Ejournals, budgets and collection policies: managing the serials stranglehold in libraries

Will Wakeling
Associate Dean, Collections and Technical Services, Northeastern University*

Introduction

Those have spent all or part of the last decade working with ejournals, selecting them, paying for them or managing them, will recognize a professional field that has changed dynamically and kaleidoscopically, and is challenging library planning in fundamental ways. The intention in this article is to review some of the essential features of that challenge, particularly in the context of academic libraries in the U.S., and particularly in the areas of library budgeting and collection development.

The background to this discussion, inevitably, is the continuing pressure on library budgets posed by the “serials crisis”, or what might more properly be called its continuation under new terms of engagement, the “serials stranglehold”. This funding environment is ridden with subscription price inflation generally well beyond the means of libraries or their institutions’ ability to provide matching funding, and has several interesting and new characteristics attributable to the change to a market based on the purchase and lease of predominantly digital material. Put together with the technological innovations and opportunities which ejournals present to libraries, and prefaced by some consideration of

* Contact at 320 Snell Library, Northeastern University, 360 Huntington Avenue, Boston 02115 MA, email w.wakeling@neu.edu
general ejournal budgeting and collection development issues, these characteristics can be discussed under headings as follows:

- A changing complex of pricing models which have to be assimilated into budget projections;
- Subscription bundling by publishers and the consequences of the Big Deal;
- The pressures on a serials budget which threaten the funding needed to sustain “Tier Three” publishers;
- The specific transitional budget and fund accounting implications of the move from a print-based to an e-based journal collection;
- Opportunities associated with key findings on the non-subscription costs of managing a predominantly digital journal collection;
- The developing role and budget implications of just-in-time delivery services for e-articles;
- Impacts associated with the Open Access movement.

At the same time, we can examine how libraries have been adapting their collection policies to provide guidance and clarity in mapping a path through these complexities.

**Collecting and Budgeting for ejournals**

In 1994 ARL SPEC Kit number 201\(^1\) reported that, of the 35 libraries which responded to its survey indicating they currently received ejournals, that only five had collection development policies which addressed making ejournals available; nineteen indicated that the criteria for selection were the same as for paper journals, and only one respondent had a line item in the materials budget specifically for electronic journals. Now, there are
numerous examples and sources of advice on constructing collection policies for ejournals\(^2\), including selection criteria, transitioning issues, archiving, and guidance on constructing genre-specific statements.

Murray Martin, in his well-regarded 1995 text on library budgeting\(^3\), said “The electronic journal is still too recent and untried to be assigned a place within the budget or the collection.” Returning to the subject in 1998, he and his co-author make no special budgetary provision for the new format, remarking only that “Electronic journals may be subject to a subscription fee.”\(^4\)

Interestingly, it was shortly before this, in 1997, that Tim Jewell attempted to analyze electronic serials expenditure as a relatively newly reported component of Association of Research Libraries spending\(^5\). He reported total spending of $15,170,972 for 1996, with an institutional median of $148,166. ARL Statistics\(^6\) for 2004 now show the median expenditure among members for electronic serials as $2,348,463, a fifteen-fold increase over 1996, with a median for all serial expenditures of $5,552,216. (The total recorded value of ARL e-serial spending was $271,949,704, from 111 returns). [ARL notes that there are expenditures counted under electronic serials which may not be included in the serials expenditure totals, e.g. annual access fees for resources purchased on a “one-time” basis, such as literature collections, JSTOR membership, etc. This neatly illustrates a point to be made later, that budgeting for electronic resources in general, and ejournals in particular, needs to be strongly adaptive and observant in order to capture the impacts on different areas of the overall budget of investments in one area such as ejournals.].
ACRL, meanwhile, from the different vantage point of its own 2004 annual survey, has a median institutional expenditure on e-serials of $48,579 among 1,019 reporting libraries, and a median total of current serials expenditure of $119,131, i.e. more than 40% devoted to e-serials. Few can doubt that the proportion of materials budget devoted to e-journals has risen further since the completion of these surveys.

So it is little wonder that libraries have moved a considerable distance from the early 1990s, and are now committing themselves to cancel print subscriptions where both print and electronic exist. As recently as Fall 2002, “only a few libraries indicated that they had moved to electronic-only versions of the titles offered “ by the 14 major publishers covered by a survey of ARL libraries. But as academic libraries continue to endure annual subscription price rises well above general inflation, (just under 8% overall for 2006) the cancellation of print in favor of electronic is becoming epidemic, or at least standard practice. If the loss of these print subscriptions does no great damage to publishers’ bottom lines (excepting where advertising revenue also suffers), the next step implied in the serials stranglehold, when libraries have to start cancelling their purchased e-only journal subscriptions to balance their budgets, certainly will do.

