through direct member investment (e.g. membership fees), through net profits from non-member business, and even through the sale of common or preferred stock to external stakeholders. We discuss these capital generation methods more fully below (see Section 4.3).<sup>36</sup>

#### 3.4.8 Maintaining Society Relevance Amidst Changing Scholarly Communications Practices

The transformative impact of the Web and digital publishing technologies on scholarly and scientific communication has yet to be fully felt. Although still relevant and prevalent, a linear model of scholarly publishing—from the author through the publisher to the audience—does not capture the full value of the disaggregated digital publishing models that are emerging. A networked model, linking interdependent nodes of the publishing value chain (including certification, dissemination, and preservation), may more accurately represent the evolution of scholarly publishing in a disaggregated digital environment.

Although much of our discussion of cooperatives has taken the current journal publishing paradigm as its starting point, cooperatives will afford society publishers a framework within which to expand their publication programs beyond the limits of the journal format itself. Cooperatives can do this by offering strategic perspective on publishing and market trends, by providing affordable access to innovative publishing technologies, and by encouraging innovation by mitigating risk. By reducing new product development risk while simultaneously ensuring high production and distribution efficiency, publishing cooperatives will allow society publishers greater financial latitude to experiment with new scholarly information services.

### 3.5 Limitations of Publishing Cooperatives

Despite their beneficial effects, publishing cooperatives cannot address all the challenges facing society publishers. For example, publishing cooperatives cannot:

- *Guarantee that publishers will realize financial returns commensurate with a profit-maximizing model—*

The cooperative model assumes that society publishers seek the broadest reach for their content and a more stable market position, rather than trying to maximize profit or subsidize substantial non-publishing activities.

- *Address member retention issues that result from a society's membership perceiving insufficient value relative to their dues—*

Cooperatives cannot counter a decline in society membership except to the extent that they allow societies to enhance their membership value. However, by lowering publishing costs they can help societies better cope with the financial pressures that result from declining membership and circulation bases.

- *Lower most editorial and content acquisition costs—*

Cooperatives can help lower many of the costs of publishing a journal however, most of the content creation and editorial costs will remain with the publisher and will be difficult for a cooperative to lower.<sup>37</sup>

- *Ensure the long-term survival of a journal of inadequate quality or value—*

Although a cooperative model can stabilize society publishing income and provide a framework within which to change the basis for monetizing content creation and certification, it will not provide an income guarantee scheme that insulates publishers from market preferences and priorities.

Although publishing cooperatives cannot solve all the problems confronting society publishers, they will help many society publishers address a common set of problems. At the same time, cooperatives will not introduce market distortions or artificially support substandard journals.

### 3.6 Cooperatives & Existing Collaborative Publishing Initiatives

As with any new large-scale venture, launching publishing cooperatives will entail significant effort and expense. It makes sense, therefore, to consider whether cooperatives offer advantages relative to existing collaborative initiatives serving society publishers.

A variety of nonprofit initiatives offer society publishers scale economies, collaborative marketing services, and other shared services that partially overlap those that cooperatives can provide. Those that serve society journal publishers include:

- Discipline-specific publishing programs, sponsored by libraries or universities (e.g. BioLine International,<sup>38</sup> BioOne,<sup>39</sup> the History Cooperative,<sup>40</sup> Project Euclid<sup>41</sup>) or scholarly societies themselves (e.g. AnthroSource, GeoScienceWorld);
- Federated society programs that provide publishing services and infrastructure for member societies (e.g. the American Geological Institute (AGI), the American Institute of Biological Sciences (AIBS), the Federation of American Societies for Experimental Biology (FASEB));<sup>42</sup> and

- Journal aggregations offered by nonprofit organizations (e.g. the ALPSP Learned Journals Collection,<sup>43</sup> Project MUSE<sup>44</sup>);
- University-sponsored online publishing platforms and digital preservation and archiving services (e.g. the California Digital Library at the University of California; Igitur at Utrecht University;<sup>45</sup> the University of Michigan Scholarly Publishing Office; the German Academic Publishers Project;<sup>46</sup> Stanford University's HighWire Press; SciELO in Brazil;<sup>47</sup> the European SciX initiative;<sup>48</sup> the Public Knowledge Project's Online Journal System; the developing DpubS initiative; JSTOR; LOCKSS); and
- University presses in North America, the U.K., Western Europe, Australia, and elsewhere.

