The authors of some journal articles create the abstracts and even the indexing that appear on the title pages of those articles. These practices have been especially prevalent in science and technology since the end of World War II, because of concern about an information explosion and co-operation between journal publishers and indexing/abstracting services. Informal debate and formal investigations focus on author indexing, which has shown itself to be an effective practice. As we approach an era of electronic transfer of information from authors to editors, it will become easier for authors to submit not only manuscripts but also indexing and abstracting information to journal editors.

Introduction

Buried in indexing literature under the rubric of 'Author indexing' and among many references to the indexing of authors' names are a few citations of indexing by authors. Even among these one must dig to find out about the indexing of journal articles by authors. Yet the availability today of word processing and electronic transfer of information suggests that it would be quite convenient for an author to submit indexing information along with a manuscript.

Author indexing of journal articles refers to the publishing of author-assigned keywords, descriptors, or classification symbols concurrently with the articles they index. This is similar to the common practice of author abstracting, in which an author's abstract appears in the same issue as his article. Both indexing data and abstracts usually are printed on the title page of the article they relate to, but they can show up elsewhere, perhaps in the journal's table of contents or on an information retrieval page listing indexing and/or abstracts for all articles in that issue. Because a journal publishes author indexing data or abstracts at the same time as the respective articles, editors and/or staff indexers, rather than authors, can provide indexing and abstracting information. Therefore, any discussion of author indexing and abstracting should include a consideration of source indexing and abstracting; that is, the publication of indexing and abstracting information simultaneously with the respective articles, regardless of who submits the information.

The purpose of this paper is to provide a brief, selective chronology of author and source indexing and abstracting of journal articles. The paper also recounts some formal investigations into these practices. The emphasis is on science and technology because, as noted below, that is where author and source indexing have become well developed.

The debate about authors' capabilities

The competence of authors to index their own works has been debated for many years. Although probably referring to monograph indexing, Nichols has demonstrated the longevity of the issue. In 1892 he commented:

Not even authors are qualified to index their own work, unless they happen to possess familiarity with the principles and practices of indexing. None but the author, it is true, has such an intimate knowledge of the subject . . . but if he lacks those special qualifications requisite in work of this kind, he cannot be depended on to make a good index.1

However, half a century later the International Conference on Science Abstracting could report that some considered authors to be qualified at least to abstract their own works. 'Quite a number of journals' by 1949 had been requiring authors to accompany their manuscripts with abstracts. Proponents of such programmes envisioned savings of time and money, since abstracting services that accepted author abstracts would not have to create their own. This was especially important because of concern about a postwar information explosion and about the duplication of effort by the various indexing and abstracting services. Yet 'In spite of the striking advantages, the heads of many abstracting services do not favor' author abstracts. Among those not accepting author abstracts around 1950 were Abstracts of world medicine, Chemical abstracts and Excerpta medica. Biological abstracts, which had been using author abstracts for twenty years at that point, was one of a 'very small' number of services favouring such abstracts.2

The Conference compromised between several viewpoints by supporting the concept of source abstracting without insisting on the submission of abstracts by authors. It recommended that:

Each issue of a scientific journal include synopses, in English or French at least, of all original articles contained in it; that the editor-in-chief of the journal accept responsibility for the adequacy of these synop-
ses, whether or not prepared by the author; and that . . . synopses . . . be used as abstracts whenever an abstracting service considers this practicable, with the aim of reducing the delays and costs of abstracting . . . .

One of the first responses to these recommendations was the drawing up by the Royal Society of the Guide for the preparation of synopses, a leaflet that was to assist authors and editors in creating what the Society called 'an author's summary . . . published simultaneously with the paper itself after editorial scrutiny by the editor . . . .'

In the United States during the late 1950s and early 1960s came hints of the roles that authors in science and technology—especially chemical engineering and physics—would play in the indexing and abstracting of documents in that country. For example, the Aberdeen Proving Ground in 1957 made use of author abstracts more efficient by developing in its report literature a checklist that professional indexers could scan quickly during the editing process. An article in 1960 called for more efficient communication among scientists through a system that would have authors accompany articles with 'code numbers' like those appearing in Physics abstracts; referees would approve the numbers and editors would check them, and more subject control would be accomplished before rather than after publication 'by the people who know the material best (as our present abstracters frequently do not!) and with no loss of time'.