Another practice, also evolving to become standard, is for libraries to apply more rigor to the analysis of cost-per-use and cost-per page as a means of identifying journal cancellation candidates. In this respect ejournals have delivered with their technology the means, potentially, of their own undoing, should they fail to demand attention or meet local
research needs. When librarians now implement collection policies covering the selection of new titles and the removal of redundancies, they can do so with underpinning evidence of usage and cost efficiency which previously could only be dreamed. Budgets are best designed and applied in an environment where value can be identified, measured and compared. For this purpose tools like Ted Bergstrom’s journalprices.com\textsuperscript{10} (giving cost-per-page and cost-per-citation rankings for some 5000 journals) and Project COUNTER\textsuperscript{11} are precious, for the insight they allow into the value of specific subscription investment when set alongside other parameters of value (such as special relevance to a specific disciplinary program, or importance to the discipline as a niche publication).

**Pricing models and components**

Library budgeting for subscriptions is more complex now than it has ever been. Planning a renewal campaign in a library with a journal collection of any size involves unpacking a host of differing options in respect of individual subscriptions, (print, print and/or electronic, electronic only, electronic with added print), and matching the options against the library’s collecting or access preferences. ICOLC reaffirmed the potential benefits of new pricing models in 2004 when it commented on one:

> A few publishers now offer an "electronic-plus" model, with the electronic journal being supplied for a base price and a price for print copies being added to that base price. ICOLC endorses this model, provided:

1. the purchase of the print copies is optional, and
2. the base price for the electronic content is no more than 80% of the price for the
electronic-plus-print (thereby reflecting the savings that the non-supply of print copies can bring), and  
3. the combined electronic and print price is no more than current print-only prices (thereby reducing the risk of additional cancellations to pay for both formats). 

While librarians will certainly recognize publisher instances where these recommendations came to pass, they will also note many cases where general price inflation and minimal discounts undid any library fiscal benefit to the transition.

Beyond these key structural pricing models, and in conjunction with charging modes developed for use with e-resources such as full-text databases and aggregations, librarians should also be prepared to adapt their ejournal budgeting strategies to a much wider range of charging models. Libraries are already familiar with the forms of tiered pricing, including FTE-based pricing structures and models incorporating usage elements either as fundamentals or as refining factors (e.g. Project Muse). A recent ALPSP-sponsored survey identified usage–based pricing as an emerging model for journal publishers dealing with consortia. In its rawest state usage-based pricing is a cause of perennial concern to librarians aware that there is no easy way to anticipate use, particularly heavily increased use with its implication of additional contingency costs.

Library collections policies on providing remote access, or equal access across a number of geographically distributed sites, or access to members of a distance education program, or electronic ILL delivery to partner institutions, or the security of long-term (if not perpetual) archiving, may each or all need to be tested against a publisher’s willingness to allow or negotiate a price, for a single title or for a group. It is no surprise, therefore, that
libraries have generally adopted and advertised multi-year strategies for moving their journal collections into the electronic environment – because the impact on staff resources and, in particular circumstances, on budgets, may be too intense to manage in a single budget cycle, however passionately the user community calls for desk-top delivery.

Librarians may need to be resourceful in their own right to achieve their ends here within the pricing framework offered by the publisher. If a small society publisher declines to allow the use of its ejournals for distance education unless a second subscription is purchased (i.e. with a 100% surcharge), the library may need to evaluate the importance of the titles for that purpose, but also consider cost-sharing agreements with the schools or departments running the distance education programs. Pricing models available via consortial terms may be better than those obtainable locally, so a library’s investment in consortial dues or handling fees may well pay off in subscription savings reaped, or in improved access to shared pools of concurrent user seats. And libraries committed to the purchase of all or a large part of the published products of a society such as ASCE, ASTM, IEEE or SPIE can now effect considerable financial and acquisition efficiencies by adopting a subscription to their digital libraries, where a much simplified pricing and payment model and an extensive archive may also simply cost less for the subscription itself.

