

# Journal publishing

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# 1 Introduction to journals

## What is a journal?

The *Oxford English Dictionary* does not recognise the word 'journal' in the sense we use it in this book. It informs us – as would many librarians – that we should be using either 'periodical' or 'serial'. Definitions vary, but librarians – the people most concerned with these divisions – would generally accept something like the following specifications:

**Serial:** a publication issued in successive parts, bearing numerical or chronological designations and intended to be continued indefinitely.

**Periodical:** a publication appearing at stated intervals, each number of which contains a variety of original articles by different authors.

Our main concern in this book is with learned (sometimes referred to as 'scholarly') journals. These are periodicals, or serials, which contain a significant proportion of articles (often called 'papers' in scientific journals) based on original scholarship – sometimes referred to as 'primary communications'. From the readers' viewpoint, such journals blur with other types of serial. Singleton examined the holdings list of a large scientific research library and found that half of all the serials it acquired were not learned journals in terms of the definition given above (see Curwen, 1980). However, in terms of information handling, it is useful to treat 'journals' as a specific group, distinguished by the fact that the input of material to a journal is not usually predetermined. This contrasts with magazines, such as *New Scientist* or annual review volumes, where nearly all the material is commissioned (or written in-house). At the same time, some other types of publication – newsletters, for example – are dependent on input from readers. This produces some similarity in



information-handling terms to journals, although newsletters are less likely to contain original research. So the boundary between serials, periodicals and journals serving the research community can, in practice, be rather hazy. Consequently, although this book is devoted to journal publishing, it is intended to say something across a broader front.

### **Why publish journals?**

In times past, the typical reason for publishing journals was because groups of enthusiasts wished to record and circulate information concerning their work and activities. Traditionally, the printed record was a by-product of meetings between such enthusiasts, who typically joined together to form a society. The link between societies and journals is strong: most societies at least consider the possibility of publishing a journal. More recently, and especially since the Second World War, commercial publishers have become important producers of journals. In part, this has been a reactive process to cater for groups of authors and readers whose needs, for one reason or another, are not entirely satisfied by existing society-published journals. Increasingly, commercial publishers have become more proactive, and are taking the initiative in determining where there may be gaps in journal coverage. Even so, this is typically on the basis of proposals coming from individuals and societies (a well-established journal publisher may receive ten to fifty proposals a year).

Commercial publishers are necessarily concerned in the first instance with the question of financial return. (Although it should be added that they have sometimes taken a charitable attitude to worthwhile journals. The record may be held by Macmillan, who supported *Nature* for thirty-five years before it broke even.) In these terms, journals have a number of attractions for publishers. Today, most major publishers ask for payment in advance so that the kind of financial uncertainty involved in book publication is absent. Overheads are much lower than for books; the value of sales per member of staff is generally much higher. Some costs, such as for building up mailing lists, can be shared between books and journals. Moreover, journals are a continuing business, and one providing contacts with authors, which may lead to new books for publishers who produce both journals and books. At the same time, the great expansion of

academic and professional activities since the Second World War has provided many opportunities to launch new titles. Commercial publishers, such as Pergamon (in its heyday) and Elsevier, have produced hundreds of new titles over the past forty years.

The market, however, has become much more difficult as shown in figure 1.1. A survey of journal publishers in Britain carried out by the Publishers Association (Oakeshott, 1995) showed that in 1994, 10 journals out of the sample of 861 were closed down although there was still a net increase over 1993 in the number of titles, particularly in medicine and the social sciences. This trend appeared to continue through to 1995. The survey also showed a decline in total circulation of 4 per cent with the institutional subscriptions declining 6 per cent, but this varied from subject to subject with the social sciences remaining unchanged.

The differences between society and commercial publishers have tended to diminish in recent years, as societies have become increasingly concerned with the profitability of their publications. This is reflected in the many co-operative publishing agreements that now exist between learned societies and commercial publishers. Societies often use profits from journals to fund other activities, while publishers will build up reserves to invest in new publications. The investment required in the first two or three years of a new journal can be considerable, as is shown in figure 1.2. However, differences in approach and infrastructure, which can affect the economics of journal publishing, remain. A study carried out in the USA (Moline, 1989) indicates how this may be reflected in terms of journal pricing. (See tables 1.1–1.3.)

