

Current Comments®

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**More for Your Money: Technology,
Marketing, and Hard Work Help ISI
Beat Inflation and the Information Explosion**

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About 25 years ago, or "back in the good old days" as some say, academics could purchase *Current Contents*® (*CC*®) for \$50 per year. That was in the era of little science. But then big science came along. So, it is not surprising that, among the comments I receive from *CC* subscribers, I occasionally find a request to "keep prices under control." It is true that from time to time we have found it necessary to raise our prices: abstracting and indexing (A&I) services are not exempt from the effects of inflation. Moreover, we must cope with an ever-increasing quantity of journals and articles. The scientific literature increased about 4 percent per year during the 1960s and early 1970s, roughly doubling in this period. In more recent years, the rate seems to have slowed somewhat, to 2 to 3 percent; however, in some new or fast-growing fields, expansion of the literature can be explosive, doubling every four or five years.^{1,2}

The proliferation of journals and articles is a consequence not only of increased scientific activity but also of the fractionation of scientific knowledge, a phenomenon known as "twigging."³ Twigging creates more highly specialized journals and multiauthored serials, large and small, all of which must be evaluated for possible coverage in one of our editions of *CC* or in one of our citation indexes. I recently discussed the extent of our selection and evaluation procedure.⁴ All such work comes under the heading of "overhead."

Fortunately, along with growth of knowledge and attendant increased costs has come growth in technology. As a consequence, we have not had to increase our prices as much as other A&I services. At the same time, we have improved our products. The result has been real savings for our subscribers. We have achieved these savings not only through persistent attention to production technology but also through increased marketing, which ensures that the number of subscribers increases, thereby spreading the costs over a larger customer base. Furthermore, a few years ago we began accepting advertising in *CC* to help defray rising costs.⁵ Certain costs, however, are difficult to control; postage readily comes to mind and is discussed below.

Before directly addressing the subject of ISI's prices, we must emphasize that all A&I services are not equal. Some index only journals, while others include books, journals, dissertations, and so on. Abstracts are provided in some indexes but not in others. Coverage and abstracting are only two categories that demonstrate the differences between various indexes. Also significant is the way information is indexed; for example, by predetermined subject categories, the keyword-in-context method, a natural language method (such as is used for ISI's Permuterm® indexes⁶), and, of course, citation indexing. For these and other reasons, any comparison of the content of ISI's indexes with those of

specific competitors would be subject to much interpretation and perhaps not be very meaningful. By what standard can one measure the value of such dissimilar products? It would not be fair to us or to other services to attempt such comparisons.

ISI's products can, however, be compared to an aggregate profile of A&I products in terms of the average percentage increase in price over a certain period. The price indexes published annually in the *Library Journal* contain the data for such a comparison. The 1984 survey demonstrated that the average price for a US A&I service, or serial service as the study called it, more than doubled (i.e., rose 108 percent) from 1977 to 1984.⁷ The survey used the definition of a serial service given by the *American National Standard Criteria for Price Indexes for Library Materials*: "A periodical publication which revises, cumulates, abstracts, or indexes information in a specific field on a regular basis by means of new or replacement issues, pages, or cards, intended to provide information otherwise not readily available."⁸ We contacted one of the authors of the study, Norman B. Brown, assistant director, Special Collections, University of Illinois Library, Urbana-Champaign, to confirm that ISI's products were part of his profile, and indeed they were.⁹ Incidentally, the 1985 survey has just appeared, but it could not be used for our study, since the serial services, or A&I, portion of this annual survey has been suspended.¹⁰

Besides analyzing the average price increase in A&I services overall, the 1984 survey also analyzed specific subject categories and found that science and technology A&I service prices rose an average of about 109 percent from 1977 to 1984, while social sciences and humanities A&I service prices rose about 95 percent and 117 percent, respectively. To obtain some perspective on these numbers, consider that the percentage increase in the Consumer Price Index for

urban wage earners (CPI-U), the recognized measure of inflation in the US, rose about 71 percent over the period 1977 to 1984, according to the US Bureau of Labor Statistics.¹¹ Plainly, the prices charged to subscribers of US serial services outpaced CPI-U inflation considerably during this eight-year period. I have made no attempt to consider inflation in other countries, but it varies considerably.