The Big Deal and Bundling

Few aspects of the rise of the ejournal have provoked as much dispute, for good or evil, as the Big Deal, publisher packages bundled across journals and, initially, across print and
electronic versions. The largest (mainly commercial) publishers have already created and
sold their bundles, and the next tier is preparing to do so. Small society and trade
publishers have found some refuge with aggregations such as the ALPSP Learned Journals
Collection, BioOne, or Project Muse. Bundles are now augmented with deeper and richer
archival backfiles (at a price); this can in itself can be a challenge to collection
development policies which may place a premium on access to a digital backfile, in order
to allow for the removal of space-consuming print journal back runs, but where one-time
purchase or annual maintenance fees may need to be incorporated into spending plans.

In a more modest formulation, bundling has long applied to libraries, of course, through
the discounts offered by, for example, learned societies for the purchase of complete sets of
their print journals, an option that libraries have long accepted on its merits. The case
against Big Deals, the potentially stultifying effect they can have on a library’s collection
selectivity and budget flexibility, and the power they allow to the largest commercial
publishers to control the terms and conditions of the information market, has been
forcefully made. Big Deals cause complications in budgeting for several reasons. The
non-disclosure clauses in which they are often wrapped, make comparisons and
negotiations more difficult for libraries. They often tie long-term commitments (and price-
caps) to restrictions in cancellations from the package, cancellations which in other
circumstances might be targeted to cope with the persistent widening gap between the rates
of increase of the library’s materials budget and subscription cost increases. In these
circumstances, and in their own interests, libraries certainly need to press publishers for
cancellation terms that will at least allow “orderly attrition”, to use ICOLC’s phrase. And
though packages often bring valuable new content, it is usually at a supplementary cost, which has to be met from somewhere in the budget. A handful of major libraries have withdrawn from Big Deals, most notably and with most publicity from Elsevier’s ScienceDirect, in order to regain budget flexibility in cancelling and reallocating funds.

Meanwhile, there remains no shortage of buyers for ejournal bundles, especially via consortia where the grouping of existing (print) subscriptions as a baseline can provide an extended shared pool of titles which can greatly enhance the range of resources available to any one institution. These supra-institutional collections represent a positive answer to the question posed by one supporter of consortial big dealing: “Is resource sharing incidental, or integral, to our operations? Can we trust each other to maintain levels of effort, to consult when making changes, to commit to long-term collaboration – not just to achieving an immediate price break on a group licence?”  

Moreover, it is by adopting the Big Deal, along with leased access to multiple full-text journal and article aggregations such as LexisNexis Academic or EBSCO Academic Search, that libraries have leveraged their budgets to the point where, for instance, and in spite of ten years of cost inflation beyond funding levels, the median number of serials purchased by ARL libraries rose from 15,583 in 1994 to 22,595 in 2004.  

Donald Waters rightly points out the unintended but strongly negative consequences of this shift to lease-based access, the “dramatic, jump-off-the-cliff shift in the academy from owning scholarly output to effectively renting it.”  

It is perhaps the most significant issue in need of attention in the aftermath of the shift from print to ejournals. But for a library collection manager in a smaller institution, trying to reconcile the many information demands being placed on an overstretched materials budget, it is
entirely understandable that the opportunity to solve the problems of the moment will trump the grand enterprise of preserving the scholarly record.

**The Imminent Demise of Third Tier publishers?**

One serious consequence of the set of budgetary and collection development trends we are investigating here threatens the rank of the Tier 3, smallest publishers, beyond the major commercial Tier 1 or larger secondary Tier 2 publishing houses and societies. Libraries which commit to expensive packages, with restrictive cancellation limits, and to multiple consortial deals for aggregator products rich in accessible content, are increasingly likely to find their budgets cramped when it comes to acquiring and retaining subscriptions from sources outside that charmed circle. Small publishing houses or societies with one or two titles are least able to ride out the financial pressures that widespread library cancellation programs apply, and libraries and their users thereafter stand to lose out on significant content by default, and as a consequence of tunnel-visioned collecting policies.

**The Transition from Print to Electronic**

Many libraries will by now have reached the point in their collection development where they have put in place formal policies covering specifically the criteria and circumstances under which they are swapping out their print subscriptions in favor of electronic-only (when they are available). One formative expression of this was Yale’s “Guidelines for Shifting Journals from Print to Electronic-only Access”, which in turn built upon the principles developed and since reaffirmed by ICOLC. Some libraries now incorporate “Special Considerations for Electronic Journals” or “Electronic Journal Strategies” into
broader e-publication or digital library collections frameworks; others offer, for example, a self-contained “Electronic Journal Collection Policy”.

