

Managing Periodicals Subscriptions: Improving Cost-Effectiveness

◆ An edited version of a paper presented at the UKSG Publisher's seminar

Introduction

THIS paper has two main objectives. In line with the general objectives of the seminar, I will try to convey the everyday reality of how the BMA Library manages and exploits its serials collection (and for that matter the every-year reality of how we decide what to subscribe to and what to forgo). Secondly, there are some general conclusions to be drawn from the BMA Library's experience of managing our serials budgets — conclusions which may point to some significant shifts in the nature of scholarly publishing. The views expressed are entirely my own and do not necessarily represent those of the BMA, or BMJ.

Some of these points are far from optimistic, from a publisher's point of view, but they are not intended as a complaint on behalf of my sectional interest. Having spent two-thirds of my working life in publishing or marketing (at the British Library, Geac Computers and at the library automation journal VINE), I am familiar with the problems of product planning, revenue, profitability and so on. Although now working in mainstream librarianship, the problems are still very much the same — when faced with a >30% annual growth in demand for services and a shrinking grant, marketing and product management experience seem starkly apposite.

BMA Library Bibliometric Study

Before dealing in more detail with BMA Library operations, it is worth spending a short time on the research project which supplied the statistical data on which the rest of this paper is founded. A

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complete account will be published shortly¹, so only the bare outline need be given. For a five month period during 1989 and 1990, a detailed Bibliometric Study was made of every enquiry, loan, photocopy or other use of a document or other information source within the library. Using a standard transaction form the progress of every enquiry was tracked in complete detail — including the category of user, the nature of the request, how the answer was located, how and in what form it was conveyed, how long the process took, what proportion of enquiries met with referral or outright failure.

The resulting mass of raw data was keyed into a PC database system and has provided a virtually unlimited fund of practical statistical information. The conclusions of our Bibliometric Study have already been used as the basis for a complete reorganisation of library stock and for a large number of adjustments to services. As will be explained below in more detail, they will be used during 1991 for a fundamental review of our journals subscription list.

The BMA And Its Library

The British Medical Association is in law a registered trade union, and conventional trade union activities such as negotiating pay and conditions and providing representation for members in trouble form an important part of our work. At least as important are the Association's scientific and campaigning activities. The BMA is a democratic organisation controlled by the members through BMA Council, and in addition to

annual membership subscriptions it derives significant income from its sub-letting of parts of BMA House and from the BMJ and other journals published by the BMJ Group.

The BMA Library was founded in 1887 to provide members with a reference service and a place to study. Over time a complete range of library and information services has been added to the facilities provided for members: book loans, postal and telephone information services, photocopying, computer searching, films and videos, and information technology courses. The most fundamental change took place in the 1960s, when at the request of the (then) Ministry of Health an Institutional Membership scheme was introduced through which the BMA Library undertook to provide back-up information and document delivery services directly to NHS and other UK medical libraries. Enquiries from our 400 Institutional Members now constitute about half our total work-load, and for priced services such as photocopying this proportion is very much higher. The Library's involvement has been justified as providing the best possible service to our members by enhancing the services available from their first choice (ie local) medical library.

The BMA Library differs from most libraries in two respects important to the theme of this paper:

1. **Supporting other libraries. For almost all our users we are a library of second resort, and are only referred to when their local library or information service is unable to satisfy a request. This is self-evidently true of our institutional members, but the pattern of usage shown in the Bibliometric Study, plus a good deal of informal research, indicates that it is also largely true of the personal membership. This factor explains why the BMA Library's pattern of usage varies widely from that shown in other published studies. Almost two-thirds of all journal titles, and almost all 'live' titles, were used at least once during the study (as opposed to 52% in the classic**

Woods Hole study⁷). The number of years for which a journal remains in demand at the BMA Library is very much longer (Figure 1).

2. **Very few callers. During the Bibliometric Study, only 8% of all enquiries and document uses were by visitors to the library, a figure which includes use by BMA and BMJ staff. This means that it is very easy and comparatively cheap to compile management information, and also that this information will be far more reliable than if its collection had depended on the goodwill, diligence and common sense of a heterogeneous community of academics (or whatever).**

Funding

The library is still funded substantially by the BMA. The analysis shown in Figure 2, and based on the 1991 budget, significantly understates the importance of this funding because they take no account of our debt to the BMJ for their donation of exchange journals and of review copies of books. Without the BMJ's support our collections and services could not continue to operate at their present level. Nevertheless, the importance of our revenue is increasing, both as a proportion of our total resources and in real terms.