As might be expected, the structural limitations that prevent society publishers from competing effectively on their own also hinder some societies from participating in existing collaborative publishing initiatives. Barriers to such participation include:

- *Initial and ongoing costs of participation*—  
Publishing cooperatives, designed to provide publishing services at cost, and utilizing proven mechanisms for generating operating capital, will lower the cost barrier to participation that excludes many society publishers from some of the existing initiatives.
- *Incomplete or undifferentiated service offerings* (e.g. a digital publishing platform without business management support)—  
By providing business management services as well as comprehensive publishing program support, cooperatives can offer societies a complete and unified package solution that competes effectively with commercial publishing outsourcing services.
- *Fear of relinquishing control and/or submerging individual publication identity or brand*—  
Exercising control through the cooperative's democratic governance mechanism should help allay the publisher apprehensions that often impede participation in content aggregations.
- *Aversion to the uncertainty entailed in a move to aggregated online distribution, exacerbated by the lack of internal resources to evaluate a potential alternative*—  
As their express purpose is to serve as effective agents for the best interests of their member-owners, publishing cooperatives will provide an attractive alternative for nonprofit publishers that are risk averse, keen to remain independent, and underresourced.

All the above initiatives provide services that help society publishers compete more effectively in the scholarly publishing market. Publishing cooperatives will complement, rather than supplant, viable alternative publishing models already in place. Cooperative members might continue to participate in existing initiatives, while using a cooperative for any services not offered by their current provider.

If any of the existing organizational models could be efficiently scaled to address the publishing needs of thousands of society publishers worldwide, they might obviate publishing cooperatives or other alternative publishing models. However, most of the initiatives do not seek to support a highly scaleable and easily replicated network of similar organizations. Further, although each of the above initiatives responds to critical needs of society publishers, most focus specifically on digital publishing, and not on providing a comprehensive solution addressing all the strategic, business, and operational issues that confront publishing societies. None of this detracts from the considerable value these initiatives continue to deliver to many societies; however, it does suggest that federated publishing cooperatives might fill a need not adequately served by existing initiatives.

## IV. FINANCIAL ISSUES FOR PUBLISHING COOPERATIVES

### 4.1 Cooperative Corporate Structures

A cooperative is a special type of corporation that is owned, controlled, and financed by the members who use its services. Depending on the jurisdiction in which it is incorporated, a cooperative can form as virtually any type of legal entity, including a nonprofit corporation, a general business corporation, a limited liability corporation, or a general partnership.<sup>49</sup> Because a publishing cooperative organized as a nonprofit corporation could not return patronage refunds to its members, publishing cooperatives might be formed as general corporations. In any event, a cooperative's distinctive operating practices are governed by the cooperative's articles of incorporation and by-laws, not the organization's formal corporate structure.<sup>50</sup>

A cooperative's distinctive operating practices—which stem from the principles of member ownership and control—are intended to provide services to the cooperative's members at the lowest possible cost, not to generate the highest return for the cooperative itself. At the same time, as with any self-sustaining business, a cooperative must generate sufficient revenue to meet its continuing expense and capital needs. To ensure that a cooperative remains sufficiently capitalized while distributing ownership equitably based on member patronage, a number of cooperative equity generation and allocation models have evolved. We describe below how these models can be applied to publishing cooperatives to generate capital, allocate equity among members, and return equity to participating publishers over time.

### 4.2 Capital Requirements

To ensure its long-term sustainability, a cooperative needs to determine its capital requirements for both its initial development stages and its ongoing operation. A publishing cooperative's capital requirements can be separated into organization launch funds, short-term or operating capital, and long-term or fixed capital.

*Organization launch funds* cover the one-time expenses incurred in establishing the cooperative. These would typically include professional services (legal, accounting, and other consultant fees), initial communications and promotional expenses, and other expenses incurred in organizing the cooperative. The amount of launch funds needed will depend on the size of the cooperative; the scope of the cooperative services offered; the type of cooperative (e.g. a satellite cooperative or a federated publishing cooperative); and the availability of outside development grant funding and institutional support. Federated cooperatives can provide resources and assistance that will lower satellite cooperative launch costs.

A publishing cooperative will use operating capital for staff salaries, rent, supplies, making negotiated payments to vendors (e.g. for printing and editorial management system licenses), for maintenance and upgrades to a digital publishing platform, for payments from risk or indemnification pools, and for other current expenditures. The cooperative may also require substantial operating capital if it undertakes extensive contracting for services or vertical integration of the publishing value chain.

