



# Introduction

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ABSTRACTS WERE originated to provide scholars with a convenient means for coping with increasing quantities of publications. Now abstracts themselves have become so voluminous that specialized indexes often replace the use of abstracts by those who need up-to-date and speedy access to publications.

Heavy investments of intellectual effort, money, time, research, and development are being expended in the "science information" field today. Too much of this effort is centered about the "mechanics" of information storage and retrieval, and too little has been dedicated to the intellectual processes basic to any good information system. This issue of *Library Trends* attempts to provide a general background for exploring today's world of abstracting and indexing.

A notable impetus was given abstracting and indexing development in this country as the result of the 1957 success of Sputnik. A National Federation of Science Abstracting and Indexing Services was established. Congressional, scientific, library and documentation leaders at once focused attention on abstracting and indexing problems, and hopes were high for wide-scale national and international cooperative activities. Perhaps the enthusiasm of the moment prevented a full realization of the highly complex nature of this intellectual activity and the serious problems facing any major efforts at effective national or international solutions.

The most noticeable accomplishments of the past decade have been the developments of new services, the improvement and expansion of long-established services, and the successful application of computer techniques to abstracting and indexing work.

Although librarians have been the major users of abstracting and indexing services, there has been all too little dialogue, feed-in or feedback between those who design and operate the services and the librarians as users. In the past decade there is in evidence a recogni-

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tion of librarians as primary users, and also the recognition of librarians as a source of highly valuable critical information and advice to these services. This volume of *Library Trends* is one indication of the involvement of libraries in the total development of abstracting and indexing work.

The National Federation of Science Abstracting and Indexing Services, after an initial spurt of action, has declined into a semi-dormant group. Its problems have been diverse and in many cases insoluble. Yet the Federation has a proud record of accomplishment and deserves a place in this volume. Unfortunately, the author who was to prepare this chapter was unable to do so. Hence, the editor has pieced together a variety of informative notes that will serve at least as a basis for a future more expert and definitive report.

One of the basic philosophical and practical problems in the abstracting-indexing area is the proper structuring of subjects for inclusion in any service. The relationship between what are called "discipline" and "mission-oriented" services has been widely discussed. The two experts who are most concerned with this problem are Scott Adams and Dale Baker. Although they have not always been in complete agreement in discussions of these two types of services, they have reached in their chapter a common base for future discussions and activities. The "Summary of Trends" at the end of their article is of basic importance to all concerned with information activities.

Two of the most knowledgeable experts in the physical sciences information field are Pauline Atherton and Stella Keenan. An article by Pauline Atherton appeared in the April 1967 issue of *Library Trends*. That article, together with Miss Keenan's in this issue, provide one of the most comprehensive and valuable representations of information services for any specialized scientific field. Those interested in general background information in the abstracting-indexing area will find Miss Keenan's introduction a highly valuable contribution. In handling each of the specialized services she provides reference librarians with valuable guidance.

Again the scope of the chapter by Louise Schultz is much broader than is indicated by the title. She gives much valuable, stimulating and practical information concerning the entire abstracting-indexing field, and demonstrates the complexities of providing access in a specialized scientific area.

For decades, *Chemical Abstracts* has been considered one of the basic tools in any significant scientific reference library collection. The

## Introduction

dialogue between librarians and abstracters is forwarded through the chapter by the two specialists from *Chemical Abstracts*, Fred Tate and James Wood. Although based primarily upon their experiences at *Chemical Abstracts*, they show the interdependence of libraries and specialized reference services.

Much interest has been shown by the library profession in the newest major development in scientific literature indexing, the *Science Citation Index*<sup>R</sup>. The chapter by Morton Malin provides a general, practical and broad introduction to this specialized concept. Dr. Garfield, who designed and developed this new index, had extensive library experience prior to developing this new tool. Librarians have recognized the comparison between the science citation concept and that of law literature indexing, but we have needed an article such as this directed toward librarians and their specialized interest.

Farthest from the background experience or knowledge of most librarians is the area of subject index production. Charles Bernier presents librarians with an authoritative, understandable and useful background, based on his extensive experience in abstracting production, library management and commercial science information. His comments on the problems of production can be most useful to librarians.

James L. Wood, Head Librarian of Chemical Abstracts Service, in his second contribution to this issue, proposes a cooperative venture between librarians and abstract producers. The analyses prepared by *Chemical Abstracts* of the broad field of chemical journals will be most valuable to library administrators and to reference librarians.

The Committee on Scientific and Technical Information in the Executive Office of the President contracted with the System Development Corporation for *A System Study of Abstracting and Indexing in the United States*. Andrew A. Aines, the senior officer of the COSATI staff, was asked originally to prepare a chapter which would critically evaluate the *System Study*. Unfortunately, this proved to be impracticable; however, he has provided us with a chapter giving general guidelines and information basic to the rationale for national information systems. The System Development Corporation report on abstracting is obtainable as Document PB 174 249 from:

Clearinghouse for Federal Scientific and  
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Some broad generalizations may be made about what has happened to abstracting and indexing during the past decade. First, we note the recognition now given by those interested in scientific research and development to the problems and potentials of these services. Next, we record the enterprising, imaginative and energetic development of new, expanded and personalized services by a variety of organizations, companies, and professional bodies. Third, we observe the amazing expansion of government supported and operated indexing and abstracting services into a variety of scientific areas.

As a supplement to this issue, attention must be called to the *Library Trends* issue on "Bibliography" published in April 1967 which contains several significant articles relating to abstracting and indexing. Although some mention and touch upon the services covered in the present volume, they serve as supplements to the present articles, with very little or no overlap.

Those who are knowledgeable in this area as a whole, as well as those who have specialized interests in a particular field, will recognize the deficiencies of the present volume and the fact that some important subject areas have not been given proper recognition. This is due in part to the difficulties encountered in structuring a volume over such a broad spectrum of knowledge, and in part to the difficulties encountered in the ultimate attainment of chapters which had been optimistically anticipated. The editor hopes, nevertheless, that this volume may provide an interim guide to those who need information and guidance in this highly important area.