NEWS FROM WASHINGTON

HPS May Benefit from Increased NSF Funding in FY 1988

By STEPHEN G. BRUSH, Washington Representative of HSS

THE REAGAN ADMINISTRATION has proposed to spend $1.96 million to support research in the history and philosophy of science in fiscal year 1988. This would be an increase of about 9.8% over FY 1987. Whether this proposal was personally approved by the President, either before or after the budget was announced, is unknown. It is somewhat less than the 16% increase proposed for the National Science Foundation as a whole, and if Congress cuts back the total NSF request, it is likely that funding for the social sciences, including HPS, will also be reduced.

According to the Consortium of Social Science Associations (COSSA), the proposed FY 1988 budget treats the social and behavioral sciences slightly better than did previous Reagan budgets, and, if approved, would bring the level of support back to that for FY 1980 in constant dollars. It would still be far below President Carter's draft budget for FY 1981.

As in previous years, the Reagan administration has proposed to cut the budget of the National Endowment for the Humanities by about 10%. This would affect several programs that support research and other activities in history of science. Congress has usually restored most of the cuts. For example, the "Humanities, Science, and Technology" program received $675,000 in FY 1987 even though the administration requested only $600,000; the request for FY 1988 is for $591,000.

Along with the hoped-for increase in NSF funding, there are plans to start a postdoctoral fellowship program in history and philosophy of science, with the first application deadline tentatively set for 1 December 1987. Guidelines will be available in late spring. Contact Ronald Overmann, Director, History and

Continued on page 3
News of the Society

HSS NOMINATIONS—1987 ELECTION


According to the newly adopted revisions of the Constitution, History of Science Society members have two months from the appearance of this Newsletter to nominate additional candidates. Petitions for Council candidates must contain at least fifteen signatures. Nominating petitions must reach the Secretary of the Society by the June deadline for the July Newsletter if the individuals' names are to be reported there. To allow time for a photograph and candidate biography to be submitted for the July Newsletter, earlier submission is needed.

Please note that Edith Sylla, Secretary of the Society, has taken over paperwork for the Visiting Historians of Science Program and that inquiries concerning visiting speakers should be addressed to her. Policy for the program is still under the guidance of the National Committee, chaired by Joe Burchfield. The National Committee has started the process of selecting a second list of speakers.

The Executive Committee of the History of Science Society is meeting in Madison, Wisconsin, 10-11 April 1987.

See announcement of awards to be made in 1987 in the Unaffiliated Scholars Program under Fellowships and Grants.

The Women's Committee of the History of Science Society has published a new edition of its Directory of Women in the History of Science, Medicine, and Technology, edited by Alice Stroup and Constance Berman of Bard College. The book lists name, address, phone number, professional title, degree data, and fields of scholarly interest for most entrants, and is indexed by subject codes and by region. Current information is provided on about 325 women, while about 100 entries are repeated unchanged from the 1982 edition. To obtain a copy, send $2.00 to cover postage and handling to the HSS Publications Office, History of Science Society, 215 South 34th Street, Philadelphia, PA 19104-6310.

Annual Meeting, Pittsburgh, 23–26 October 1986

Report of the Program Cochairs

The annual meeting of the History of Science Society was held in conjunction with those of the Philosophy of Science Association, the Society for the History of Technology, and the Society for the Social Studies of Science in Pittsburgh, 23–26 October 1986. The participation of the Society for the History of Natural History, running a concurrent program with the History of Science Society, effectively made this a five-society meeting: the pace and bustle of the sessions, corridor discussions, book-exhibition browsing, committee meetings, and interdisciplinary socializing sometimes made it seem as if the entire Republic of Letters had converged on the Pittsburgh Hilton for the weekend.