*Long-term capital* includes the investment a federated cooperative might make in capital assets such as development of a digital publishing platform and equipment, as well as the

investment a satellite cooperative makes in membership in a federated cooperative.<sup>51</sup> Most publishing cooperatives, at least initially, would need little long-term capital.

Cooperatives make two common mistakes in trying to please their members: 1) underpricing the cooperative's services to members and 2) not requiring a sufficient equity contribution by their members. In the first instance, cooperatives fail to build sufficient operating margin into the pricing for the member services they offer. An inadequate margin lowers the operating capital that the cooperative can generate and can even lead to losses when margins are insufficient to cover unexpected operating exigencies. In the second case, a cooperative keeps its initial member equity requirements low in order to encourage a greater number of members. However, this can lead not only to inadequate capitalization, but also to an insufficient commitment on the part of members. Often, a larger member equity requirement will encourage greater member participation in the governance of the cooperative and increase commitment to patronizing the cooperative services. This active engagement increases a cooperative's long-term vitality.<sup>52</sup>

### 4.3 Sources of Equity Capital

Equity capital is that portion of the cooperative's assets owned by the cooperative's members. For cooperatives, equity capital represents a means to an end, rather than an end in itself. Patronage of the cooperative, which generates much of the member-publisher equity, creates the economic rationale for the cooperative's existence in the first place.

The cooperative obtains equity capital from participating publishers without incurring a legal obligation to repay the funds at a stated time. Equity capital is risk capital in that all or part of it can be lost if the cooperative's operations are not profitable. Under most cooperative structures, however, member risk would be limited to the amount of capital invested in the cooperative.

A publishing cooperative can obtain equity capital by combining any of the following:

- *Direct investment*—

Direct investment can include a membership fee or a requirement to purchase one share of voting stock. The size of the initial investment will depend on the particular capital needs of the cooperative. In addition to the initial investment, a cooperative can levy an annual membership fee, with the fee being either flat or proportional to the publisher's usage of the cooperative.

- *Retained patronage*—

Retained patronage refunds will provide the cooperative's most common means of acquiring operating capital. In the U.S., up to 80% of the cooperative's annual net surplus from member patronage can be retained for operating capital, with the remainder refunded to the publishers in cash. The cooperative will accumulate the deferred patronage refunds until it has sufficient capital to finance its operations, then will begin to redeem the equity under a systematic plan (see Section 4.4).

- *Retained surplus*—  
Retained surplus represents a portion of the cooperative’s profits kept by the organization to offset future development expenses and/or losses. This is sometimes treated as an “unallocated reserve” (see Section 4.3.1).<sup>53</sup>
- *Per-unit capital retains*—  
If a publishing cooperative offers purchasing, bargaining, and/or marketing services, it can generate capital through per-unit capital retains. Per-unit capital retains are member equity investments based on the number of units of goods and services processed (e.g. units printed or articles processed) or on a percentage of sales revenue. As with other types of equity capital, capital retains would be allocated to each publisher and redeemed on a revolving basis.

As per-unit retains do not depend on the cooperative’s net earnings, the cooperative can use this approach to generate capital from activities that do not produce their own revenues as such (and therefore create no patronage refunds to retain). For example, the cooperative can base per-unit capital retains for publisher bargaining services on the dollar amount of vendor contracts; on unit charges, such as the number of pages for copy editing or digital conversion; and/or on the number of member records for membership management. For marketing services, a cooperative could deduct a small percentage of total content sales income from each publisher’s share.

- *Sales of common or preferred stock to libraries and other non-members*—  
A publishing cooperative can issue non-voting preferred or common stock to libraries and other external shareholders.<sup>54</sup> Besides facilitating library risk sharing, stock plans appear compatible with program-related investment (PRI) programs offered by some foundations.<sup>55</sup> In either case, a preferred stock plan would allow stakeholder communities to support the cooperative while keeping control with the cooperative’s publisher members.<sup>56</sup>
- *Net profits from non-member business*—  
In some instances, a cooperative might elect to do business, at a profit, with publishers that are not members of the cooperative, but wish to purchase services from the cooperative. These profits can be retained by the cooperative as unallocated equity capital.<sup>57</sup>

#### 4.3.1 Allocated & Unallocated Equity Capital

A cooperative’s equity capital can also be categorized as either allocated or unallocated. The cooperative assigns allocated equity to members in proportion to their use of the cooperative. Allocated equity will include the publishers’ non-cash refunds and other equity assigned to an individual publisher’s equity account, including the publisher’s direct investment in the cooperative (e.g. as an initial and/or annual membership fee).<sup>58</sup>

Most of a publisher’s allocated equity will be generated via retained patronage refunds and/or per-unit capital retains. Patronage refunds will be returned to publishers either as

cash or as written notices of allocation.<sup>59</sup> Although written notices of allocation can eventually be redeemed by members for cash, redemption is at the board's discretion to ensure that the cooperative remains adequately capitalized.