How do the prices we charged over this period compare? Table 1 lists the percentage increase in the prices of our products from 1977 to 1984 compared with the average price increase for their respective A&I service categories. Our price for *CC/Life Sciences (CC/LS)* increased about 11 percent less than the industry average, while the prices for the *Science Citation Index® (SCI®)*, the *Social Sciences Citation Index® (SSCI®)*, and the *Arts & Humanities Citation Index™ (A&HCI™)* rose roughly half as much as those of similar products offered by other services from 1977 to 1984. These figures show that we have increased our prices at a substantially slower rate than other A&I services in the US in recent years.

But this is only half the story. In addition to holding the line on prices, we have also improved our products.

Improvements made in *CC* since 1977 include expanding journal and article coverage; providing a publishers' address directory; adding the *Citation Classics®* feature; supplying a weekly cartoon, such as those of Sidney Harris, whose career as a science cartoonist we examined recently;¹² improving our quality-control procedures; and upgrading the binding and cover stock of *CC*. Our editorial enhancements, such as the *Citation Classics* feature and the cartoon, have gained wide acceptance among our subscribers. A recent survey of *CC*'s subscribers confirmed that these editorial features, as well as *Press Digest* and *Current Comments®*, are read regularly by most readers.

Table 1: A comparison of the percentage increase in subscription prices for ISI®'s products with the average percentage increase in subscription prices for related US A&I services, 1977-1984. A= ISI product. B= Percentage increase in subscription price for ISI product. C= Average percentage increase in price for subscription to A&I service category of which the ISI product is a member.

| A | B | C |
|--------|-----|-----------------------------|
| CC®/LS | 98% | 109% (Science & Technology) |
| SCI® | 63% | 109% (Science & Technology) |
| SSCI® | 53% | 95% (Social Sciences) |
| A&HCJ™ | 47% | 117% (Humanities) |

Likewise, consider the improvements made to the *SCI* since 1977: expanding journal and article coverage (24 percent and 15 percent, respectively); adding addresses to the *Source Index* entries; and upgrading the binding and typography, just to name a few.

While these improvements have added significantly to the value of our products, it is difficult, if not impossible, to quantify the value of these enhancements. We can, however, calculate the price per article and per journal indexed that we charged our customers over the years.

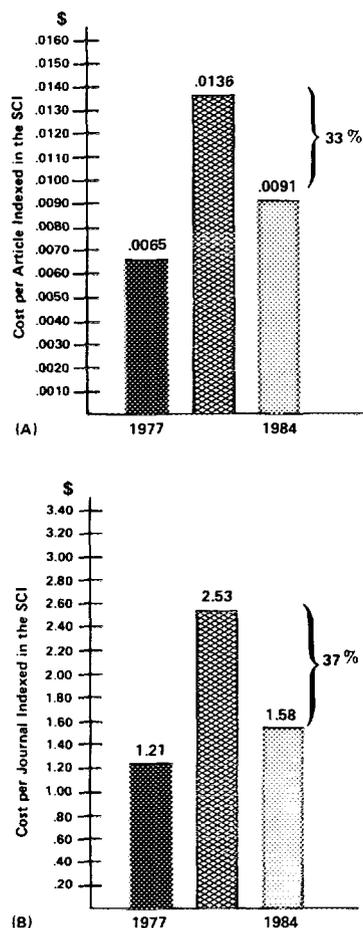
The price per article indexed in the *SCI* in 1977 was \$0.0065 and rose to \$0.0091 in 1984 for the 600,000 source items and 10,000,000 cited references we indexed that year. Had we increased our prices as much as the industry average, we would have charged \$0.0136 per article in 1984. But, in fact, we were able to charge 33 percent less than what the inflation in science and technology A&I services would have warranted, thereby giving our subscribers more for their money.

