The History and Mission of ISI Press

In 1980, I wrote an essay to describe the mission of ISI Press® and introduce its director, Robert A. Day.[1] At that time, ISI Press was three years old and had just three titles to its credit. But I expressed optimism that many more titles would follow, and that ISI Press would become a full-fledged publisher of scholarly books. Since then, and particularly this year, my optimism proved justified. In 1982, ISI Press published five outstanding new books, and a number of others are scheduled to appear in the near future. With all this activity at ISI Press, now seems to be a good time to reflect on its history and to reexamine its mission.

ISI Press was born, in part, with our decision to publish a collection of my weekly *Current Comments*® essays in book form.[1] One practical reason for this decision was the need to satisfy the requests for copies of older essays. We might have approached an established publisher, but the decision to publish a continuing series of *Essays of an Information Scientist*[2] ourselves was part of a long-term ambition to expand into book publishing. Thus, in 1977, ISI Press was officially established under the direction of my close friend, the late Robert L. Hayne.[3]

Actually, long before we decided to publish *Essays*, Bob had been helping me implement a project I had started many years earlier. From my own personal experience, I realized that the Cyrillic alphabet presented certain barriers to learning and using Russian. But this was especially true for those who only occasionally needed to translate a short scientific paper or even an abstract. Like any exotic alphabet, the Cyrillic alphabet obscures resemblances between words that are common or cognate to both Russian and English. More importantly, the order in which the letters in the Cyrillic alphabet appear differs from that of the Roman. This makes it time consuming to find words in a conventional Russian-English dictionary. I had long envisioned a transliterated dictionary to help overcome these problems.[4] In 1979, ISI Press published the *Transliterated Dictionary of the Russian Language.*[5]

Though initially operating on the scale of a small university press, ISI Press has enlarged its scope to publish a variety of books by, and for, scholars and professionals. We have defined ISI Press's mission broadly: to publish books and other materials dealing with the process of scholarly communication and the sociology of scholarship. This includes all aspects of intellectual creation, production, and publication of scholarly work, as well as its dissemination, retrieval, and use.[1]

This mission reflects the fact that scholarly communication is a process involving many interdependent stages.

ISI® has been primarily concerned with developing tools to make the information retrieval stage easier. But in our line of work, one is constantly reminded that the quality of what can be extracted from the literature depends entirely on the quality of what has gone in. We have consequently found ourselves doing what we can to promote higher standards in journal publication and in the way articles are written and documented.

Many of the books published by ISI Press complement these efforts. In 1979, for example, we published *How to Write and Publish a Scientific Paper* by Day.[6] Day approached us in 1977 with his idea for a step-by-step guide to show the reader how to transform scientific material into a coherent, readable journal article. We agreed that such a manual would be useful, and were impressed with Day's credentials for writing it. For 19 years, he had served as managing editor of the *Journal of Bacteriology* and eight other journals published by the American Society for Microbiology. He has served as chairman of the Council of Biology Editors (CBE), and is currently the president of the Society for Scholarly Publishing.

Day's book has more than fulfilled the high expectations we had for it. In addition to explaining how each section of a journal article functions and how best to organize it, the book covers the finer points and conventions of scientific writing. It describes the kinds of mistakes that interfere with a paper's being accepted for publication, and offers advice on selecting the right journal for a manuscript. Day speaks eloquently for a belief I have long held—that clear, concise writing is a worthy goal in itself. And the book differs from most writing manuals in that it is engaging and fun to read.[7]

The sales history of *How to Write and Publish a Scientific Paper* has confirmed the need for such a book. Within a year of its publication, the book sold almost 19,000 copies. Today, that figure has surpassed 57,000. Consider that few books designed to reach the technical market sell more than 2,000 copies. In addition to its popularity, the book received, and continues to receive, overwhelmingly favorable reviews. Its long-term significance is attested to by its use in teaching programs in several hundred colleges and universities. The book will be translated into Japanese, and perhaps into other languages as well.

During the time we were preparing the *Transliterated Dictionary* and *How to Write and Publish a Scientific Paper* for publication, ISI Press was held together by Tom DiRenzo, our vice president of direct marketing and communications. He assumed this, along with his many other responsibilities, when our first chief editor, Hayne, died in 1977. In 1980, we were pleased to have Day join our staff as the new director of ISI Press. As expected, ISI Press has flourished under his leadership. This year, for example, it launched its new Professional Writing Series. All of the books in this series will address facets of scientific and scholarly communication. For some of these books, *How to Write and Publish a Scientific Paper* serves as a prototype.

Two such books in this series were published this fall. Both of them take the same "how to" approach as Day's book. These books, however, are aimed at different audiences.