In contrast to allocated equity, unallocated equity is not credited to a specific publisher's account, nor is it returned to the participating publishers unless the cooperative disbands.<sup>60</sup> Because it does not need to be repaid to the publishers on a specific redemption schedule, unallocated equity provides a general capital reserve to fund development and to provide a cushion to offset potential operational exigencies. The cooperative's governing board can choose to retain a percentage of the cooperative's net patronage income as unallocated equity. Additionally, unallocated equity can be generated from non-member business income.<sup>61</sup>

#### 4.4 Equity Distribution

A cooperative will redeem each publisher's allocated equity at some future date. This equity redemption acts as an ownership transfer process that keeps the cooperative financed, owned, and controlled by its current member-users. The process should result in a membership with similar interests in using the cooperative, and this shared member interest will render the cooperative easier to manage and steer strategically.

The cooperative's board must manage the cooperative's equity to ensure that the business has an adequate supply of capital and remains owned by those publishers patronizing it. The board must balance the interests of publishers that want additional services and growth with those that hold large amounts of unredeemed equity. A well-designed equity redemption plan will maintain each publisher's allocated equity proportional to its patronage of the cooperative, thus keeping the interests of participating publishers aligned and strengthening the economic linkage between the cooperative and its members.

To keep each publisher's equity proportional to its patronage, a cooperative can use a revolving equity redemption plan to return allocated equity to participating publishers.<sup>62</sup> Under a revolving fund plan, the cooperative holds allocated patronage refunds for a specified number of years, redeeming equity in the order in which it is allocated. The time frame in which the equity is redeemed will be determined by the cooperative's board of directors and will be subject to the cooperative's financial condition and need for operating capital.<sup>63</sup>

Additionally, special policies will govern the redemption of publisher equity in the event of atypical circumstances, such as the withdrawal of a publisher from the cooperative. The terms and conditions of such special redemptions can ensure that a publisher's withdrawal will not cause undue financial disruption to the cooperative.<sup>64</sup>

Under a federated cooperative model, affiliated satellite cooperatives will receive patronage returns from the federated cooperative, which will be channeled to participating publishers. Similarly, investments in the federated cooperative, primarily from retained patronage allocations, will often represent a substantial portion of a satellite cooperative's assets. To ensure transparency and to maintain member commitment, the cooperative's board and management will need to keep participating publishers fully educated and informed about the cooperative's capital formation and equity redemption status.<sup>65</sup>

The equity generation and redemption plans described above pertain to the equity publishers accrue through patronage of the cooperative's publishing services. Additionally, rev-

Revenue from publisher content will be distributed to publishers in a manner appropriate to the distribution medium and as determined by the cooperative's members. For example, revenue from print subscriptions can be channeled directly to publishers, while revenue from participation in a cooperative's online aggregation can be allocated to publishers based on an equitable value-contribution formula approved by the cooperative's board.

## V. COOPERATIVE BENEFITS TO OTHER STAKEHOLDERS

Universities and their libraries quite literally pay the price for dysfunctions in the market for scholarly and scientific journals. The inherently monopolistic nature of non-fungible journal content, the market power wielded by large commercial publishers, and defective supply-demand signaling within the academic market itself all contribute to allow for-profit journal prices that deviate significantly from the competitive norm. The steady growth in the number of journals and the pronounced price differential between commercial and non-profit journals should ensure library interest in the financial stability and sustainability of society publishing operations and their ability to meet future market demand for certified research.

Without such an alternative, more and more small society publishers will outsource their publications to commercial publishers and publishing service providers. Based on current market experience, this will result in an effective trebling of the prices for the outsourced journals. At the same time, if societies remain without the resources necessary to respond to an ever-increasing scholarly and scientific communications demand, commercial publishers will continue to expand their dominance in the market. Again, the result will be journal prices several times higher than would be the case were society publishers able to respond effectively to growing market demand.