Figure 3 provides a broad breakdown of our sources of revenue, and is also based on 1991 projections. **Subscriptions** refers only to the subscriptions paid by Institutional Members; the **Film Competition** revenue is the fees paid by entrants to the annual BMA Film & Video Competition organised by the library; the catch-all **Transactions** category includes photocopies, computer searches, income from courses and publications.

Current Operations

The BMA Library has 17 full-time staff, 10 of them professional. In addition to 50,000 monographs

and 1,500 films and videos, our catalogues list 3,100 periodical titles, around 1,200 of them current subscriptions. Our main clientele is the BMA's 80,000 members (most of whom use us via our 370 institutional member libraries), all of them registered medical practitioners, plus the 200 staff of the BMA and BMJ. During 1991 the Library supplied 32,841 photocopies, loaned 4,777 books and 433 videos and carried out 1,407 computer searches³.

Managing The Periodical Collection

The library's accommodation is virtually full, which imposes a discipline in collection management which is wholly beneficial in a working scientific library - for every item we acquire another must be discarded. This discipline has led to a very careful definition of our collection policy. Instead of trying ineffectually to cover the broad range of biomedical practice and research we decided in 1989 to concentrate on the following areas:

1. **Current clinical practice**
2. **Medical ethics**
3. **Political medical issues**
4. **Issues on which the BMA is campaigning**
5. **BMJ and BMA publishing archives**

For monographs and videos, the collection policy is easy to apply on an immediate basis. Selection and cancellation of serials titles is, of course, complicated by the urge to keep the collection in a state which our users will find easy to comprehend — to avoid fractured holdings. For the BMA Library this is more than usually important because so few of our users ever even enter the building, and even fewer are regular, routine users of the type which are the bread and butter of almost every other library.

The criteria applied when the BMA Library decides to add or subtract titles from its subscription list are entirely conventional. Within the general collection policy already explained, we

balance cost, current and future user demand, overlap with other titles and the publisher's reputation (both in terms of academic quality and of the likelihood that we will be burned by aggressive pricing policy).

Although we are fortunate in not having had to prune our serials list to cope with budget cuts, it is clear that for the foreseeable future any new titles will be paid for by cancellations from our current list. The data provided by our bibliometric study has placed us in an ideal position to carry out a comprehensive review of serials acquisitions. This will be completed in time for the 1992 subscription renewal round as it is likely to bring substantial changes to our intake.

Tables 1 and 2 are examples of the level of objective detail which we are able to apply to this review. Table 1 lists the BMA Library's 50 most-used titles, showing the cost per use. These figures are merely based on the nett subscription cost divided by a full-year extrapolation of the number of uses shown by the study. An interesting method for arriving at the full cost was examined⁴ but the raw figures were thought to be sufficiently accurate for our purposes. For heavily-used titles, almost every cost-per-use is comfortably under £1. This tabulation contains only two titles that surprised the Library's professional staff. The BMJ figure represents nearly 4% of the total transactions recorded during the study - remarkable testimony to its place in British medical information, considering that everyone allowed to use the BMA Library receives a copy of the BMJ free of charge; the heavy demand for the *Annals of the New York Academy of Sciences* is remarkable since the BMA subscription lapsed some years ago. Following the Study, we are seeking to complete a second complete run of the BMJ, and have resubscribed to the *Annals*.

If Table 1 represents the staple intellectual diet of our users then Table 2 might be described as our cancellation hit-list. It shows our 50 most expensive journals, measured by raw cost per consultation. This is, after all, the real way to measure whether or not a journal is expensive. Excluded from this table is the small number of

journals with no recorded usage — these were almost all cancelled during the 1991 renewal round. Having this data available has led us to a redefinition of what we mean by a “core” journal. To give but five examples, before the study we would have included ‘The Journal of General Microbiology’, ‘Development’, ‘The Bio-chemical Journal’, ‘The Journal of Experimental Medicine’ and ‘The Journal of Comparative Pathology’ in our list of titles without which the Library would begin to lose its identity and integrity. But with the costs-per-use of these titles ranging from eight to thirty-eight times our inter-library loan cost, the position changes very radically.

