compatibility, the library profession's call for a systematic approach to catalog code design and Ranganathan's powerful ideas. At the late end of this period we read of the possibilities of augmenting MARC records by terms from the indexes and tables of contents of books, of analyzing data from online catalog transaction logs and of browsing classification schedules online. A certain amount of repetition occurs throughout the volume; for instance, K. Gapen's unheeded research findings (pp. 64 and 149) and SDC's warnings about the dangers of lack of standardization (pp. 23 and 138). However, some redundancy might be expected in a volume of this sort.

If Cochrane's collected papers is to be used as a text, the most useful papers are those reporting research, for instance the classification projects, most notably AUDACIOUS (with Robert Freeman) and the Subject Access Project. (Again one misses the above mentioned paper reporting research carried out on the ERIC data base comparing free and controlled vocabularies.) Cochrane observes that the subject access project is the most popular of all her research (p. 393). However, in this reviewer's opinion at least, the AUDACIOUS project, for its conceptualization and innovation is the more outstanding. This was an early (1967–68) project involving the development of a retrieval system using the UDC Classification. Interesting ideas and recommendations resulted from it, some of which are recognizable in more recent experimentation with classification in online catalogs; some, however, have been unheeded—only in part is the past prologue to the future.

The thread running through these papers is that of the author's vibrant personality. Cochrane's interest in improving methods of subject access is dedicated and energetic. Over the years she has conveyed the excitement of change and possibility. Gatekeeper and gadfly to the profession, she has called for the uprooting of past practice, has drawn attention to research findings (her students' as well as those of others) and has demanded that librarians be involved in the development of online public access systems. Above all, as this volume bears witness, the profession owes her a debt of gratitude for keeping before the public eye the important goal of improving subject access to information.

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The Awards of Science and Other Essays: Essays of an Information Scientist v.7 E. Garfield, ISI Press, Philadelphia, PA. (1985). 675 pp., $30.00. ISBN 0-89495-044-4. Distributed in Europe by STM Distribution Ltd., Enterprise House, Ashford Road, Ashford, Middlesex, TW15 1XB, England.

The Awards of Science is the seventh volume of Gene Garfield's collected essays and commentaries originally published as the "Current Comments" column in the ISI publication *Current Contents*. As in the first six volumes, this collection includes articles on a variety of topics ranging from detailed bibliometric studies of the journal literature in selected subject areas and discussions of new or improved ISI products to thoughtful and informative reviews of topics of current interest such as animal rights, anorexia nervosa and social gerontology. The title of this collection highlights an informative series of essays on the 1982 and 1983 Nobel Prize recipients as well as profiles of Ching-chih Chen (ASIS—Information Science Teacher Award), Frank Bradway Rogers (ISI—Information Advancement Award), and E.R. Hilgard (APA—Excellence in Scientific Reviewing). In 1984 Garfield was awarded the first Derek DeSolla Price Medal by the journal *Scientometrics*—a brief version of Garfields' comments on Derek Price as an historian of technology and proponent of the importance of scientific instrumentation in the advancement of science is included here. Of particular interest to students of the social studies of science is the second part of a discussion of the more than 50 "Non-Nobel" awards, many of which are considered "predictors" of future Laureate status. In this essay, the 1982 award winners are listed along with one "significant" publication [highly cited or identified as significant by the awardee]. Bibliometric measures of these authors' prominence, and variations in communication, publication and citation practices across fields are discussed. Also worthy of note are profiles of Miriam Rothchild and S.R. Ranganathan.

Bibliometric analysis is ISI's stock-in-trade and most of the essays include the results of citation or cocitation analysis in one way or another. Essays on the various Nobel Laureates include "Research Fronts" (multidimensional scaling maps of cocited document clusters) and "cluster strings" (document clusters linked over a series of years) illustrating changes in the field over time. (The research fronts and cluster strings are also examined in a separate essay on The ISI Atlas of Science: Biotechnology and Molecular Genetics, 1981/82.) Garfield notes that "primordial" contributions in basic life sciences research are frequently published in general medical journals. Accordingly, essays on "100 Classic Articles" from *Lancet, New England Journal of Medicine*, and *Annals of Internal Medicine* are included in this volume. The multidisciplinary nature of the mathematics and computer science literature is highlighted in two essays on highly cited articles and books in the *CompuMath*

Citation Index. A two-part study focusses on current research in Latin America. This research is represented by articles, covered in the 1978 Science Citation Index, whose first author was affiliated with an institution in Central or South America.