Publishing cooperatives will benefit academic libraries and other stakeholders in several ways. The cooperative publishers' reduced costs, larger and predictable customer base, and lower business risks will often result in reduced content fees. Although publishing cooperatives will not guarantee lower journal prices or other direct economic benefits, the social mission of publishing cooperatives—explicitly balancing the societal benefits of greater access with the need for financial sustainability—would be unlikely to attract publishers seeking primarily to maximize profit.

Further, cooperatives can provide a framework to support a transition to new business and access models. Without such an enabling framework, most small societies will remain unable to adequately evaluate alternative models, let alone plan and effect a transition. Under a cooperative's umbrella, society publishers might consider collectively business models and access policies that might appear too risky to them individually. By offering society publishers greater financial stability, broader strategic perspective, a fuller understanding of market trends, and workable risk mitigation programs, cooperatives will allow society publishers to move from a defensive posture to a more forward-thinking mode. That alone should help increase the understanding and potential appeal of alternative access and funding models.

## VI. NEXT STEPS

Before publishers will invest and participate in a cooperative, they must find the model economically compelling and consider the potential benefits, financial and non-financial, to outweigh the risks. As launching a publishing cooperative will require a substantial investment, a detailed feasibility study and business plan will be needed to demonstrate the viability of a specific cooperative implementation and to provide a justification for development funding. The plan will need to address the business issues relevant to establishing the central shared services cooperative, as well as the financial and market issues affecting the individual society publishers participating in initial discipline-specific satellite cooperatives. Such an analysis will allow stakeholders—including societies, funding agencies, and other development partners—to assess the feasibility of a publishing cooperative.

Owned and controlled by the nonprofit publishers themselves, cooperatives would respond to many of the publishers' common needs. Publishing cooperatives would encourage societies to retain control of their publishing programs while increasing their efficiency, expanding their capacity, and strengthening their financial sustainability.

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## NOTES

<sup>1</sup> For the origins and development of the mixed market for scientific and scholarly journals, see Kronick (1962), pp. 110ff.; Kronick (2004), pp. 27, 194ff.; Ornstein (1963), pp. 198ff.; and Henderson (2002).

<sup>2</sup> This assessment of the academic journal market used the online version of *Ulrich's Periodicals Directory* (*Ulrich's*), the most comprehensive single information source on scholarly serials literature. Its coverage provides a useful proxy for the academic journals market, and the service's functionality supports a detailed analysis and segmentation of the journals market. This research was performed on *Ulrich's Periodicals Directory* ([ulrichsweb.com](http://ulrichsweb.com)) between March 15 and April 29 2005. Unless otherwise indicated, the market description below is based on the *Ulrich's* analysis.

<sup>3</sup> Mabe's analysis indicates that the growth rate for peer-reviewed journals has been an almost constant 3.46% per year for the last 300 years. The growth rate increased slightly (to 4.35%) from 1945 to 1976, but has slowed to 3.26% per year since 1977. Mabe (2003), p. 193.

<sup>4</sup> This growth is driven by an overall increase in the number of research workers, rather than by profligate publication on the part of authors or publishers. Mabe demonstrates a clear correlation between the increase in the number of researchers and the growth in the number of journal titles. Mabe (2003), pp. 195-96.

<sup>5</sup> While there are no comprehensive pricing surveys by publisher type, several studies illustrate the significant price differences between journals published by commercial and nonprofit publishers and between self-published society journals and those society-sponsored journals outsourced to for-profit publishers. See Bergstrom and Bergstrom (2001) and White and Creaser (2004). For journal price surveys by discipline and/or geographic region, see Van Orsdel and Born (2004); Dingley (2004); and Moline (1989).

<sup>6</sup> The White and Creaser (2004) study shows median prices for Blackwell journals—the vast majority of which are published on behalf of societies—to be over twice those of the nonprofit publishers surveyed.

<sup>7</sup> Kyrillidou and Young (2005). For a review of library budgets and serials pricing, see Edlin and Rubinfeld (2004), pp. 122-26.

<sup>8</sup> According to publishing industry analyst Outsell, Inc.—cited in Edlin and Rubinfeld (2004), p. 123—commercial publishers control 70% of STM market revenue, aggregators 12%, and nonprofit publishers 18%. The market shares provided in the U.K. House of Commons Science and Technology Committee Report (House of Commons (2004), vol.1, p. 13), citing EPS Ltd., support the Outsell estimates.