The differences due to subject matter in table 1.1 have been included because it is important to remember that the mix of subjects is not the same for commercial and society publishers. Nevertheless, this and other studies do indicate an underlying difference in pricing between society and commercial publishers. One factor to be taken into account here is the greater amount of voluntary help given to society publishers, especially in terms of editorial assistance. An example of the importance of this is provided by a small modern-language research journal published in the UK. For some years this was produced by a commercial publisher. In 1979, the university editors were told that the price must be increased from £12 to £20 in order to break even. The editors took over the

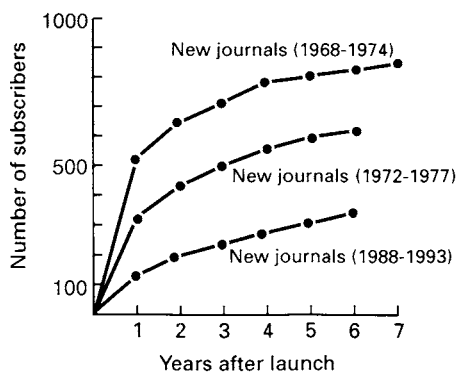


Figure 1.1 Growth in circulation of new STM research journals which are launched independently of any society, showing the decline in the market. Each graph is based on an average of three titles. Where a society is involved, the circulation is usually greater due to members taking copies.

title and produced it themselves using desktop publishing, with the result that throughout the next decade its price was kept at £15 p.a. In effect, the editors and, to some extent, their institution were subsidising the publication.

Another important difference is that society members may be expected to take copies of the society journal, or journals, as part of their annual subscription to the society. This provides a base level of sales, which a commercial journal does not have, and is important not only as a direct subvention, but also for such spin-offs as advertising revenue. In the USA, a number of other factors also favour society publishers. For example, there are tax breaks and lower postage rates available to not-for-profit publishers, and they may also be able to introduce page charges.

Some of these differences have been eroded over the past few years. Journal editors are increasingly requiring compensation for their efforts, whether from commercial or society publishers; so, too, are the institutions that house many of them. In an increasing number of societies, receipt of the journal as part of the membership requirements is no longer compulsory; so the base number of subscriptions is no longer ensured. Hence, differences between society and commercial publishers of journals appear to be diminishing.

The costs of paper, printing and binding for a journal usually account

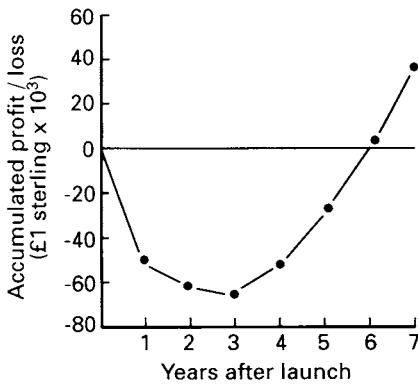


Figure 1.2 Graph of accumulated profit or loss of a well-produced STM research journal launched in the late 1980s. The size of the investment required explains why new STM journals are mainly launched by large publishers. With the support of a society the graph is usually flatter and generally new journals in the social sciences and humanities do not require so much funding.

for rather less than 35 per cent of the subscription price; for books, they may come to 20 per cent or less of the cover price. There are a number of reasons for this difference. The trade discount on academic books (other than school texts) is rarely below 25 per cent and may be 40 per cent or more; on journals it is sometimes zero, often 5 per cent and rarely more than 10 per cent. Each book requires special attention and design (if only of the cover), so editorial and production overheads are generally higher. Journals enjoy continuing sales; books generally need more spent on promotion. In addition to providing publicity, book publishers often need to employ representatives and agents overseas, while journal publishers can usually manage without a permanent overseas sales force, nor do they need representatives who can call on booksellers. It is easier to predict the sales for an established journal than for a book, even one in a series. The price of the book has to allow for the possibility of copies not being sold or, at best, being remaindered. Finally, journal publishers demand payment in advance and charge for cancellations; book publishers have to give credit (which may be for as much as 180 days in far-flung markets) and allow booksellers to return unsold copies.

Any publisher who has attempted to launch a single book title in a new

subject area will know the problems this involves. Journals are different. An analysis of the journal holdings at the British Library Document Supply Centre (BLDSC) shows that many publishers produce only a single title. This is not too surprising. As we have seen, many journals are owned and published by a society or similar organisation, and are aimed at the membership. For a small or medium-sized society, a single title will often suffice to cover all of its needs. A journal published by a commercial organisation, which has to pay for all its services, is in a different position. It usually forms one of a number of titles from that imprint: economies of scale are generally necessary to achieve financial viability. This dichotomy is reflected in the data from BLDSC. A clear majority of the inter-library loan requests are for articles from scientific, technical or medical (STM) journals, and a considerable proportion of these requests can be supplied from journals produced by a small group of international STM journal publishers, primarily in the commercial sector.