There was an interesting, if brief, debate on author indexing in Science during 1961. An article on the status and future of the indexing of scientific papers had irritated one reader who noted that the role of authors had been overlooked. Suggesting that authors supply index terms with their manuscripts, the writer argued: 'Since the greatest authority on any item of literature is the author, is he not the one best able to classify the item properly?'. No, retorted a later correspondent: 'Actually, of course, authors are seldom qualified to do indexing. Only occasionally can they do half as well as an experienced professional indexer.' The reason for this would be the authors' non-objectivity and their inability to see how their works fit in with others in the field.

Development of source indexing programmes

Despite this doubt about authors' capabilities, the American Institute of Chemical Engineers at that time launched a source indexing programme. The Institute's Standards Committee had been studying the effect on scientific communication of what it considered an information glut. It began its work in 1959, and in 1961 announced a plan to accompany articles in its journal, Chemical engineering progress, with 'catalog cards'. Such cards contained the abstracts and bibliographic citations of articles as well as keywords. In addition to providing indexing and abstracting services with information, a primary purpose of the programme was to assist the scientist or engineer in the maintenance of personal information retrieval files. Thus, a reader could clip the cards from the journal, paste them on card stock, and put them into his own file. Initially the editors of all Institute journals were to supply data for the cards, but it was expected that authors eventually would contribute, for 'the most effective point at which to create references to information is at the time of its generation. The author . . . and the publisher . . . are best able to select the major concepts . . . '. Not only Institute journals but also some commercial publications, such as Petroleum refiner, participated in the programme. The Thesaurus of chemical engineering terminology appeared in 1961 as a product of the programme; it was a tool that could aid authors of all chemical engineering journals to select appropriate keywords. Other help for authors and editors came from the Engineers Joint Council, which in 1962–65, sometimes with the assistance of Battelle Memorial Institute, ran workshops that trained engineering society members in the techniques of source indexing.

At about the same time physicists became involved in source indexing. By 1963 the American Institute of Physics Documentation Project had stimulated participation by Applied physics letters and other physics journals in aid-to-indexing projects which requested authors to fill out indexing forms upon acceptance of their manuscripts for publication. Information on these forms described a study's experimental methods, objects examined, and physical properties tested; some editors also required submission of keywords. Applied physics letters did publish some of this information concurrently with its articles, but the main objective of the programme was to use author-supplied information as an aid in the preparation of annual indexes by professional indexers on the staffs of physics journals.

The alternative to the provision of key terms by authors [in Applied physics letters] is a large professional staff, much of whose time is taken up with what the author could have done better in the first place.

In 1965 it could be reported that 80% of authors in the six American Institute of Physics journals were participating in the aid-to-indexing programme.

Programmes by such organizations as the American Institute of Chemical Engineers and the American Institute of Physics, and the policy of some European and Asian journals to include Universal Decimal Classification numbers on title pages of articles, anticipated the call of the Weinberg Report in 1963 for assistance from authors to the users of information.

Traditionally, authors have assumed little responsibility for the later links in the information transfer.
chain. [Authors] ought to prepare their papers with much more sensitive regard for subsequent dissemination and retrieval than has been their custom. Many journals now require their authors to label their articles with keywords . . . . Even in such broad fields as engineering, keyword indexing is being undertaken with considerable success.12

In fact, however, the Second National Symposium on Engineering Information reported that in 1965 only 7% of engineering articles had both source indexing and source abstracting assigned to them.13

Thus began source indexing and abstracting. Interest in the concept has continued. The 1968 Annual review of information science and technology noted that ‘publishers with computer-based systems in mind will be seeking the author’s participation . . . in abstract and index preparation’ and that the possible use of mechanized indexing would depend in part on proper preparation of a work by its author, for in ‘mechanically created indexes, human judgment can no longer be applied once the indexing program is established’.14

Bernier suggested that subject indexing was accomplished to a large extent by authors, whether or not professional indexers examined works, for the contents of a work ‘are entirely under the control of the author and not of the indexer . . . . The technical author knows what is new in his work and is usually careful to point it out’.15 Yet, source indexing no longer was the exclusive property of science and technology journals. For example, Wellisch documented the use of source indexing and abstracting in library and information science, finding that Revue internationale de la documentation (1957) and American documentation (1960) were among the first such journals to publish source abstracts, while some international library journals, like the Unesco bulletin, also include source indexing.16 Vesenyi compared source indexing appearing in journals to monograph cataloguing-in-publication data, and claimed that college libraries could use source indexing data to supplement inadequate or nonexistent indexing services in any discipline.17