The History of Science Society scheduled thirty-three sessions, including eight works-in-progress sessions and six cosponsored with other societies (not counting the sessions of the Society for the History of Natural History). Since all the sessions were held in the Pittsburgh Hilton, where most of the participants were quartered, session hopping in principle presented no problem. However, session chairpersons encountered the usual difficulties of persuading speakers to hew to the timetable, and program chairpersons entertained the usual complaints that "all the interesting sessions" conflicted with one another. These latter complaints were philosophically received as evidence that all the sessions were indeed interesting. Participants were guided not only from one session to the next, but also through Pittsburgh—its sights, universities, and restaurants—by a handsome, useful program.

The locale had the vices of its virtues. Large enough to house all the sessions, meetings, and participants of the four societies, the Pittsburgh Hilton was long on cavernous ballrooms and short on cozier rooms for smaller sessions. However, a few events drew crowds that overflowed even the most spacious rooms. These included "Experiment, Observation, and Theory Formation in Twentieth-Century Science"; the History of Science Society Lecture, "Applied History of Science," delivered by John Heilbron; and the session sponsored by the four societies, "The Implications of The Great Devonian Controversy.

Several thematic foci emerged from the History of Science Society part of the program, although the sessions were remarkable for nothing if not their variety and range. New interests in the interactions of theory, observation, and experiment; in the material culture of the laboratory; in language, literature, and science; and in the institutional framework of nineteenth-century German science were all reflected, as were more traditional concerns with the problems of quantification and transmission of scientific theories across cultural boundaries. Despite the shift in the discipline's center of gravity toward the modern period, at least as gauged by sheer number of sessions, scholars of earlier periods were prominent among those the Society honored and remembered: a dinner was held on Friday evening in honor of Marshall Clagett, and the session "Renaissance Philosophy and Science" was dedicated to the memory of Charles B. Schmitt.

The complexities of realizing these four-society extravaganzas beggar the imagination, and the organizational skills of the local arrangements chairman Peter Machamer were universally admired.

Aside from the usual annoyances of not enough water glasses and recalcitrant slide projectors, almost everything ran smoothly. On behalf of the Society, thanks are due to Professor Machamer and his staff at the University of Pittsburgh.
Related Groups

The Académie Internationale d'Histoire des Sciences has elected fifteen new effective members and seventeen additional corresponding members. For 1988 they have a limit on membership of 170 corresponding members and 115 effective members.

The Brazilian Society of History of Science was founded in December 1983 and now has close to 400 members. It publishes a newsletter and a journal. It has been charged with the organization of the second Latin American Congress of History of Science and Technology, to be held in São Paulo, 30 June through 4 July 1988. For more information, contact the Secretary of the Society and chair of the organizing committee for the upcoming congress, Ubiratan D’Ambrosio, Pro¬Reitor de Desenvolvimento Universitário, Universidade Estadual de Campinas, Caixa Postal 6063-CEP 13.081, Campinas-SP, Brasil.

The first annual lecture of the newly formed Leonardo da Vinci Society will be given at the Wellcome Institute for the History of Medicine at 5 p.m. on Thursday, 21 May 1987. The lecturer will be R. A. Weale, Professor of Visual Science, University of London, and his subject . . . "Leonardo on the Eye." Particulars of the society, which is open to all those with an interest in Leonardo, his life, times, and influence, may be obtained from the president, Kenneth Reece, 19 The Green, New¬ick, Sussex BN8 4LA; or the secretary, J. B. Trapp, The Warburg Institute, Wo¬burn Square, London WC1H OAB.

The Research Policy Institute of the University of Lund, Sweden, offers a Master’s Degree Program in Science and Technology Policy. The program, which takes approximately one and a half years of full-time study, consists of a basic course on Science and Technology in Society, plus four shorter courses and a Master’s Thesis. English is the working language of the program. The Institute’s library is the main library of science and technology policy studies in Sweden and contains a unique collection of science and technology policy literature in Chinese and Japanese. For more information, contact Andrew Jamison, Box 2017, S-220 02

Continued from page 1

Philosophy of Science Program, National Science Foundation, Washington, DC 20550.