There seems to be no consistent answer to the question of how, precisely, libraries are constructing their budgets to identify and regulate ejournal expenditure as part of the transition to e-only, nor does any best practice appear to have developed. The Publishers Communication Group (PCG) has been surveying a wide range of libraries, including a sample of North American academic libraries, over the last several years, and in its survey for 2006 noted that only 17.5% of those surveyed have a separate budget for ejournals (the figure for 2005 was 20%)\(^{24}\). It would not be surprising to see the number of libraries with separate budgets for ejournals stabilize or even diminish: once many of the budgetary and fund accounting complications associated with the transition from print-to-electronic have been resolved, such as the identification and tracking of the extra funds meeting the combined cost of print electronic where before only the print subscription had to be purchased, the focus of a budget can turn from consideration of format differences to the more central concern (in this inflationary environment) of managing recurring, subscription-based, costs, whatever their format, so as to preserve purchasing power for one-time purchases (of monographs and archival files).

Among those libraries surveyed by PCG that had created separate ejournal budgets, only 28% had indicated it was at the expense of other budget headings, predominantly the serials budget, but also the book budget, or from special funds. Here the figure for 2005 was over 50%, indicating, perhaps, that libraries which saw the need for a separate ejournals budget had mainly already set them up by 2006 and organized separate funding sources for them.
The majority of institutions, therefore, even in this transition period, appear to be continuing to handle their ejournals as an integral part of their subscription budget, even if differentiated by fund accounting tagging in order to allow reporting out.

This is not to say that ejournals are not susceptible to subject or departmental budget management, as traditionally applied in some academic libraries to print subscriptions, where a consolidated subject fund, say for Philosophy or Mathematics, will be broken out into book and journal (and potentially other format or payment-related) subdivisions. Many libraries, including many where allocations to subjects are generated formulaically, have striven to adapt their budget structures to retain a periodicals element within departmental allocations while accommodating the budgetary complication that comes with the transition, in particular, to the purchase of bundled e-journals. When acquiring a publisher’s bundle brings access to a mass of new titles to a library, how is fairness addressed in distributing those new titles and their notional costs across departmental funds?

A good example here would be the subject distribution of collections resources described for Simon Fraser University Library in its collection policies and related documentation. There, the funding for migrations to e-only publisher packages has been drawn down from departmental periodical allocations, and used to constitute a General Electronic Serials fund, unattributed by subject. Where only print subscriptions are available, or print subscriptions duplicate the contents of electronic packages (because of e.g. archiving considerations) they are retained in departmental allocations. As the Library says
“Departments have a diminished list of subject-specific journal titles in their designated lines in the Library collections budget. This shift provides an opportunity to move away from the Library's longstanding policy that a department must cancel an equivalent dollar value of subscriptions in order to start up new journals. Although departments are still free to identify single titles on their "departmental" serials list from the Library collection to suggest for cancellation in favor of new titles, these lists will be diminished.” It remains for libraries adopting a similar budget model to decide if savings made in the transition of specific individual title subscriptions from print to electronic only count as savings against specific allocations, or are gathered up into a separate fund for the purchase of new titles.

As libraries adapt and transition to ejournals, another cost element associated with the subscription budget is likely to come under close scrutiny: third party subscription vendor fees. Having a well-informed vendor keeping track of publisher subscription models and their implications for a library makes sense when the journal marketplace is exhibiting so much nonconformity and variation in its approaches to pricing. But as “flip” pricing prevails, and ejournal delivery via packages represents an increasing proportion of a library’s ejournal business, the value of subscription vendors’ services in these changed circumstances will need careful review. Ejournals packages, even ones that have been negotiated via consortial agreements, inevitably require or can allow libraries to manage significant amounts of invoice and cataloging data in their own right, via their ILS, their ERM systems, their ejournal listing system or their OpenURL knowledge base; much of this work bypasses a library’s serials vendors, or can do. As Hutchens has recently
pointed out, for libraries of a certain size or complexion the continuing use of vendors for managing e-resources is certainly a debatable proposition.