<sup>9</sup> For a history of publisher acquisitions and mergers, see Munroe (2005).

<sup>10</sup> The figures on journal digital availability by field of science cited by Tenopir and King (2004)

support the assumption that a much higher proportion of science journals are available electronically than for the social sciences and humanities. See Tenopir and King (2004), Table 9.4, p. 117.

<sup>11</sup> Bok (2003) has made this observation in regard to the performance of research universities overall. Weisbrod (1988, 1998) describes the fundamental distinctions between nonprofit and commercial enterprises and the dangers inherent in nonprofit competition in a mixed market, and Salamon (2002) has emphasized the importance of the nonprofit sector restoring the balance between distinctiveness and survival. With specific reference to journal publishing, Morris (2001) outlines some of the differences between commercial and nonprofit publishers, and Shelock (2001) has commented on the apparent antipathy of some societies to the pressure of change in publishing models coming from their own members.

<sup>12</sup> Nonprofit learned societies exist, in part, because the marketplace does not adequately serve the needs the society addresses. The tax laws of the U.S., and of many other countries, reflect the expectation that nonprofit associations serve a broader public purpose than serving needs of the organization's members. See Salamon (2002) and Foster and Bradach (2005).

<sup>13</sup> Although losses of institutional subscription revenue may be temporarily offset by price increases for the remaining subscribers, this practice can lead to an accelerated rate of cancellations.

<sup>14</sup> The few empirical sources of information on scholarly and scientific journals subscriptions indicate that subscriptions to individual titles have been decreasing by about 4% per year. See, for example, Watkinson (1999).

<sup>15</sup> See Salamon (2002), pp. 17-19.

<sup>16</sup> This is not to suggest that limited capital is the only constraint on society launch of new journals. Many other factors, including internal society decisions regarding editorial and organizational focus, can also limit a society's desire and ability to launch new publications.

<sup>17</sup> Given the long-term cost advantages of electronic over print journal formats documented by Schonfeld et al. (2004), library demand for electronic formats—and pressure on print-based nonprofit publishers to move to digital dissemination—will only increase.

<sup>18</sup> An efficient market would typically preclude the formation of cooperatives; where market dysfunctions exist, cooperative models emerge. For an introduction to the cooperative model, see Burt (2004). For cooperatives as a response to market dysfunctions, see Fulton (2001), pp. 5-6.

<sup>19</sup> For a brief overview of the history of cooperatives, see Fairbairn (2004).

<sup>20</sup> For a more detailed description of cooperative principles, see Barton (2000).

<sup>21</sup> On the evolution and voluntary adaptation of cooperatives over time, see Fairbairn (2003), pp. 7-8.

<sup>22</sup> The Midwest Plan Service appears to represent one of the few extant publishing cooperatives; see Harmon, Koenig, and Moore (2004). Scholars' Press, a publisher of print monographs in the field of religious studies, founded by the American Academy of Religion and the Society of

Biblical Literature, apparently followed a cooperative model. Scholars' Press dissolved in 2000. Hurtado's proposal for an electronic journal publishing consortium includes cooperative elements and was inspired by Scholars' Press. Not surprisingly, Hurtado's proposal—mooted in the early 1990s—focused on harnessing the publishing potential of the Internet. In common with other collaborative publishing models proposed since, it assumed that universities would be the principal agents in the collaboration, rather than publishing societies. See Hurtado (1996). Recently, Schroeder and Siegel (2006) have provided an overview of the cooperative movement and its application to the publishing of academic research.

<sup>23</sup> Willinsky discusses the potential for a publishing cooperative that integrates both libraries and publishers as a means of achieving open access. See Willinsky (2006), Chapter 6.

<sup>24</sup> Discipline clusters will typically reflect shared scholarly communication practices (e.g. the relative roles of pre-prints, working papers, and monographs), common editorial and business policies (e.g. page charges, and publication fees), and shared niche market environments.

<sup>25</sup> Federated publishing cooperatives could also lower operating costs by sharing digital publishing platforms and hosting services. Although a large federated cooperative might find it cost-effective to manage its own digital publishing system, often the services would be more economically obtained through a fee-based agreement with a university-sponsored system. This would allow the cooperative to focus on its own competencies while seeking the best digital publishing and hosting services at competitive market rates.

<sup>26</sup> For example, to fund digital conversion of retrospective content or underwrite transitions to new funding models.

<sup>27</sup> For shared-services cooperatives, see Crooks, Spatz, and Warman (1995).

