

International Scene

Work to Internationalize Access to the Archives and Manuscripts of Physics and Allied Sciences

JOAN WARNOW-BLEWETT

Abstract: The essay reports on the methodology and activities of a current project of the American Institute of Physics's (AIP) Center for History of Physics to enlarge the international component of its International Catalog of Sources for History of Physics and Allied Sciences (ICOS). The ICOS project identifies an institution in each foreign country to survey its repositories and send information on the location and content of collections to the AIP for cataloging, indexing, and sharing with RLIN-AMC. Comments on the impact of political upheavals and on other problems and successes are included.

About the author: Joan Warnow-Blewett is associate director of the AIP Center for History of Physics. Her activities and writings focus on: (1) cooperative documentation strategies, especially appraisal studies and preservation of materials at appropriate repositories, and (2) documentation research to resolve archival problems, especially those pertaining to changes in organizational structures and communication patterns. She chaired the Joint Committee on Archives of Science and Technology and is a fellow of the Society of American Archivists.

ARCHIVISTS ARE BEGINNING TO tackle the problems surrounding international access to information on archives. Two projects—the Vatican Archives Project¹ and the project of the American Institute of Physics described in this account—are well under way. The Research Libraries Group (RLG) reports that discussion of a number of additional projects is also taking place. A significant aspect of RLG's current focus is the acquisition of data for the Research Libraries Information Network—Archives and Manuscripts Control (RLIN-AMC)² on primary source materials, both within and beyond the United States.

The International Catalog of Sources for History of Physics and Allied Sciences (ICOS) is maintained by the Center for History of Physics of the American Institute of Physics (AIP). Despite its name, the catalog has thus far been overwhelmingly domestic in its coverage of collections of historical documentation. Scholars seeking information on collections outside the United States have been limited to a very few special catalogs³ and to individual inquiries. In April 1989, the AIP Center initiated a project, supported by a grant from the Andrew W. Mellon Foundation, to strengthen the international component of the ICOS.

Background

The AIP Center's work to secure the documentation of modern physics and allied sciences in appropriate repositories around the world has led to detailed knowledge of the location and contents of archival resources, and this has allowed the center to guide people to the resources they need. Gathering and disseminating archival information has thus been the linchpin of the center's work from the outset. In this program, the AIP Center's chief asset over the past thirty years has been the International Catalog of Sources for History of Physics and Allied Sciences.

The ICOS is just what its name implies—a specialized catalog of information on the locations and contents of collections of papers and archives around the world. The AIP Center continues to seek information about papers of scientists working in physics and related fields (such as astronomy, acoustics, optics, and geophysics) as well as records of major institutions (academies of science, academic physics departments, and research laboratories). The AIP's period of interest is chiefly from about 1890 to the present, but if nineteenth-century or earlier collections are of interest or of major importance, they are included as well.

In addition to collections that are in libraries and archives, the ICOS has information on privately held papers (especially if they are available for research use) and on significant scientists' papers that have been destroyed. Copies of finding aids to individual collections are welcome as supplementary aids for scholars; at the moment, the AIP Center has more than six hundred of these finding aids.

The AIP Center is well-known for this catalog, and many historians of physics as well as other scholars use it when they are planning new research projects. Since the beginning of 1989, the AIP Center has been upgrading and automating the ICOS in

¹The Vatican Archives Project, which is under the direction of Francis X. Blouin, Bentley Historical Library, University of Michigan, is well under way. For further information on this project, see Leonard A. Coombs, "A New Access System for the Vatican Archives," *American Archivist* 52 (Fall 1989): 538–46; Francis X. Blouin, Jr., "A Case for Bridging the Gap: The Significance of the Vatican Archives Project for International Archival Information Exchange," *American Archivist* 55 (Winter 1992): 182–91; and Elizabeth Yakel, "Pushing MARC AMC to Its Limits: The Vatican Archives Project," *American Archivist* 55 (Winter 1992): 192–201.

²RLG is headquartered in Stanford, Calif.

³For example, Thomas S. Kuhn, John L. Heilbron, Paul Forman, and Lini Allen, *Sources for History of Quantum Physics: An Inventory and Report* (Philadelphia: American Philosophical Society, 1967).

preparation for distributing it widely through the RLIN-AMC. The Mellon Foundation grant, which supports the special efforts needed to strengthen the international components of the project, supplements the AIP's National Endowment for the Humanities (NEH) grant, which covers domestic work. Basic funding comes from the AIP, a not-for-profit membership corporation whose members are the leading American societies in physics and such allied fields as astronomy and geophysics. The AIP is primarily a publisher, handling approximately 90 percent of American journal literature in its field. But it also undertakes other tasks that are best done by a central organization; one of these—the AIP Center for History of Physics—has been dedicated since 1961 to the mission of preserving the historical record of modern science at appropriate repositories.