Our 1991 subscription list renewal project has started with the construction of a hit list of titles which have been shown to be expensive, poor value, attracting little or no use — or which fall far outside our collection policy. The usage of marginal titles is being monitored for a few months, to see if usage has increased since the end of the study. (Since the Library is almost exclusively used by its staff, this type of management information exercise is easy to mount and produces extremely reliable results.) By October 1991, we will know which titles we can dispense with, and will be able to use the resulting savings to take on new titles, to build up areas of known weaknesses, and to make strategic moves such as perhaps strengthening our coverage of human genetics.

Changed Attitudes

The information resulting from our Bibliometric Study has brought significant changes in the way we view our periodicals collection, and will affect our relationship with the scholarly publishing industry:

1. **As some of our preconceptions have been shown up as fallacious, we have become much more intelligent and questioning customers. The unthinking sentiment that Journal N is a core title and we have to have it no longer has much power.**
2. **We are now much more cost-conscious, much more inclined to ask whether a £150**

title is going to attract twice the use of its £80 rival. Before the study, most of us the professional staff had little idea of the sometimes huge and mysterious variations in the cost between titles of equal size and stature.

3. **The Library’s professional staff has become significantly more willing to accept less continuity in our year-to-year choice of journals and much more willing to accept the penalties of changing our subscription base in order to follow, or even anticipate, demand.**
4. **We are ever more user-driven in this area as in others. Put simply, we need to keep our membership convinced that the Library is worth all the money they give us, and we need the revenue to balance our books.**

Librarians and Publishers

Following our Bibliometric Study, the BMA Library is now a much more difficult customer for publishers. Although not every library has been able to undertake such a thorough analysis, the financial stringency which has chilled us all is bringing with it some general and significant changes of outlook which the publishers will ignore at their long-term peril.

First and foremost, they will have to develop a bit more respect for our intelligence, particularly with regard to budgeting and investment. This is something of a hobby-horse of mine, but during my two-and-a-half years at the BMA I have grown tired of being treated as a complete mug by suppliers and potential suppliers. To give an example: librarians attending the 1990 SCONUL conference, *Scholarly Communication and Serials Pricing* were treated to some startling lies and evasions by some of the publishers present, most memorable was the solemn assertion that the price of a serial was entirely a function of its production cost.

Journal publishers are going to have to come to terms with this leaner and nastier environment,

because their place in the fabric of scholarly communication no longer seems assured for eternity. The increasing separation of information from publishing, and especially from conventional print publishing, has been ably described by Gordon Graham and conventional serials may soon begin to follow bibliographic serials and reference books into the dustbin of history. Not tomorrow, not next year, but perhaps before my retirement date of 2009.

The time may well come when publishers will need librarians more than we (and the authors) need them. If at that time our perception remains that publishers have continued to drive up prices, to fund merchant adventuring, to support LA Law lifestyles, to generally rip us off — then when alternatives come along we will grab them. If they fail to come along, we will create them. And publishers will have deserved it.

This is not a bitter complaint born of envy. I have chosen my work and I like it — many of my best friends are publishers and I buy them lunch regularly. But the days are over when librarians convinced themselves that a serial was indispensable because their library had a complete run. Our cocoon fell away in the 80s, publishers' may be cracking now.

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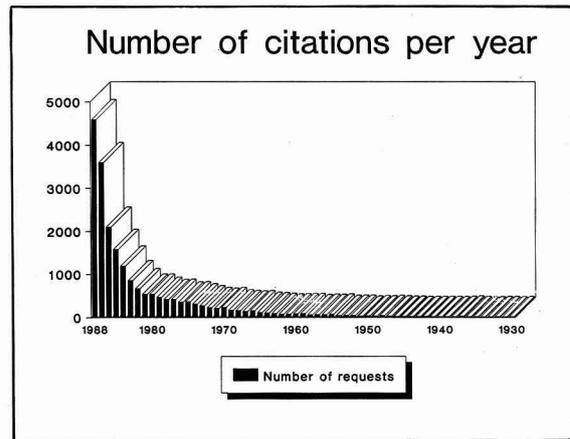