The structure of the journal publishing community is also indicated by David Brown's analysis using the reported turnover with the subscription agents B. H. Blackwell (BHB) (Brown, 1993). He came up with three categories: (1) 117 publishers with a turnover of more than £50,000 with BHB producing 7177 titles in total; (2) 987 publishers with a turnover between £50,000 and £5,000 with BHB producing 4047 titles, and, (3) 16,429 publishers with a turnover of less than £5,000 with BHB producing 23,700 titles.

The importance of a few commercial publishers on the international journal scene is reflected in the holdings of most research libraries. This can be seen from the proportion of titles from a given country that actually emanate from a single publisher. For example, one US university library in the latter part of the 1980s subscribed to 253 journal titles from the Netherlands and 194 titles from West Germany. In terms of publishers, this can be restated as meaning that it subscribed to 229 titles produced by Elsevier and 101 titles from Springer Verlag.

Co-operative arrangements between societies and commercial publishers vary greatly in terms of who has overall control. However, the society typically provides the editor(s), so day-to-day editorial policy is in the society's hands. When no society is involved, the editor is still usually responsible for editorial policy, and expects this right as part of the job.

Table 1.1. *Average annual journal subscription price by subject*

	1973	1985	Increase
Science	\$24.36	\$197.46	711%
Social Sciences	\$12.63	\$64.66	412%
Humanities	\$7.92	\$32.81	314%

Table 1.2. *Average annual journal subscription price by publisher type*

	1973	1985	Increase
Commercial publisher	\$27.93	\$188.69	576%
Society publisher	\$16.26	\$96.21	492%
Other scholarly publisher	\$11.10	\$63.11	469%

Table 1.3. *Average cents per page by publisher type*

	1973	1985	Increase
Commercial publisher	3.7-4.0	19.3	400%
Society publisher	2.9-3.2	10.4	240%
Other scholarly publisher	3.0	8.9	200%

Publishers of learned journals (apart from some review journals) rarely pay contributors, which weakens their ability to exert much influence on what is published. However, they will certainly watch for signs of falling quality. One of the truest sayings in the business is that good articles sell subscriptions.

## Authors

Clearly, journal publishers are looking to recruit eminent, well-known authors, just like any other publisher. Where scholarly journals are unusual is in the often appreciable overlap between their authors and their readers. The high-priority journals for reading may also be the preferred journals in which these readers publish. The extent to which this is true varies with audience. The overlap is important for many

scholarly journals, less so for professional ones and hardly at all for semi-popular publications. In general, academic readers are more likely to be potential authors than readers working in other types of institution. For example, it has been estimated that 28 per cent of American scientists work in the academic world, but they account for some 70 per cent of US-authored scientific papers. Commercial or security considerations form a particular barrier to journal publication. Previously this has mainly affected potential authors in industrial or commercial enterprises, but current research pressures on universities mean that it is now an increasing concern there, too.

Within each subject area, journals can be listed in terms of the prestige that authors assign to them. In the sciences, such comparisons are made internationally; so, if the journal with highest prestige is published in (say) the United States, its prestige will normally ensure that papers are submitted to it by authors from Europe and elsewhere, as well as from North America. Such ranking of journals is not immutable. It changes – although usually fairly slowly – and, in any case, the exact order of precedence is often a little hazy. Some points are clear. The journals with most prestige have typically been established for some time – decades, or even centuries. This means that society journals are preferred, although a number of commercially-published journals have now reached the top. Prestige and subject specialisation (alternatively expressed in terms of readership outreach) always come out top in terms of why authors choose to publish in a particular journal. These factors relate to the research community which the author wishes to reach. Some way behind, though not to be ignored, come a cluster of personal factors, such as having published in the journal before, or knowing the editor. Other factors, such as speed of publication, usually rank lower still. Hence, in attracting good authors to a specific journal, prestige is of crucial importance.

The best way of finding how authors rank a particular journal is to talk to experienced authors in the relevant subject area. Another way is obviously to look at relative circulations of journals in the same field, if the information can be obtained. It can also sometimes be helpful to examine the references attached to papers in journals covering the same topic. The higher the prestige of a journal, the more likely it is to appear frequently in the references. Garfield has estimated that 21 per cent of the

4,400 journals analysed in the *Science Citation Index* for 1988 received 83 per cent of all the citations processed. (The method must be applied with some caution – because, for example, most journals preferentially contain citations to themselves.) Probably the simplest way of inter-comparing prestige via references is to use the ‘impact factors’ for each journal (described below); but these are still somewhat subject-dependent, so comparisons should only be made between journals in the same discipline.