The non-subscription cost savings of ejournals

A series of studies, culminating in a 2004 CLIR Report on the Nonsubscription Side of Periodicals\textsuperscript{28} have offered very good evidence that the nonsubscription costs associated with ejournals are significantly lower than those for print. Savings on staff and space costs will flow to libraries the more rapidly they complete their transition to a predominantly digital journal environment. (In the meantime, subscription and nonsubscription costs both stand to be higher, as a result of the redundancy of duplication). Libraries need to recognize here the opportunity they have here to reshape their operating plans and the funding distributions in which the plans are expressed. Schonfeld’s suggestion\textsuperscript{29} is that libraries (or consortia, or systems) conduct a strategic format review, to incorporate planning for the transition to e-only. It is easy to see how such a process could inform collection and budget planning in a holistic way and allow for the proper adaptation of the collections, operational and staff budgets to the altering and altered environment. (A practical example of this approach can be found in the Tri-Colleges Library Consortium 2003 Mellon-funded project\textsuperscript{30}). In this way, for example, the changing nature of the library’s responsibilities for digital, rather than print, storage would need to be reflected not only in the repurposing of space but also in the Library’s budgetary and technical commitment to journal repository initiatives such as LOCKSS and Portico

Ejournals, access and document delivery
It is another facet of the preceding argument that requires us to acknowledge how the relationship between traditionally understood notions such as the library journal collections and the library’s public and access services has been rewritten. As an ARL report states, “building collections and creating access to them are no longer achieved just within the walls of the library. Broadly defined, collections and access responsibilities are no longer distinct spheres within research libraries. Collections and access responsibilities are inextricably linked…”

This is evidenced very clearly in the whole area of ILL and document delivery. In a way that was not generally predicted ten years ago, libraries have at least temporarily been largely diverted from a path which seemed inevitable then. This path led towards massive dependence on ILL/DD as the means of answering information needs for articles which it was clear libraries were increasingly no longer going to be able to afford to buy in subscription formats. However, all the evidence is now that, especially in those libraries which have invested heavily in ejournal packages, consortial resource sharing, and multiple aggregations, the growth in ILL/DD is flattening out. For the doctoral degree-granting institutions reporting in the ACRL survey, mean expenditures actually fell between 2004 and 2005; PCG survey responses in 2005 predicted that numbers of ILL would be static. This is unlikely to be true for libraries which have not followed that ejournal strategy; for them, a different budget model is needed. In any case, libraries taking a longer view are already prepared to articulate policies which show a shift away from collection dependence and towards access and delivery. The University of Connecticut Libraries’ “Access
Model statement explicitly links the building of core collections, bibliographic access to the world’s literature beyond the core, and rapid document delivery.

This engagement between collections and access over ILL/DD provides a clear example of the importance of collaborative budgetary planning. A budget, it will be remembered, is both a plan for the use of money available in a fiscal cycle, and also indicates the actual amount of money available to meet expenditures for a cycle. It needs to be clear which part of the budget covers which expenditures. A conventional line budget may, for example, depending on the library’s organizational structure, locate some of the funds assigned to meet the costs of document delivery of electronic journal articles (e.g. royalty payments, fees to lenders) in the collections budget, some (e.g. costs for ILL dues or application software purchase and maintenance) in the operating or systems budget, and others (e.g. staff costs, mail costs) in a separate salaries or administrative budget, assigned to Public Services. This can make the process of deriving a) a clear plan for investment in document delivery as part of an access-oriented approach to journals and b) a clear statement of actual costs incurred, unhelpfully complex and difficult. It is one of the strongest arguments for project-based planning as a budgeting mode, in circumstances where traditional line budgets don’t provide a very helpful historical baseline for a dynamic information environment.

So, in budgetary terms, the act of providing access to a suite of ejournals can draw a library in differing directions. On the one hand, they can be viewed as far as possible as susceptible to traditional budget treatment, by covering their purchase or lease from the
funds allotted to specific subjects or general subscription funds, even as the mounting costs jeopardize the sums available for other formats. On the other hand, librarians can look for new access-oriented models in which to recast the budget, so that only the costs of a core journal collection (however defined) are met from the traditional subject or format allocation, and a growing budget component is devoted to document delivery, including items like unmediated pay-per-view.

Open Access and EJournals

Many libraries are already grappling with the budgetary implications of the OA movement. There are efficiencies to be had in canceling subscriptions to journals which have turned OA (e.g. the pioneering Nucleic Acid Research - NAR), and facilitating access, at some cost in terms of metadata management, to the mass of alternative resources indexed in sources such as the Directory of Open Access Journals\textsuperscript{33}. There is also a rational argument to be made, based on libraries’ expertise in fiscal dealings with publishers, for the library as the continuing locus of payment for OA institutional dues or memberships. These, applied to organizations like NAR, Public Library of Science, or BioMed Central\textsuperscript{34}, can ensure that researchers at the home institution earn a discount on the publisher’s full-rate author publishing or article-processing charges. The motivations for budget decisions in a library here may be mixed. Support for the fledgling OA movement may justify the payment of a membership fee to a publisher in order to ensure that OA titles succeed. Meanwhile, a cool analysis of the publishing history of local faculty in the journal may indicate that the annual outlay on the membership will exceed the value of any likely
annual total of discounts for would-be faculty authors. For many libraries, this may be a defining moment of “put your money where your OA mouth is”.