<sup>28</sup> For one description of these costs, see Morris (2005).

<sup>29</sup> Personal communication, Bruce Anderson, December 5, 2005.

<sup>30</sup> For a discussion of the impact of online aggregations on journal publishers, see Cox (2004), pp. 11-18.

<sup>31</sup> In the case of journals with publication fees, these savings might also be passed along to authors or their sponsors.

<sup>32</sup> For example, current expensing and/or funded or unfunded loss reserves. On risk retention and contractual transfer techniques, see Herman et al. (2004), pp. 254ff.

<sup>33</sup> For a discussion of the risk management aspects of cooperative equity policies, see Peterson (2000), pp. 20ff. and Section 3.7.6.

<sup>34</sup> For example, a satellite cooperative comprising journals in a discipline with a tradition of page charges might, with the assistance of a federated cooperative, develop a transition and risk mitigation plan for a shift to discretionary open access through publication fees. This transition plan would identify areas of uncertainty (e.g. uptake rates by authors and the proportion of waived fees) that would translate into potential risk for the publishers. Depending on the performance of the subscription model and the relative attractiveness of an alternative model, publishers might not be willing to undertake the transition on their own. In such cases, librar-

ies could contribute to an indemnification pool designed to offset wholly or partially the risk incurred by the publishers.

<sup>35</sup> The experience of cooperatives in other industries indicates that a federated cooperative should not serve as a “bank” for its members. Personal communication, Bruce Anderson, December 5, 2005.

<sup>36</sup> Additionally, in the U.S. and several other countries, cooperative banks exist that lend exclusively to cooperative organizations, often at a lower interest rate than charged by commercial banks.

<sup>37</sup> Factors affecting a publisher’s editorial costs include the journal’s volume of article submissions, selectivity rate, editorial quality, peer review process, and operating efficiency. See Wellcome Trust (2003) and Morris (2005).

<sup>38</sup> See <<http://www.bioline.org.br/>>.

<sup>39</sup> BioOne, which currently aggregates 70 journals from 54 publishers, was established in 1999 by five collaborating organizations: the American Institute of Biological Sciences (AIBS), SPARC (the Scholarly Publishing & Academic Resources Coalition), the University of Kansas, Greater Western Library Alliance (formerly Big 12 Plus Libraries Consortium), and Allen Press, Inc. See <<http://www.bioone.org>>.

<sup>40</sup> The History Cooperative, a collaboration between two large historical societies and a university press, is not a cooperative in the technical sense used in this paper. Currently, the large societies subsidize the costs of including the journals of smaller societies.

<sup>41</sup> Project Euclid is a partnership of independent publishers of mathematics and statistics journals based at Cornell University Library. See <<http://projecteuclid.org/>>.

<sup>42</sup> For a partial list, see <<http://www.scholarly-societies.org/federations.html>>.

<sup>43</sup> The ALPSP Learned Journals Collection enables small and medium-sized scholarly publishers to market their titles to libraries and library consortia by participating in an aggregated collection with a unified license policies, pricing model, and online delivery platform. The collection comprises over 550 journals from almost 50 scholarly publishers (not all of which are nonprofit).

<sup>44</sup> Established in 1995 by the Johns Hopkins University Press and the Milton S. Eisenhower Library, Project MUSE now has almost 30 publisher participants. Project MUSE provides online access to the full text of over 100 scholarly journals in the arts and humanities, social sciences, and mathematics. See <<http://muse.jhu.edu/>>.

<sup>45</sup> See <<http://www.igitur.uu.nl/en/default.htm>>.

<sup>46</sup> See <<http://www.dl-forum.de/Foerderung/Projekte/germanacademic/>>.

<sup>47</sup> SciELO represents a partnership among FAPESP (<<http://www.fapesp.br>>)—the State of São Paulo Science Foundation, BIREME (<<http://www.bireme.br>>)—the Latin America and Caribbean Center on Health Sciences Information, and other organizations. See <<http://www.scielo.org>> and Marcondes and Sayao (2003).

<sup>48</sup> See <<http://www.scix.net/>>.

<sup>49</sup> Cooperative legal and corporate structures are described by Cropp (2002) and Barton (2000).

<sup>50</sup> The articles of incorporation specify the purpose of the corporation and define its general structure; the by-laws stipulate the corporation's operating rules and governance. In the U.S., cooperatives typically enjoy a special federal and state tax status, as well. For example, cooperatives do not typically pay taxes on operating surpluses refunded to members, although these refunds represent taxable income to the members.