The question of prestige naturally affects new journals. They are, almost by definition, likely to have a lower prestige; so authors are less likely to be attracted to them. One way around this is for the editor to invite distinguished authors in the field to contribute papers. Such a ‘call for papers’ is best done by a personal letter. (This approach underlines the fact that a highly ranked journal is actually one that publishes work by highly regarded authors.) The response to requests of this type is usually somewhat better for society journals than for commercial journals. One problem is that eminent authors are likely to consign their less important work to a new journal. Other factors that can attract (or deter) authors are the general philosophy of the journal, the editor, the refereeing policy, speed of publication and, to a lesser extent, design and offprint policy. The existence of page charges is frequently seen as a deterrent, even though journals may be flexible in their imposition.

Authors actually employ a range of strategies when deciding where to publish their work. A short report of important scientific work might be sent to a journal such as *Nature*, or to a relevant letters journal. A longer report might be submitted to the journal with most prestige in the specialism. Less important, but still useful, work will be despatched to journals of lower prestige. Some of these journals may also provide homes for review-type articles. As a result of this discrimination, there is scope in any subject area for journals of different levels of prestige. This fact provides an opening for new titles which, if they survive, may subsequently grow in reputation.

Various studies over the past twenty years have shown there are systematic differences in rejection rates between different subject fields. The sequence runs from low rejection rates in journals covering the physical sciences, through the life sciences, to high rejection rates in humanities



journals. In terms of actual figures, the rejection rates for well-established journals may range from 20 per cent in the physical sciences to 80–90 per cent in the humanities. These variations reflect both subject differences and market forces. In subject terms, agreement on acceptability between referees (and editors) decreases along the sequence; sciences – social sciences – humanities. Equally, the potential financial rewards to publishers typically decrease in the same sequence. The overall result is that scientists can much more readily find a good journal in which to publish than can authors in the humanities.

Many researchers nowadays are under pressure to maintain a good publications record, which means they normally try to publish anything of reasonable standard which they produce. In response, those involved in the administration of research try to determine whether the published work is significant in terms of quality as well as quantity. One common approach is to assess the standard of the journal in which the work appears. At the simplest, this may be by posing the question – does this journal employ referees? More sophisticated measures look at the impact of the journal. For example, the ‘impact factor’ can be derived: this effectively measures the average number of times each paper in the journal is cited in other papers. (Correspondingly, various attempts have been made to exploit the number of times the publications of an individual or group have been cited by other authors as a measure of their research quality.) The use of citations for quality judgements has often been criticised, but publishers would do well to be aware of the practice, since the application of such assessments to their own titles may help attract, or deter, potential authors. In addition, publishers can themselves use citation measures of various kinds to identify which individuals and institutions are most widely recognised in particular subject fields. This is potentially useful information when launching a journal. Listings of citation measures (including impact factors) are published regularly by the Institute for Scientific Information (ISI) in Philadelphia.

Contributors to scholarly journals are mainly concerned that their work should be noted by their peers. Hence, they are willing to put considerable effort into preparing articles for publication without compensation. They are not too worried if readers make copies of their work: as readers, they often do the same. Hence, it is mainly publishers who

have made the running in discussions of journals and copyright. One aspect of this has concerned the effect of photocopying on sales of journals. The evidence remains ambiguous. Librarians seem to be generally correct in their assertion that, if there are frequent requests by readers for photocopies of a particular journal, then it will normally be considered for purchase. Nevertheless, publishers point to the fact that the circulations of many titles have decreased by 1 to 4 per cent per annum in recent years, whilst the demands on document supply centres have continued to increase. The questions of copyright and copying are taken up in chapter 7.

One final point publishers should keep in mind is that different subject areas have their own traditions for the handling and presentation of journal material. For example, articles in the humanities typically have footnotes (and endnotes), whereas scientific articles do not. Again, the form in which references are given in articles varies with subject. At a less obvious level, the form of an author's name may differ according to the journal. A paper in a scientific journal might have 'J. Smith' as the author; in a social science journal, the same person might appear as 'John Smith'. Scientists usually expect more rapid publication of results than other researchers; whilst the demand for offprints differs dramatically between different research fields. A publisher venturing into a new field is well advised to investigate existing journals in order to pick up some of these distinctions.