Research findings

There have been few formal studies of author and source indexing, but in a major study in the 1960s Claire Schultz and her associates included author indexing in an evaluation of indexing procedures for the Federation of American Societies for Experimental Biology. The investigators examined 285 Federation conference papers, comparing keywords assigned by the papers' authors with keywords assigned by a 'criterion group' of twelve Federation members who had read the abstracts of the papers. The criterion group, but not the authors, had a list of suggested biological terms from which they had the option of selecting keywords. The results of the comparisons showed that the average set of terms assigned by the author to his/her own paper included about half of all the terms assigned to the paper by the criterion group. The investigators concluded that ‘In projecting themselves into the position of other research workers, and in addressing the combined interests of a varied group of users, the authors appear to have succeeded remarkably well’.18

Several other studies also found authors to be effective indexers of their own articles. Falk and Tompkins studied the May and October 1969 issues of Proceedings of the IEEE, for which indexing from the classification scheme used by Electrical and electronics abstracts and Computer and control abstracts was available from both professional indexers and the articles’ authors. An unidentified ‘Evaluator’ judged the two sets of indexing provided for each article and ruled that author indexing required less revision than professional indexing.19 Yokoo, Takahashi and Habara assessed the quality of author-assigned keywords for articles in two journals of the Atomic Energy Society of Japan. The investigators used the actual search strategies from forty-nine queries to the INIS (International Nuclear Information System) data base to retrieve relevant citations. Then they noted the keywords assigned by authors to these citations, and attempted ‘to have the citations retrieved using a search strategy based upon the keywords. Being able to retrieve 86% of the originally retrieved items, the investigators ‘felt that this study proved quantitatively the effectiveness of the [author] keywords used for indexing’.20 In a similar study that employed articles on mathematics published in 1975 and indexed by authors and professional indexers according to a Mathematical reviews classification scheme, this writer found that indexing supplied by authors permitted retrieval of about 50% of items known to be relevant to simulated requests for information.21

Suggestions for further study

This writer suggests an investigation into current author indexing practices in journal literature. If authors are becoming an important force in journal indexing, it would be interesting to know what factors (such as experience, discipline, training) affect the success of an author as indexer. As a first step, this writer and a colleague, Zoltan Tomory, examined 20% of the current periodicals received by a medium-sized academic library (the Golda Meir Library of the University of Wisconsin-Milwaukee). Of 922 journals with signed articles printed in roman type, only forty-six (about 5%) included source indexing on the title pages of at least some of their articles. A perusal of the journals' instructions to contributors indicated that at least half of the source indexing journals actually were using author indexing. While twenty-four of the forty-six source indexing journals employed keywords apparently freely assigned and not taken from any thesaurus or other vocabulary list, fifteen did use Universal Decimal Classification numbers and
the rest drew from controlled vocabulary lists in computer science, mathematics, medicine, and physics. As expected, almost all the source indexing took place in science and technology. The sample included 585 journals in Library of Congress classes Q (Science), R (Medicine), S (Agriculture), T (Technology), U (Military Science), and V (Naval Science), and forty-three (about 13%) of these contained source indexing. Thus, all but three of the source indexing journals were science or technology publications.

Other studies could range from investigations into the place of author and source indexing and abstracting in fields outside science and technology to a response to the possible abuses of author indexing recently mentioned by Price.22

Acknowledgment

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References

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New Deal for authors

Faber and Faber, London publishers, are featured in a column of The Times, 9 July 1984, as adopting new policies that ‘publicly affirm that the house values its authors’: signing a minimum terms agreement with the Society of Authors and the Writers’ Guild, limiting copyright duration for the publisher to 20 years, and allowing contract revision ten years after the publication of a book. Authors will be consulted on copy editing, illustrations, blurb, jacket design, publication date; option clauses will be by agreement, and the author will be paid for granting an option. Best of all, to us, ‘On top of the advance, Faber will pay up to at least £200 for copyright fees for illustrations and/or quotations; if the author does not wish to undertake his or her own index (and it is a moot point whether authors are sufficiently objective about their texts to do so or, conversely, whether they know their books in such depth that they are potentially the best indexers) Faber will pay half the cost’.

How splendid; may many more publishers follow this example!

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