One of them is *How to Write and Publish Engineering Papers and Reports*,[8] by Herbert B. Michaelson. Michaelson has edited the *IBM Journal of Research and Development* and the *IRE Transactions of Engineering Writing and Speech*. The Institute of Radio Engineers (IRE) is the predecessor of the Institute of Electrical and Electronics Engineers (IEEE). Michaelson has also

contributed to numerous publications in engineering and technical writing. He is a fellow of the Society for Technical Communication, and has served on the board of directors and as chairman of the publications committee of that society. He is also a senior member of IEEE.

His book is based on over 35 years of experience with the writing problems of engineers and engineering students. It is not designed to teach the fundamentals of expository writing, but rather to help engineers working on various writing projects such as conference papers, trade magazine articles, internal technical reports, and academic theses. It concentrates on writing strategies which Michaelson and others have developed for tailoring presentations to the needs and interests of specific audiences.

There are pointers on how and when to use graphics, list multiple authors, cite literature references, and incorporate various kinds of feedback into a manuscript. There is also advice to help engineers pilot their papers through the publication process. One learns how to schedule publication for the most opportune time, defend refereed manuscripts successfully, and anticipate various problems with publishers before they arise. In addition to sharpening writing skills, the book offers insight into why it is important for engineers to write—and how writing actually contributes to the quality of the work and the status of the profession.

The other book of this type is *How to Write and Publish Papers in the Medical Sciences*,[9] by Edward J. Huth. Huth is editor of *Annals of Internal Medicine* and has been associated with this distinguished periodical since 1960. He is also adjunct professor of medicine at the University of Pennsylvania. In addition, he is past chairman of the CBE, and editor of the current edition of the *CBE Style Manual*. The respect he has earned from his editorial peers is also demonstrated by the fact that he is a past president of the American Medical Writers Association. We are proud to claim him as a Philadelphia institution. Incidentally, Huth and I share a concern over ethical issues in scientific authorship. It was Huth who called my attention to an interesting editorial on the subject which recently appeared in the *Annals of Internal Medicine*.[10]

Given his experience, Huth is in a good position to know why medical papers are accepted or rejected by journals. In his book he systematically shares this knowledge. He familiarizes the reader with the various criteria editors use in assessing manuscripts and with the procedures they follow. This kind of knowledge is invaluable to an author, both before and after a manuscript has been submitted. Appendixes in the book cover formats for references, abbreviations and symbols, and annotated bibliographies.

How to Write and Publish Papers in the Medical Sciences is intended for those planning to write papers in clinical medicine and related health sciences, including clinical pharmacology, dentistry, nursing, and veterinary medicine. It deals with every type of published paper: research papers, case reports, reviews and case-series analyses, editorials, book reviews, and letters to the editor. The advice it offers will be useful to seasoned medical writers as well as those who are less experienced, and who need a practical and very credible guide to writing publishable papers.

Two other books in the ISI Press Professional Writing Series have been published this year. One is entitled *The Art of Abstracting*,[11] by Edward T. Cremmins. Cremmins has been writing, editing, indexing, and translating abstracts for the past 14 years. He has also taught

abstracting. His professional experience includes a four-year stint at NASA's Scientific and Technical Information Facility. More recently, he has been managing editor of *Cancer Therapy Abstracts* and *EIS: Digests of Environmental Impact Statements*. I know him as a person with remarkable appreciation of literary and intellectual accomplishment.

The object of Cremmins's book is to "introduce clarity, precision, and grace"[11] into the composition of abstracts. Abstracting may be the most difficult form of expository writing, since nothing short of precision will do. Well-written abstracts are especially important these days and will become even more so in the future. The information explosion has forced researchers to be very selective in their reading. While scanning journals or using indexes, they often rely on abstracts, rather than whole articles. A good abstract will encourage them to read on, or it will save them the trouble of doing so when the article is not really relevant.

Cremmins's book shows the reader how to avoid putting too much or too little information into an abstract. It also explains various ways abstracts are formatted, and the conventions that are involved. But beyond this, the book examines the cognitive processes involved in each stage of composing an abstract. It shows how material can be read and classified purposefully in the early stages to make subsequent condensing and editing easier. For this reason, the book is useful for scholars and others who want to be more succinct in their writing.

Another new book in the Professional Writing Series is *Communication Skills for the Foreign-Born Professional*.[12] It is designed to help scholars and professionals whose work has brought them to the US or other English-speaking countries. The author, Gregory A. Barnes, teaches English as a second language to adults at Drexel University, Philadelphia. He knows that being submerged in a foreign language and culture can be a professional handicap. Linguistic problems that are frustrating for students or tourists take on a more serious dimension for professionals who need to present themselves and their ideas to colleagues in highly competitive fields. Thus, Barnes has developed instructional methods particularly suited for these individuals, and has incorporated them into his book.