The Mellon Foundation grant is revolutionizing the AIP Center's methodology for locating collections of correspondence and other manuscript materials outside the United States. With few exceptions, the AIP Center's activity heretofore was confined to occasional letters seeking information on manuscript collections from individuals or specific libraries.⁴ In general, success in finding materials was limited. With additional funds, the AIP has directed its effort toward building cooperative programs with one key institution in each scientifically developed country. Although contracts with designated institutions vary in details, the AIP expects each of them to conduct a na-

tional survey of libraries and archives (including universities and scientific societies, academies, and some laboratories) and share with the AIP the information on personal papers and institutional records they gather through this survey. Grant funds support the basic costs of each national survey, for example, for the development of mailing lists, postage and telephone, and some staff time. The amount of support has been based on the size and potential difficulties of survey work in a given country, ranging thus far from a few hundred to a few thousand dollars for startup costs. In some cases, when the potential obstacles are unknown the AIP has paid an amount at the outset and held an additional sum in reserve. With its own funds, the AIP is providing another incentive to designated institutions by offering to share the ICOS, making each institution in effect a center for history of physics documentation in its country. The plan calls for ongoing commitments: The designated institution will continue to conduct periodic surveys, and the AIP will continue to catalog the new information, enter it on RLIN-AMC, and share the ICOS updates with the designated institution.

This stratagem is new both to the AIP Center and to the countries it is approaching. The work required to designate institutions in scientifically developed countries can be lengthy. It is first important to identify the institution that offers the best possibility for a long-term cooperative arrangement. Ideally, that institution would have ties to both the science and history of science communities. In a few countries, choosing such an institution has been relatively easy. In the United Kingdom, for example, a national program to document science and technology has been in place since 1973, making the National Cataloguing Unit for Archives of Contemporary Scientists (NCUACS) the clear choice.⁵

⁴The main exception is the close relationship that has been maintained with the national program to document science and technology in the United Kingdom since its founding in 1973 (see note 5). This cooperative link was a major inspiration for the new ICOS project. The center had also joined in the mid-1980s with the Deutsches Museum in Munich to locate papers and records; see Joan Warnow-Blewett and Jürgen Teichman, *Sources for the History of Solid State Physics* (New York: American Institute of Physics, 1992).

⁵The National Cataloguing Unit for Archives of

Australia has a national program that is based on the U.K. model and that also includes a survey program.⁶ Several countries, including France and Sweden, had relatively new centers for science and technology, which made them first-priority candidates.⁷ In most cases, however, the choice has required a protracted process of correspondence, discussions, and meetings with physicists, historians, and archivists in the nation in question to identify possible institutions.

The AIP has found some cases in which institutions are hesitant to participate. This is understandable for several reasons. Particularly important is the fact that, even in countries where nineteenth- and twentieth-century science has been significant, historical work on modern science is just

emerging. In addition, surveys of physical science papers and records have been conducted in only a very few countries in the past. (The United States, Australia, and, to lesser extent, the United Kingdom are the main exceptions.) For the most part, therefore, the AIP efforts have been missionary in character: trying to persuade individuals and institutions of the potential growth of historical activities and the benefits of the proposed cooperative project.

Existing archival practices had varying impacts on the development of national survey strategies. As noted earlier, a national program to preserve the records of modern science and technology has been in place in the United Kingdom since 1973. General archival programs at universities and elsewhere are the tradition there, and the main objective of the AIP was to gain local support for the addition of a survey to the existing U.K. national program. At the other extreme, a site visit to Japan turned up some important records in private hands and noted a few beautiful memorial rooms, but found no archival programs to document modern science and technology. Apart from the Diet Library and the National Archives, there did not appear to be archival programs to document any other areas of modern Japanese history.⁸ Despite these factors, the AIP was able to identify several concerned individuals willing to undertake a survey in Japan that, in turn, could lead to systematic preservation efforts.

Local political circumstances have sometimes fostered, sometimes thwarted ICOS project plans. For decades, the AIP Center failed in every effort it made to inquire about the final fate of papers of distinguished Soviet physicists. With the coming of perestroika, a young Russian

Contemporary Scientists at the University of Bath and its predecessor, the Contemporary Scientific Archives Centre, were founded to locate, process, and then place in appropriate repositories the papers of scientists and engineers, especially papers of members of the Royal Society.

⁶The Australian Science Archives Project began operations at the University of Melbourne in 1985. Its first published catalog is available; see Gavan McCarthy, *Guide to the Records of Science in Australia: Records of Individuals* (Melbourne: D.W. Thorpe, 1991).

⁷The Centre de Recherche en Histoire des Sciences et des Techniques has been part of the national museum, Cité des Sciences et de l'Industrie at La Villette, in Paris since its founding in 1986. It has carried out some preservation activities and has close ties with other archival institutions in France. The Swedish Center for History of Science was founded in 1988 at the Royal Swedish Academy of Science. Its initial purpose was to carry out historical research of its own and to facilitate that of visiting scholars, with particular emphasis placed on the collections of the academy.

