Collections Policy Statement Index

Science - General
(Subclass Q and selected portions of Z)

Contents

I. Scope

This Collections Policy Statement covers the subclass Q (Science, General) and applicable subclasses of Class Z. The Library's collections in this class encompass nearly 55,000 titles. In addition, many of the numerous abstracting and indexing services, catalogs of other scientific libraries, specialized bibliographies, and finding aids so vital for accessing the serial literature are classed in Z. Materials relating to the role of science in the development of civilization are classed in CB, and those relating to the telecommunication aspect of information theory are classed in TK5101.

II. Research Strengths

The Library's collections in general science are particularly strong in the history of science, scientific exploration, the lives and contributions of scientists, the role of science in society, world science, and science education. For a discussion on collecting guidelines in the history of science, consult the Collections Policy Statement on the History of Science and History of Technology.

The Library's holdings of 18th- and 19th- century scientific serials in all languages and its collections of the transactions, proceedings, bulletins, and memoirs of scientific societies and institutions, from every part of the world, provide a chronicle of scientific investigation, inquiry, and deliberation that is encyclopedic in its coverage. This collection, classed for the most part in Q, is a legacy of the Smithsonian Institution, the Smithsonian's exchange partners, and Copyright deposit. If one adds the exploring expeditions (Lewis and Clark, Humboldt, Murray, and Wilkes) and the many voyages of discovery (HMS Endeavour, HMS Challenger, HMS Discovery, USS Albatross, the Schooner Grampus) to the thousands of publications generated by scientific societies and institutions, the sum is one of the most extensive records of scientific investigation and research known to man. This genre of material has expanded in the 20th and the 21st centuries to include the tracts of modern-day explorers, new scientific endeavors, new institutions, new treatises, contemporary issues, interdisciplinary research, fresh insights, and ever more scientific transactions, proceedings, and bulletins. This combination of

resources, in all formats, provides the scientist and scholar with a comprehensive view of the pursuit of scientific knowledge throughout time. These collections are continually being carefully augmented and judiciously expanded.

Another area of distinction in the Library's general science collections is its holdings of materials summarizing the contributions of scientists to the community of knowledge. This multi-faceted/multi-formatted collection of biographical materials preserving the scientific accomplishments, achievements, and the personal and public lives of scientists is vast and covers all periods of time from classical antiquity to modern times. While book-length biographies, autobiographies, and membership directories are usually classed by subject, collected biographies, those appearing in the publications of scientific societies, institutions, and organizations, and biographical memoirs are generally classed in Q. Also classed in Q are the chronologies, milestones, breakthroughs, and landmarks of science, most of which are directly tied to the triumphs, conquests, and achievements of a single scientist or groups of scientists. These materials are substantial and have been used by historians, biographers, administrators, and policy-makers to access past accomplishments and forecast future advances in the sciences.

Science policy, the federal/private sector support/promotion of scientific research, the dissemination of scientific and technical information, and the importance of science in the national interest are areas in which the Library has also collected heavily. These materials not only support the work of the Congress, but they also further scientific inquiry, define the relationship between science, the scientific community, and society as well as provide evidence that the application of scientific research and knowledge improves the lives and well-being of the world's citizenry. Materials on scientific enterprise, scientific instrumentation, information and communications systems, and science education and science literacy are extensive as are the collections that support the view that basic research and fundamental science are important to the development of international competitiveness and economic growth. The papers and writings of Vannevar Bush, Alan Waterman, William T. Golden, Harvey Brooks, Joshua Lederberg and Jerome Wiesner and the reports of science and technology advisory organizations and commissions analyzing science policy questions and administrative decision-making are considerable and add texture and understanding to scientific debate and policy-making.

III. Acquisition Sources, Current and Future

The Library acquires its materials in the general sciences from a variety of sources, e.g., copyright deposit, Cataloging in Publication (CIP), the Library's numerous field offices, purchase, gift, and exchange. The real challenge is keeping up with the volume of publications in science, keeping current, capturing those publications that are born digital before they disappear, keeping track of print titles that suddenly turn digital, and acquiring e-journals that are not purchased through an aggregated database. As more publications are issued digitally, the Library must ensure that all important and appropriate information is added to the collections and that the data formats represented in the general science collections are maintained to assure continued access to its digital information. Electronic obsolescence is not an option for scientific materials.

As certain materials migrate from print to digital-only format, they are frequently collected into the Electronic Resources area of the Library or within the OPAC as an electronic link. These sources may be freely available, or may require a subscription, as in the case of many electronic resources. Both are

actively acquired and will continue to be acquired in the future.

Digital formats have increasingly blurred the line between databases of citations, abstracts and full text, so that a given database may provide what is essentially an electronic journal for one title, while providing a citation, with no text, for another journal. Differences in periods of coverage also contribute to making a precise assessment of the number and nature of available electronic resources somewhat difficult, but several reliably strong sources for electronic materials in the area of the general sciences can be identified. Particularly useful titles include the subscription databases: *JSTOR*, Academic *Search Premier*, *Applied Science and Technology Full Text, Biological and Agricultural Index Plus*, *General Science Full Text*, *Biosis*, CISTI, ECO, *Environment Complete*, *ProQuest Databases*, *Readers' Guide Retrospective*, *Web of Science*, *Biological and Agricultural Index*, *NTIS*, *HistSciMedTech*, *Garden, Landscape and Horticulture Index*, *and Digital Dissertations*.