Figure 1

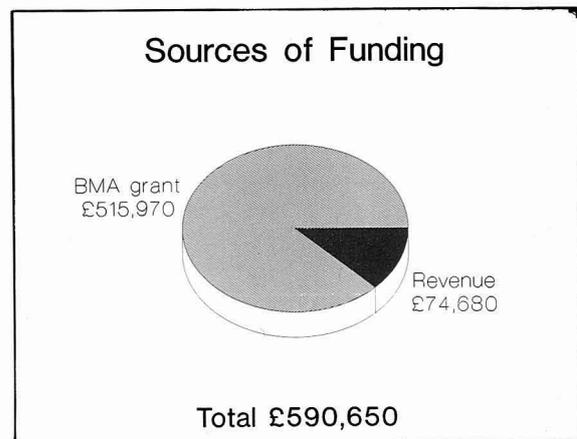


Figure 2

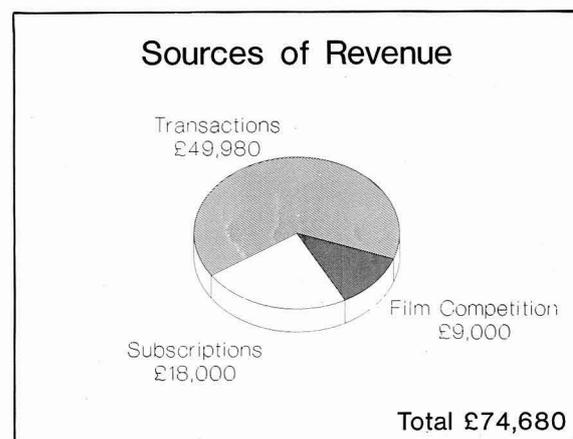


Figure 3

Table 1 — 50 Most Used Titles

Rank	Uses	Title (Unit Price)
1.	795	British Medical Journal (£0.05)
2.	452	The Lancet (£0.04)
3.	256	Medical Journal of Australia (£0.33)
4.	220	New England Journal of Medicine (£0.09)
5.	209	Journal of the American Medical Association (£0.08)
6.	204	Southern Medical Journal (£0.12)
7.	150	New Zealand Medical Journal (£0.09)
8.	140	American Journal of Gastroenterology (£0.32)
9.	132	Annals of Internal Medicine (£0.22)
10.	130	Canadian Medical Association Journal (£0.15)
11.	126	Social Science and Medicine (£2.00)
12.	123	South African Medical Journal (£0.12)
13.	117	American Journal of Public Health (£0.32)
14.	115	American Journal of Medicine (£0.28)
15.	112	American Journal of Obstetrics & Gynecology (£0.28)
16.	99	Transplantation Proceedings (£0.62)
17.	98	Annals of the New York Academy of Science (£12.54)
18.	92	Postgraduate Medicine (£0.22)
19.	85	Chest (£0.42)
20.	85	Gerontologist (£0.29)
21.	82	Journal of the American Geriatrics Society (£0.66)
22.	81	American Journal of Cardiology (£0.48)
23.	79	Journal of Allergy and Clinical Immunology (£0.49)
24.	79	Journal of Clinical Psychiatry (£0.37)
25.	79	Obstetrics and Gynecology (£0.80)
26.	77	British Journal of Clinical Pharmacology (£0.94)
27.	77	Journal of the American College of Cardiology (£0.66)
28.	76	American Surgeon (£0.41)
29.	75	European Journal of Clinical Pharmacology (£2.14)
30.	75	Journal of the Royal College of General Practitioners (£0.44)
31.	75	Science (£0.71)
32.	73	Neurology (£3.23)
33.	72	Annals of Allergy (£0.24)
34.	72	Thrombosis Research (£3.29)
35.	71	American Journal of Epidemiology (£0.61)
36.	71	American Journal of Physiology (£4.67)
37.	71	Drugs (£0.90)
38.	71	Journal of Infectious Diseases (£0.74)
39.	70	Archives of Surgery (£0.15)
40.	70	Hypertension (£0.63)
41.	70	Journal of Urology (£0.92)
42.	69	Cancer (£0.83)
43.	69	Canadian Journal of Surgery (£0.25)
44.	69	Gastrointestinal Endoscopy (£0.41)
45.	69	Radiology (£0.63)
46.	68	Family Practice (£0.31)
47.	68	New York State Journal of Medicine (£0.18)
48.	67	Archives of Internal Medicine (£0.31)
49.	65	Public Health (£0.38)
50.	64	American Journal of Obstetrics and Gynecology (£0.48)