### **Marketing journals**

Not surprisingly, there is no single answer to the question – who buys journals? Purchasing habits vary from country to country. For example, the proportion of individual subscriptions to institutional subscriptions is significantly higher in the USA than in the UK. Habits also differ according to the subject. Thus, journals in the humanities tend to have a higher proportion of individual subscriptions than those in the sciences. Purchasers' expectations based on such traditions can affect journal marketing. For example, in a field where individual subscriptions are common, a publisher may feel limited in terms of the highest price that can be charged, since the individual pocket may prove less elastic than

the institutional purse. One answer, commonly adopted, is to have different subscription rates for individuals and institutions. However, as will be noted later, this solution is itself under attack from librarians.

Many publishers – society as well as commercial – now expect their main customers to be institutional (most often some kind of library). It is therefore important for publishers to know how librarians go about selecting, or retaining, journal titles for their stock. The attitude of librarians will be discussed further below, but the first point to note is that selection and retention of titles usually involves joint activity between library staff and their customers. There are exceptions. Some major research libraries rely primarily on the advice of subject specialists on their library staff. At the other end of the scale, academic librarians in a country such as Japan typically have little delegated authority for journal purchasing. But, normally, if librarians suggest changes in journal subscriptions, these will be scrutinised by the readers in their institutions, and vice versa. In these days of tight budgets, it is commonplace for librarians to demand that a new subscription can only be started if an existing title, costing the same amount, is cancelled. It is then up to the readers to decide which new subscriptions should be taken out, and which old ones cancelled. The librarians often retain a final veto, since it is their duty to maintain a balanced collection suitable for all their readers. Some attempts have been made to find ‘objective’ methods of deciding on a journal’s worth, and so the need to subscribe to it. For example, citation measures have been suggested, but such methods are not yet widely implemented.

The prime journal targets for cutting in recent years have tended to be those for which (1) the library has more than one subscription (2) the title is available through resource sharing between libraries (3) the contents of the journal are relatively ephemeral, or do not link closely with current research and teaching programmes (4) the subscription price is very high. In addition, libraries in English-speaking countries have tended to cut subscriptions to foreign-language journals; cover-to-cover translations seem to have been particularly at risk.

The dominance of English-language journals is illustrated by one major British scientific library which tries to hold copies of less-used overseas journals. Even so, over 60 per cent of its holdings in recent years has

consisted of journals published in English. Many journals nominally produced in languages other than English will accept papers written in English. This even extends nowadays – after considerable debate – to a number of French-language periodicals.

For the purchase or retention of a title, the prime requirement for a librarian, or a reader, is obviously that the journal should be used. This is nearly always a more important criterion than the cost of the journal. Readers are attracted to journals which carry high-quality information. However, the position is by no means always straightforward. Some journals have considerable historical prestige, although they may not now be extensively read. It often takes much heart-searching to cancel subscriptions to such journals. Again, when an institution owns a long back-run of a particular journal, librarians may hesitate before cancellation. It is only fair to add that the general financial squeeze of recent years has led them to hesitate less. Another factor is obviously cost. A low-priced journal can be absorbed more readily within an institutional budget, and so may have a greater chance of being retained. However, all journals incur handling and accessing costs: librarians are becoming increasingly aware that no low-usage journal can really justify its acquisition, whatever its price.

Journal publishers have only two basic ways of expanding their publications: (1) by increasing the size of existing titles (2) by launching new journals. Both ways forward are currently under pressure. The rate of appearance of new titles has been falling in recent years. For example, Elsevier launched forty-eight new titles in 1979, but only twenty-six in 1983 and ten in 1988. Moreover, all the journals launched in 1979 survived, whereas a quarter of those launched in 1983 have already disappeared. For science journals, specifically, the number of new titles appearing each year over the period 1945–88 is shown in figure 1.3. According to this, the rate of increase peaked about 1970.