As Barnes explains, one basic characteristic of adults as language students is that they learn by cognition, rather than by intuition or imitation. As a result, they are good at learning general rules and applying them to specific cases. Appendixes in the book list grammatical and syntactic rules tailored to this type of systematic learning.

On the other hand, there are countless subtleties in communication which are not accessible through logic, and this is where adults are at a disadvantage. Many communication problems stem from cultural, rather than purely linguistic, differences. Therefore, adults need to develop what Barnes terms "compensatory skills."[12] Sections of the book, accordingly, discuss the preferred, as opposed to technically correct, ways of expressing ideas in a formal setting. There are chapters on attire, and overall comportment expected of American professionals. Other chapters cover standard forms of written and oral communication common in professional organizations. In reading the book, one is repeatedly struck by Barnes's ability to anticipate and address the problems a foreigner might have with things which natives take for granted.

As I stated earlier, ISI Press publishes books which deal with scholarly communication and the sociology of scholarship. The books I've discussed so far do so from a practical standpoint. Their ob-

ject is to aid practicing scholars and professionals. But there are other equally valid approaches to the subject of scholarship. Historians, sociologists, and philosophers of science, for example, explore scholarship from a theoretical perspective. While ISI compiles citation data to help retrieve scientific information, it has also gained some notoriety in using citation analysis to reveal the cognitive and social structure of science. We work in partnership with many scholars who make a science of studying science, and we are excited about the kinds of information they are uncovering. ISI Press was conceived, in part, as a forum for airing new ideas on the subject of scholarship and science as institutions within society.

One of the more provocative analysts of scholarship as a cognitive and social process is Soviet scholar V.V. Nalimov. Nalimov has a remarkably diverse background as a mathematical statistician, information scientist, philosopher, and historian of science. He has a broad perspective on the significance of science, both as a methodology and as an entity resting on a set of assumptions that change over time.

While in Moscow, I had the opportunity to meet Nalimov and to read some of his manuscripts. I felt that they should be brought to greater attention in the Western world.[13] In 1981, ISI Press published English translations of two of his books. One, entitled *Faces of Science*,[14] is a collection of essays examining different aspects of science. In one section, Nalimov draws an interesting comparison between the structure of science and that of a natural biosphere. The scientific literature, he suggests, is made up of "cells," which are scholarly articles. Nalimov's metaphor extends to citations which, like the genetic code, transfer information between "cells," or articles, in condensed form. Illustrations in the book are done by Mikhail Zlat-

kovsky. Remarkable in themselves, they highlight Nalimov's fresh and thought-provoking perspectives.

In *In the Labyrinths of Language: A Mathematician's Journey*,[15] Nalimov dissects the structure of language and locates the fundamental features that all languages, from the "hard" or precise ones such as computer language, to the "soft" ones such as art and poetry, have in common. Nalimov looks specifically at the language of science as something which not only transfers information but also organizes it hierarchically and is capable of reducing, storing, and retrieving it. He expresses hope that the many new "dialects" that science has brought forth will not promote narrowness and rigidity in scientific thought, and that a better understanding of the relationship between language and thought may reveal new, creative approaches to scientific problems.

The third book in our Nalimov "trilogy" was published in early October of this year, and is entitled *Realms of the Unconscious: The Enchanted Frontier*.[16] As the title suggests, this is a study of the human imagination. Nalimov's premise is that one reason we lack meaningful theories of the imagination is because existing languages are inadequate for describing a phenomenon whose very nature is opposed to formal logic. Using the language of probability, he makes forays into this uncharted territory in the hope of discovering new paths to scientific creativity. By penetrating to the creative heart of human discovery, Nalimov means to show us that our fundamental thought patterns transcend the various disciplines. The book includes eight color plates and 25 black-and-white illustrations. These drawings are abstract creations produced by artists and subjects in a meditative state.

Nalimov speaks eloquently for a conviction we both share, that people in dif-

ferent fields need to be able to learn from one another. In a sense, Nalimov's writings are theoretical responses to the information explosion and the fragmentation of knowledge, much as our activities at ISI are practical responses. By identifying the cognitive processes underlying all thought, Nalimov seeks to restore to knowledge some of its lost unity.

ISI Press will continue to exercise strict criteria in the selection of works to be published. Day believes, and I think rightly, that quality will beget quality. By publishing only works of scholarly distinction and of demonstrable value to professionals, we can continue to attract the attention of first-rate authors. On the other hand, our mission is construed broadly enough to include many different types of books. There are many conceivable ways of dealing with the process of scholarly communication. As ISI Press expands its operations, it will welcome and help contribute to this diversity. *Current Contents*® readers are invited to submit their own proposals, manuscripts, and thoughts concerning the kinds of publications they feel are needed. You can address your inquiries to me or, preferably, to Robert A. Day, Director, ISI Press, 3501 Market Street, University City Science Center, Philadelphia, PA 19104, USA.

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