Table 2 — 50 Most Expensive Journals

N° of reqs	Name of Journal	1990 Price	Cost per req
1	Resuscitation	£214.29	£214.29
1	Journal of General Microbiology	£350.00	£350.00
1	Suomen Laakarilehti	£126.40	£126.40
1	Abstracts on Hygiene and Communicable Disease	£109.00	£109.00
2	Development	£415.94	£ 86.65
2	Research in Microbiology & Research in Immunology & Research in Virology	£380.73	£79.32
1	Zentralblatt für Arbeitsmedizin Arbeitsschutz Prophylaxe und Ergonomie	£ 72.55	£ 72.55
1	Revista Brasileira de Medicina	£ 69.61	£ 69.61
1	Advances in Clinical Chemistry	£ 53.50	£ 53.50
1	Journal of Audiovisual Media in Medicine	£ 50.62	£ 50.62
1	Zeitschrift für Unfallchirurgie Versicherungsmedizin und Berufskrankheiten	£ 47.78	£ 47.78
1	Genetic Research	£109.67	£ 45.70
7	Biochemical Journal	£682.29	£ 40.61
1	Seminars in Oncology	£ 94.90	£ 39.43
1	Bibliography of Bioethics	£ 39.43	£ 39.43
1	British Journal of Healthcare Computing	£ 38.85	£ 38.85
1	Medicinski Pregled — Medical Survey	£ 92.29	£ 38.45
1	Professional Negligence	£ 90.00	£ 37.50
2	Journal of Experimental Medicine	£175.19	£ 36.50
1	Tropical Diseases Bulletin	£ 80.00	£ 33.33
1	Transactions and Studies of the College of Physicians of Philadelphia — Medicine & History	£ 32.46	£ 32.46
2	Journal of Comparative Pathology	£153.96	£ 32.08
2	Research in Immunology	£151.16	£ 31.49
1	Society of General Microbiology Quarterly	£ 30.10	£ 30.19
1	Bulletin of the Postgraduate Committee in Medicine University of Sydney	£ 29.82	£ 29.82
5	Molecular Immunology	£357.00	£ 29.75
1	Journal of Heredity	£ 70.82	£ 29.51
1	Seminars in Liver Diseases	£ 64.89	£ 27.04
2	Casopis Lekarů Ceskych	£109.98	£ 22.91
1	Journal of the Irish College of Physicians and Surgeons	£ 51.50	£ 21.46
1	Journal of Public Health Medicine	£ 51.34	£ 21.39
1	Advances in Internal Medicine	£ 49.95	£ 20.81
4	Nouvelle Revue Française d'Hématologie	£192.93	£ 20.10
1	Laboratory Practice	£ 48.00	£ 20.00
14	Anatomical Record	£644.48	£ 19.18
11	American Journal of Anatomy	£484.83	£ 18.36
1	Revue Médicale de la Suisse Romande	£ 40.77	£ 16.99
2	Modern Medicine — Duluth	£ 72.22	£ 16.09
1	Advances in Genetics	£ 35.00	£ 14.58
12	Forensic Science International	£407.16	£14.14
1	Archives de l'Institut Pasteur d'Algerie	£ 13.00	£ 13.00
98	Annals of the New York Academy of Science	"£2,950.00"	£ 12.54
2	British Journal of Social Psychology	£ 59.97	£ 12.49
5	Journal of General Physiology & Society of General Physiologists Series	£145.16	£ 12.10
7	Immunology	£195.08	£ 11.61
2	Vitamins and Hormones	£ 54.00	£ 11.25
1	Calcutta Medical Journal	£ 26.68	£ 11.12
3	Vascular Surgery	£ 78.12	£ 10.85
2	Revue Médicale de Liege	£ 50.40	£ 10.50
7	Hepatology	£175.20	£ 10.43
26	Virchows Archiv — a Pathological Anatomy and Histopathology	£644.71	£ 10.33
6	Journal of Medical Microbiology	£147.63	£ 10.25
6	Parasitology	£146.58	£ 10.18
3	Seminars in hematology	£ 73.29	£ 10.18