In 1977 the price per journal indexed in the *SCI* was \$1.21 and rose to \$1.58 in 1984. Again, had we increased our prices as much as the industry average, we would have charged \$2.53 per journal in 1984. But we did not; we were able

to charge 37 percent less than what inflation would have warranted.

The two bar graphs in Figure 1 represent the prices per article and per journal indexed in the *SCI* in 1977 and 1984. The percentage difference between the second and third bar in each graph is the savings our customers have realized over this period. Thus, while coverage of journals and of articles has expanded in

Figure 1: Prices per article (A) and per journal (B) indexed in the *SCI*®, 1977 and 1984. The middle bar in each graph is the price ISI® would have charged if the price for the *SCI* matched the price increases for A&I science and technology serials.



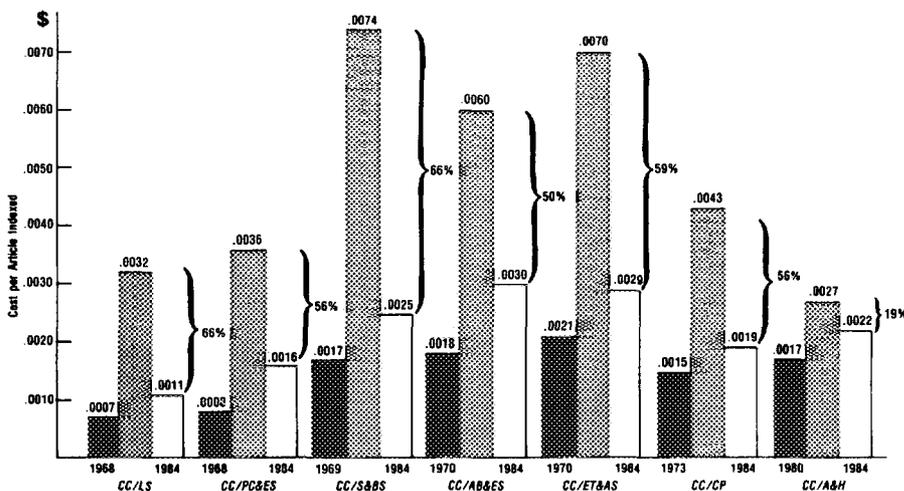
the *SCI*, the price for each journal and article indexed has been heading downward relative to the average percentage increase within the industry.

This will be welcome news to librarians, whose acquisition dollars have been shrinking.¹³ Yearly they must justify their purchases by weighing necessity and demand against expense. The numbers presented here show that we have been stretching your library's dollars.

Moreover, we offer libraries help in acquiring our products through our grant program, which I have described previously.¹⁴ If your library qualifies, our grant program offers the equivalent of a discount ranging from 25 to 75 percent off the regular subscription price. Incidentally, all the computations in this essay are based on the regular list price; however, a significant percentage of subscribers to our indexes benefit from our grant program. The program is based on the assumption that every library, no matter how poor or how small, wants and needs the best reference tools available to support its research and educational programs.

Grants are available not only for purchase of bimonthly and annual indexes but for our multiyear cumulations as well. Some librarians harbor the mistaken assumption that we can produce cumulations merely at the cost of paper and ink, since, in many cases, we already have these data in our files. They may not realize, however, the tremendous amount of computer time, the labor-intensive preparation, and the improvements we undertake when issuing multiyear cumulations. For example, if we have added a journal in the last year of a five-year cumulation, we will obtain and process the volumes from the previous four years of this journal so that coverage is complete in the cumulation. Processing five years of data can produce significant changes in Permuterm indexes. We extensively analyze vocabulary for a cumulation to ensure uniformity and specificity in retrieval. Indeed, considerable effort and expense is directed at reducing redundancy wherever possible. These are but a few of the "hidden" costs of producing cumulations. Our cumulations, in fact, add up to

Figure 2: Price per article indexed in each of the seven editions of *CC*[®] in the introductory year and in 1984. The middle bar in each group is the price ISI[®] would have charged if its prices matched price increases for A&I services.



much more than the sum of the annual indexes.