Italy and Germany offered similar opportunities. With historical, and some preservation work, for twentieth-century materials centered at the Università degli Studi di Roma "la Sapienza," its Seminario di Storia della Scienza was the optimal institution. The Seminario agreed to set up a special committee for the ICOS project that would include members from other institutions throughout Italy. While not a center per se, the Deutsches Museum in Munich has served for decades as the single most important repository for science and technology papers and records in Germany.

⁸See Chiyoko Ogawa, "Archives in Japan: The State of the Art," *American Archivist* 54 (Fall 1991): 546–52. I was enlightened by this article and particularly pleased to learn of the existence of the College and University Archives Association.

historian of physics applied for one of the AIP Center's grants-in-aid to support some of his historical research. We immediately asked if he would be willing to work on our ICOS project; ever since then he has been locating papers for the AIP in repositories of the former Soviet Union. Unfortunately, the upheavals of 1991 seem to have temporarily halted the choice of a former-Soviet or Russian institution for future cooperation with the ICOS project. Also, plans to survey documentation in mainland China have been impeded by the aftermath of events at Tiananmen Square. However, a young marine geologist in Shanghai has just recently agreed to contact institutions throughout mainland China on our behalf.

Overall, the AIP Center has made significant progress in identifying appropriate institutions and developing contracts for survey work. It is very clear that Mellon Foundation support for travel—making possible site visits and discussions with historians, archivists, and physicists—has been critical in tipping the balance toward success in these arrangements.

Since April 1989, formal arrangements have been made with designated institutions for survey work (and, unless otherwise noted, for the deposit of the ICOS) in the following countries and regions:

- Australia—Australian Science Archives Project, University of Melbourne
- Austria—Österreichische Nationalbibliothek for the survey, and the Zentralbibliothek für Physik in Wien as depository for the ICOS
- Belgium—Centre d'Histoire des Sciences in Liège
- Canada—National Archives of Canada
- Denmark—National Committee for History and Philosophy of Science for the survey
- France—Cité des Sciences et de l'Industrie at La Villette, Paris
- Germany—Deutsches Museum in Munich

- Israel—Hebrew University of Jerusalem

- Italy—Seminario di Storia della Scienza, Università degli Studi di Roma "la Sapienza"

- Japan—the survey will be conducted under the aegis of several institutions, including the National Science Museum

- Latin America—La Sociedad Latinoamericana de Historia de las Ciencias y la Tecnología

- Poland—Instytut Historii Nauki Os-
wiaty i Techniki Pan at the Polska Akademia Nauk in Warsaw

- Sweden—Center for History of Science at the Royal Swedish Academy of Sciences in Stockholm

- United Kingdom—National Cataloguing Unit for the Archives of Contemporary Scientists at the University of Bath

Efforts to identify institutions in other countries are now under way and will continue through the beginning of 1993.

When arrangements have been completed, the AIP Center sends the designated institution a survey package, consisting of survey forms (in the language of the country), instructions regarding cataloging terms, notes on the scope of "physics and allied sciences," and a selection of form letters. The center also sends information that is already in the ICOS on collections in the designated country. Some initial survey responses have already been received; as of October 1992 these responses add new or improved descriptions for close to 1,000 collections outside the United States. The descriptions will be translated as necessary into English and fully cataloged and indexed following USMARC standards; the AIP expects to be ready to begin to upload records into RLIN-AMC in early 1993. These in-house tasks are under the direction of Bridget Sisk, the AIP Center's archivist-librarian.

The AIP expects this project to lay the groundwork for future efforts on the part of the AIP Center and others. First and

foremost, the Center will use the cooperative ties with institutions abroad to further its documentation strategy; in particular, it will encourage these institutions to initiate more systematic efforts to identify and preserve papers and records that are needed to document their countries' contributions to modern physics. Moreover, these institutions were chosen, in part, because their missions went beyond physics to include other disciplines in science and technology. It is hoped that other disciplines in the history of science will elect to build on these

ties and carry out future international surveys. In the more immediate future, the issuance of national catalogs (or perhaps catalogs covering larger regions, such as Europe) that will foster greater use by historians and others may be expected. In the longer term, these databases may enable archivists and historians to analyze and assess areas of science and technology in which there is a rich record and, even more important, areas in which little has been saved and greater documentation efforts must be made.

New From Highsmith Press...

Preservation Of Electronic Formats



Electronic Formats For Preservation

Janice Mohlenrich, Editor

Answers to your questions about electronic formats.

Preservation of Electronic Formats & Electronic Formats for Preservation responds to the growing concern about new technologies in library information and the preservation of these formats.

The book focuses on:

- Durability and longevity of CD-ROM
- Advantages and disadvantages of microforms vs. electronic storage formats
- Costs and capabilities of imaging techniques
- Appropriateness of electronic formats for libraries

March 1993

0-917846-17-6 • 128 pp • Paper • \$25 • P52-95522

Highsmith
P R E S S

To Order, Call Toll-Free **1-800-558-2110**

Highsmith Press • P. O. Box 800 • Fort Atkinson, WI 53538