In the longer term (a period which at the present rate of change may be only a year or two distant), libraries will likely need to make an accommodation with another of the potential consequences of the OA movement, whether applied in fully OA journals or in those hybrid subscription journals offering a so-called “Open Choice” to authors who care to pay to enable OA for their own articles within the journal. This is the possibility that the funding from institutions and grant-giving bodies to their researchers and scholars to subsidize their OA publishing costs will not necessarily be fed through the library budget. The more strongly librarians advocate for the alternative, author- or institution-pays scenario, as a key component of the effort to open up access to all by obviating subscriptions, the greater the likelihood that the library will find itself removed from the financial nexus which currently ties them, in this area, to vendors and publishers. Institutional administrators are unlikely to let all the windfall subscription savings of the move to OA remain wholly with the library. In the context of the wider, organizational budget, of course, many institutions may not see significant net change in the total outlay attributable to scholarly publication and communication, once OA publishing costs are met. So it will remain for librarians to prepare to advocate for levels of library collections- and access-related funding to be sustained for investment in other resources or activities, including the value-added services on offer from the publishers of subscription-based ejournals.
As David Goodman\(^3\) points out, if retained, the savings could also be used by libraries to buy additional non-OA material from journals they have had to cancel because of high subscription costs. Goodman also suggests that one advantage of the Open Access-by-the-article, Open Choice development is that related reductions in libraries’ subscription expenditures are likely to less dramatic, year on year, than with full OA, as some subscription costs will remain to be met by the library – this will keep the subscription savings lower to the external administrator’s horizon, and increase the likelihood of the library retaining them for reinvestment elsewhere.

**Author self-archiving** represents the second, sustaining limb of the OA movement, and a complementary aspect of ejournal article publishing. In this area, too, libraries have an opportunity to reallocate OA savings or to argue with funding authorities for the retention of resources which might otherwise be withdrawn. The creation, management and sustaining of institutional repositories need not be expensive, in comparison, for example, to the total expenditures of the institution on scholarly and research activity, and depending on the scope and intensity of the IR program implemented\(^3\). But it is just one more of the challenges facing the library budget manager, to be able to convert resources previously applied to the subscription model to related activities that will sustain a reformed model of scholarly communication. An alternative budgetary consideration which libraries may need to consider as a call on their resources might also prove to be subsidizing the growing number of subject-oriented central repositories modeled on the high-energy physics ArXiv\(^3\) article repository – although the optimal relationship between these two complementary approaches still needs to be resolved\(^3\). The point remains: the article-
based approach to information-seeking empowered by the rise of the ejournal cries out for innovative approaches to budget management and a voluntary freeing-up of constraints on the way “collections” funding is reapplied.

**Conclusion**

The complex environment in which librarians are currently planning for and managing ejournal collections gives rise to a host of fiscal, budgetary, and technical challenges, many of them rooted in the continuing “serials stranglehold”. These challenges are best addressed by librarians acquiring a clear understanding of the interactions between the different elements of the collections and the budget, and fostering a collaborative and forward-looking approach to budget management.

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3 Murray S. Martin, *Collection Development and Finance* (Chicago: American Library Association, 1995), 50. He went on to say, with some prescience, “No clear cost pattern has yet emerged, but it seems likely that, in the future, use will be governed by contract, including membership payments as a variation.”


10 See [http://www.journalprices.com](http://www.journalprices.com)

11 See [http://www.projectcounter.org/](http://www.projectcounter.org/)

15 As used in ICOLC, “Statement of current perspective,”
22 See ICOLC, “Statement of current perspective,”

For more on publishing fees for these examples, see
http://www.oxfordjournals.org/our_journals/nar/announce_openaccess.html#publication (NAR),
http://www.plos.org/journals/pubfees.html (PLoS),

David Goodman, posting to LibLicense listserv, September 8, 2006,

For discussion and analysis of comparative costs of establishing and running various forms of IR, see, for example, the appropriate threads on the SPARC-OAForum@arl.org listserv.


See, for example, Alma Swan and others, “(2005) Developing a model for e-prints and open access journal content in UK further and higher education.” Learned Publishing 18, no. 1 (2005): 25-40,
http://eprints.ecs.soton.ac.uk/11000/

Will Wakeling

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