Several continuing series of citation studies are represented. "Journal Citation Studies" in 1984 focus on analytical chemistry, astrosciences, entomology, geosciences and nursing journals. Each essay can be read without recourse to others in the series. Indeed, if these are read sequentially, the presentation appears somewhat formulaic and repetitive, the advantage being that comparisons can be drawn across subject areas while field-specific data are not lost. The annual "most-cited" lists are presented. The "Most Cited Articles" of 1981–82 and the 1982 "most cited" lists in physical and life sciences and five essays (of a longer series) discuss "citation classics" (most cited articles 1961–1982).

Again following the format of earlier years, approximately one-fifth of the *Current Contents* essays review current research literature in areas of broad popular interest. These include single essays on animal experimentation and anorexia nervosa, and two-part essays on social gerontology, twins, and urinary tract infections. The reviews are well written and appear to be comprehensive within the scope of the format. In addition to a useful reference list, each essay includes appropriate bibliometric data (core journals, research fronts) and all but one (anorexia nervosa) provides a list of information centers or research organizations. Garfield notes in his preface that the essay on animal experimentation was surprisingly timely, appearing in *Current Contents* at about the same time that an animal rights vigilante group broke into a laboratory at the University of Pennsylvania. Two additional short essays on parenting and scanning (of text) introduce reprinted articles from *CoEvolution Quarterly.* The latter article, "Information as a Communicable Disease" by Kevin Kelly, is an antic introduction to a few of ISI's more popular products *(Current Contents, SCI, Atlas of Science)* in the context of a more general look at information overload and the dissemination of scientific information.

Special note should be taken of the last essay in the volume. "Science Books for Children" examines the relative influence of science texts and popular science books in stimulating children's interest in science and the roles of editors, authors and concerned organizations in promoting good children's science books. Important review media and annual lists, such as AAAS' *Science Books and Films,* the New England Roundtable of Children's Librarians' *Appraisal: Science Books for Young People,* and the Children's Book Council-National Science Teachers Association annual annotated list of "Outstanding Science Trade Books for Children" are highlighted.

The remainder of the essays introduce new or augmented ISI products and services, including an essay with color insert on the mural created by Lilli Ann Killen Rosenberg for the ISI Caring Center for Children. In an appendix, Garfield continues the tradition (begun in Volume 6) of reprinting relatively inaccessible older work. His 1961 doctoral dissertation, "An Algorithm for Translating Chemical Names to Molecular Formulas" is reprinted along with several early articles on aspects of citation indexing.

This is the seventh volume in the series *Essays of an Information Scientist.* All have been well received and it is difficult to find new good things to say. The essays are informative and well researched. (Garfield acknowledges research assistance at the end of each essay.) The writing is clear and frequently entertaining. *Current Contents* is ephemeral and the annual collection (and indexing!) of the "Current Comments" is a service to both researchers and other interested readers. Certainly the *The Awards of Science* (and the earlier volumes in the series) should be part of the collection of an academic or research library whose patrons are interested in library and information science, information management and social studies of science. The ultimate difficulty, for many of us, is to remember the wealth of information contained in each volume and to turn to the "Essays" for useful reviews and references.

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Distributed Computing and the Electronic Library: Micros to Superminis. A. N. GROSCH, Knowledge Industry Publications, Inc., White Plains, NY (1985). vi + 205 pp., $36.50 (hc). ISBN 0-86729-145-1, $28.50 (pb) ISBN 0-86729-144-3.

The stated intention of this book is to serve as "a basic source for librarians and information specialists who need to acquire some background in the current state of distributed systems for libraries or information centers." Distributed library systems are defined as "those that use some form of multi-user computer system . . . dedicated to running software to support one or more interrelated functional support areas in a library or information center." The title seems to promise more than