<sup>51</sup> The cooperative need not develop its own publishing platform, but could contract with a third party for such services. However, if the cooperative contracts with a library or university, it may need to invest in modifying the platform to serve its needs.

<sup>52</sup> The cooperative's financial model can be constructed to encourage broad participation without jeopardizing adequate capitalization. For example, an initial development grant might be applied to help societies that would otherwise be unable to join the cooperative. The societies could repay this initial loan to the cooperative via unallocated retained earnings.

<sup>53</sup> In the U.S., retained surplus is taxed at the normal corporate tax rate.

<sup>54</sup> Since a cooperative's preferred stock does not have an enforceable dividend payment or a specific repayment period, it is equity rather than debt capital. For a description of cooperative stock schemes, see Williamson (1998).

<sup>55</sup> Some foundations make program-related investments to support nonprofit activities that involve the potential return of capital within an established timeframe. PRIs include financing methods, such as loans, loan guarantees, and even equity investments, typically associated with private investors. For more on PRIs, see the Foundation Center web site, <<http://fdncenter.org/learn/faqs/html/pri.html>>.

<sup>56</sup> If a publishing cooperative does issue shares, it would need to ensure that the participating publishers maintain an adequate equity stake in the cooperative. Cropp et al. (1998), describing agricultural cooperatives, cite 50% of the value of total assets as the minimum equity stake for members to maintain in a cooperative. This ensures that the participating publishers have provided at least as much of the capital for the cooperative as lenders.

<sup>57</sup> On cooperative capital structures and financing, see Peterson and Cobia (2000); Burt (2004); Cropp et al. (1998); and Rathbone (1999). On good capitalization resulting from effective cooperative behavior and strong and transparent economic linkages, see Fairbairn (2003), pp. 27ff.

<sup>58</sup> Membership fees are considered cooperative income, rather than equity. Therefore members would receive any excess payment of membership fees via their patronage refund. Personal communication, Bruce Anderson, December 5, 2005.

<sup>59</sup> The cash refund is the percentage of allocated patronage refunds distributed to the publishers in cash. U.S. tax regulations require cooperatives to return at least 20% of their net income to participating members in cash, allowing cooperatives to retain up to 80% of their net income. As the members' cash and non-cash equity allocations represent taxable income, this is intended

to provide cooperative members with sufficient cash to pay their tax obligations for cooperative equity. For a discussion of cooperative taxation issues in the U.S., see Royer (1997).

<sup>60</sup> If the cooperative closes, all outstanding expenses, debts, and liabilities are paid first, then all retained earnings are paid to members.

<sup>61</sup> See Cobia and Peterson (2000b) and Cropp et al. (1998).

<sup>62</sup> Other equity redemption plans include percentage-of-all-equities and base capital plans. Under a percentage-of-all-equities redemption plan, the cooperative redeems a percentage of all equities, with each publisher receiving the same percentage of equity regardless of when it was allocated. Under the base capital model, the cooperative determines the capital needed to run the cooperative on an annual basis. Each publisher's equity contribution is adjusted annually based on average patronage during a specified time period (e.g. the past five years). Under-invested publishers would need to increase their investment in the cooperative, and over-invested members would sometimes receive equity refunds. For more on cooperative equity redemption practices and plans, see Royer and Ingalsbe (1983); Cropp et al. (1998); and Burt (2004), pp. 26ff.

<sup>63</sup> A revolving fund plan will keep equity in proportion to patronage as long as the revolving period is relatively short. As the revolving period lengthens and equity becomes less proportional to use, the cooperative runs the risk of participating publishers having divergent interests.

<sup>64</sup> This could be handled, for example, by retiring a former member's equity over a specified period of time.

<sup>65</sup> Additionally, in the U.S., many states require cooperatives to submit an audited annual financial statement to a regulating state agency.

## **ABOUT SPARC**

The Scholarly Publishing and Academic Resources Coalition (SPARC) is an international alliance of over 800 academic and research libraries working toward a more open system of scholarly communication. Recognizing the importance of society and other nonprofit publishers in this system, SPARC works with these publishers to help them remain independent and financially self-sustaining. This SPARC discussion paper continues SPARC's efforts in support of nonprofit publishers. For information on SPARC's education, advocacy, and publisher partner programs in North America, Europe, and Japan, please visit our Web site at <<http://www.arl.org/sparc/>>.

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