The most significant factor in pricing cumulations, however, is that not all subscribers purchase cumulations. As a result, the five-year cumulations carry production costs that must be spread over a smaller customer base. To remedy this situation we attempted a few years ago to include the cumulation as part of the regular annual subscription; however, some subscribers objected. Our subscribers now have the option of "bundling" their subscription to include the annual index and the cumulation or of purchasing them separately.

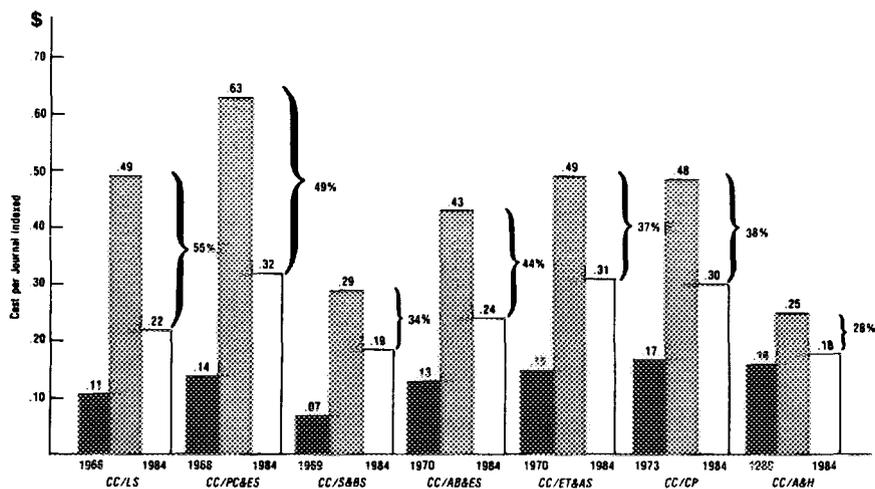
Now you're no doubt asking what we've done for you, the subscriber to *CC*. Certainly, you are glad we help your library with the *SCI* and our other index products. But very few *CC* subscribers carry a personal subscription to the *SCI*. Naturally you're interested in the price of your edition of *CC*.

Figures 2 and 3 illustrate the pricing history of each of our seven *CC* editions on a per article and per journal basis, respectively. For each edition, the prices

we charged subscribers per article and per journal indexed are given for 1984 and for the year in which that edition was introduced. Data for *CC/LS* and *CC/Physical, Chemical & Earth Sciences*, however, extend back only to 1968, so we have used this as the introductory year for these two editions. The middle bar projects what the 1984 price would have been, had our price increases kept pace with the industry average. The percentage savings to subscribers in price per article and per journal are stated in Figures 2 and 3 as the difference between the second and third bar in each graph.

The savings reported here are particularly remarkable, I believe, when one considers the tremendous increase in US and foreign postal costs, which for *CC* is one of our greatest expenses. Some readers of *CC* may remember that a few years ago ISI prevented the US Postal Service from blocking our right to distribute *CC* via second-class mail.¹⁵ Through this precedent-making case we saved our subscribers an eightfold increase in postage charges. Despite our

Figure 3: Price per journal indexed in each of the seven editions of *CC*[®] in the introductory year and in 1984. The middle bar in each group is the price ISI[®] would have charged if its prices matched price increases for A&I services.



legal victory in 1977, US second-class postage rates for *CC* have increased almost 86 percent per lb. and more than 233 percent per piece,¹⁶ which is 15 percent and 162 percent greater than CPI-U inflation, respectively.

When we introduced our *Automatic Subject Citation Alert (ASCA®)* service in 1963, the subscription price was \$100. Today, the basic subscription for *ASCA* is \$150. Thus, in the past 22 years the price of *ASCA* has increased only 50 percent (i.e., not even twofold) while on average the price of science and technology A&I services increased elevenfold.^{7,17} Moreover, since 1963, *ASCA*'s

journal coverage has increased about tenfold. And over these years we have made other substantial improvements in *ASCA*, the most recent of which I described only last week.¹⁸

I believe the foregoing figures demonstrate that ISI's products have been very competitively priced in the A&I marketplace. This is all the more notable when you consider the many improvements we've introduced that have increased the value of our products.

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