It is an obvious point, but one worth emphasising, that any continuing expansion of journals depends on the availability of readers who wish to read them. Huth (1989) has pointed at that, though the number of medical journals rose sharply between 1960 and 1975, so did the size of the US medical community. He found that the ratio of medical journals in the National Library of Medicine to 1000 physicians/dentists/nurses

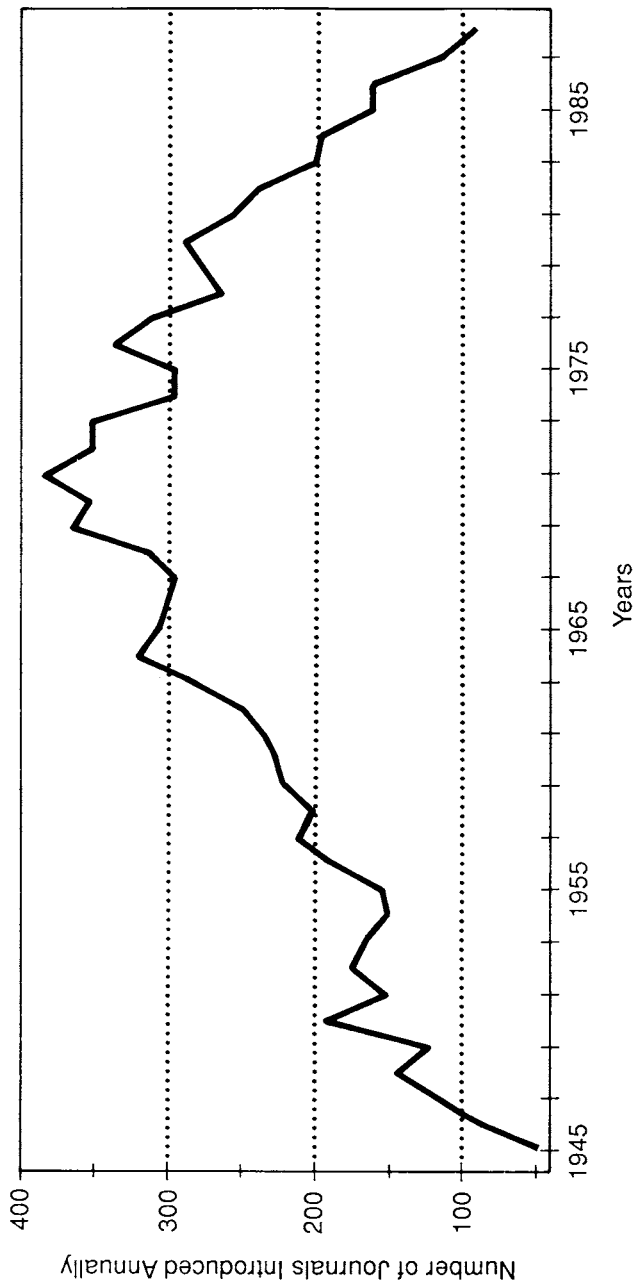


Figure 1.3 The number of science periodicals introduced annually from 1945 to 1988 based on data from *Ulrich's International Periodicals Directory*.

in the community only rose from 15.5 to 17.3 over this period. Here, again, the ratio seems to have peaked in the 1970s. It has been estimated that, in US science and engineering, there were 0.110 articles per person in 1965; 0.155 in 1977; 0.114 in 1985; 0.104 in 1990 (King and Griffiths, 1995).

Journal growth occurs not only by the appearance of new titles, but also by the expansion of existing titles. Figure 1.4 shows the growth in size of a leading British geological journal in terms both of number of papers appearing each year and of the number of pages published annually. Clearly the scale, and so the cost of producing the journal, has changed greatly over the past thirty years. The cost increases because the growth in the number of pages reflects a corresponding growth in the number of articles published. (Individual articles have not increased in length.) This requires extra effort in editing and refereeing, as well as extra production and distribution charges.

The rate of addition of new titles has not been constant across all subject areas. For example, new Elsevier titles in the 1970s appeared in such areas as physics, chemistry and the geosciences. By the early 1980s these areas were less popular, but growth in health science titles continued until at least the mid-1980s. Growth in some areas, such as business and engineering, survived to the beginning of the next decade. By this time, Elsevier was publishing more than 600 titles, or over three-quarters of a million pages per year. These trends at Elsevier reflect what happened more generally across the journal publishing scene (although individual publishers are naturally still cultivating their own particular gardens). Elsevier's experiences during the 1980s may be compared with Butterworth's. At the end of the 1980s, Butterworths produced 93 journal titles (76 in the UK and 17 in the USA). One-third of their journal business was in Europe, one-third in the United States and one-third in the rest of the world. Of the 60 journals started before 1980, 21 had circulations of more than a thousand, whereas only two of those started since 1980 reached this figure. The circulations of most of the older journals had peaked, and were now tending to decline. Nevertheless, the titles, as a whole, were providing a net profit of half a million dollars on a ten million dollar turnover.

The decreases in circulation noted by Butterworths are now