Freely available electronic resources collected by the Library, that often have materials of interest in the area of the general sciences include *Agricola*, *Science.gov.*, *SCIRUS*, *Scientific Commons*, *STINET MultiSearch*, *Encyclopedia of Earth*, *Biographical Memoirs of the National Academy of Sciences*, *Scitopia.org.*, etc. Maintaining functioning links becomes part of the process of collection development and maintenance, as issues related to the capture and archiving of web sites continue to be debated.

Since many books, including standard reference tools, are received through Copyright deposit with a CD in their pockets, they are acquired for the collections. Because the technology for viewing these CDs is not generally supported in the Library's reading rooms, these materials must be requested and viewed in the Microform Reading Room. Podcasts and webcasts produced by the Library are currently available on the Library of Congress web site. Increasingly, links to webcasts and podcasts on other web sites are being made, and these materials can be expected to become more integral to the electronic resources collections in the future.

IV. General Policy and Collecting Levels

The Library acquires material in all formats and languages, e.g., print materials, microforms, audio, video, and electronic. The Collections Policy Statement for Electronic Resources, the Selection Guidelines for Collecting Electronic Resources, the Collections Policy Statement for Web Capture and Archiving, the Collections Policy Statement for Dissertations and Theses, the Collections Policy Statement for Developing Countries, and the "Copyright Best Edition" statement are used in conjunction with this policy and the Collections Policy Statement for the History of Science and History Technology, to maintain the Library's collecting strengths in general science that will support the work of the Congress and the Library's many constituencies.

The Library's general science collections are particularly strong in both foreign and English language materials and contain a preponderance of serials, including the proceedings and transactions of most major scientific societies and institutions worldwide. The major sources for reporting scientific research within a country, e.g., *Nature*, *Science*, *Revue Scientifique*, *Naturwissenschaftliche Rundschau*, are included as are those representing regional interests or specific scientific institutions attached to universities, natural history societies, or museums.

The Library considers scientific and technical information from all countries in all languages to be

significant, and therefore collects materials in analog and digital formats on a worldwide basis to ensure full representation of the substantial literature in these fields. The Library collects foreign language materials that illuminate the science policy of each of the world's countries. These materials include data on administration of science, scientific research, scientific achievement, science education and scientific output.

Some e-journal and born digital materials are acquired at a lower level than their print counterparts, because the current Copyright law does not address the deposit of electronic materials. Also some of the mechanics associated with the acquisition, storage and display of digital materials have not yet been resolved. As e-journals, e-prints, podcasts, webcasts, and new technologies for creating science material proliferate and the copyright law includes these materials as depository items, they will be collected at the same rate as their print counterparts, using the same criteria.

The Library's general science collections of reference works, monographs, and general science serials are acquired primarily at either the comprehensive level or the research level. Included at the comprehensive/research levels are directories of research institutions, laboratories, and scientists, histories of science, biographies, works describing the results of and support for scientific research and exploration, the importance of science to society, science literacy, the communication of scientific information, cybernetics, artificial intelligence, and information theory.

The Library's collection of science fair projects, school science activities, and materials for science educators is extensive and supports a wide-range of use by educators both here and abroad. Secondary school textbooks, works on museums and exhibitions, laboratory manuals, problems and exercises, and syllabi are acquired selectively at an instructional support level. The Library acquires textbooks published in the United States on science written at the college level or above at the research level; foreign textbooks in this field are acquired selectively at the basic level.

Materials related to the history of science, scientific method, and the process of science -creativity, basic research and development, accountability, ethics, communication, the dissemination of scientific results - as well as materials describing major scientific advances, achievements are well represented in all language and formats in the general science collection. Also acquired broadly at the research level are materials gauging the contribution of science to specific national goals and the general national welfare, those monitoring significant developments and trends in the scientific enterprise, including international comparisons, and those providing appraisals of science in the United States.

Artificial intelligence, natural language processing, cybernetics, and information theory are acquired widely at the research level in many languages, and in many formats. Much of the literature relating to these topics can be found in journals, conference proceedings, technical reports, and standards, as well as in electronic resources. The sizeable increase in computational capability, along with new ways of computing, have caused the literature in these fields to grow exponentially.

V. Collecting Levels

class	subject	level	comments
Q1-Q299	General science, science policy, periodicals, society publications, biography, scientific voyages and expeditions, history of science, scientific research, science and society	5	Science periodicals, English language 5, European, Asian science periodicals 4; other countries, 3, born digital materials, e-journals, and ephemeral electronic materials are not acquired as widely as needed.. U.S. college level or above textbooks, 4
Q300-385	Cybernetics, artificial intelligence, Information theory	5	
Z7491-Z7407	Bibliography	5	Abstracting and indexing services, scientific book catalogs, bibliographies on special topics covering all aspects of general science

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