Another new program, which covers history and philosophy of science as well as other NSF programs, is “Research Experiences for Undergraduates.” The program is intended to supplement ongoing NSF research grants: funding may be requested to support one or two undergraduates. Projects involving these students may be carried out during the summer months (e.g., in conjunction with a Summer Scholars Grant), during the academic year, or both. A typical supplement would be about $4,000 per undergraduate. Requests for supplemental funding should be in the form of a letter signed by the principal investigator and the appropriate institutional official. This letter should state clearly that this is a REU Supplement request and should articulate in some detail the form and nature of the students’ projected involvement in the research project. If the students have not been preselected, a brief description of the selection criteria should be included. If the students have been preselected, the grounds for selection and a brief biographical sketch of each student should be included. The request letter should be accompanied by a signed budget page including information about the funds requested and their proposed use. NSF Form 1030, Appendix 3, may be used for this purpose. Proposals will be accepted and processed at any time, but are due no later than 15 May 1987. Awards will be made within three months of receipt of the supplement request.

For those HSS members who want to take an active role in lobbying: if you have not already done so, please send me your name, address, and phone number if you would be willing to contact your congressional representatives and senators on short notice regarding issues that may come up affecting the history of science profession (see the form below). Aside from asking Congress to support the requested increase in overall NSF funding, I suspect that the most effective way to increase history of science funding would be to develop contacts with decision makers within NSF and to persuade them that major projects should be at least partly supported by other divisions rather than relying entirely on the relatively small budget of the HPS program. More generally, we can enhance the image of our profession in the scientific community by publishing interesting articles in magazines like Scientific American, Science, and American Scientist.

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YES, I am willing to write to members of Congress about the NSF and NEH bills.

Name ____________________________

Address ____________________________

City ____________________________ State __________ Zip __________

Phone(s) ____________________________

My representative is ________________

The representative for my institution’s district is ____________________________

Please send to Stephen G. Brush, Institute for Physical Sciences and Technology, University of Maryland, College Park, MD 20742.
Table 1: HSTM the Primary Area of Expertise

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<th>Other</th>
<th>Field(s)</th>
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With LOIS MAGNER
Purdue University

and ALESLA MALTZ
University of Illinois

Preliminary data for the 1985–1986 employment survey were reported at the HSS annual meeting in Pittsburgh in October 1986. The final, though still incomplete, report is presented below.

Between 1 May 1985 and 30 April 1986, a total of 61 positions were advertised for which history of science, technology, or medicine (HSTM) was indicated as a required, desirable, or possible area of expertise. The sources reviewed for this survey were those used for the last three years: HSS Newsletter, AHA Perspectives, SHOT Newsletter, Bulletin of the American Association for the History of Medicine, and the Chronicle of Higher Education. Of these 61 positions, no data are available for 9 positions about which the advertising institution refused to respond. The 9 positions were advertised by 7 institutions. Data for the remaining positions were accumulated by mail survey (stamped envelopes were sent for the return letter or telephone when surveys were not received).

The 52 survey results received indicated that 39 of the positions have been filled, 8 positions are unfilled and the search is continuing, and 5 positions have been withdrawn or canceled. The 61 positions originally advertised were divided into four kinds of work: teaching (44, or 72.1%); research, editing, or writing (9, or 14.75%); library or museum work (4, or 6.55%); and administrative work (4, or 6.55%).

The 61 positions were classified into three categories: Category I, in which HSTM was the primary area of expertise sought; Category II, in which it was a second area of expertise desirable; and Category III, in which it was a possible area of expertise. Each of these categories was further divided into permanent and temporary positions.

While the total number of positions is down slightly from the previous year (63 in 1984–1985), the number of positions in Category I was significantly higher. Last year 29 (46%) of all positions advertised were in this group, whereas this year 43 (70.5%) were in this category. The number of permanent positions remained...
essentially the same (44 last year compared to 43 this year).

The number of applications totaled 1,377, down 180 from last year. Of these, just over 1,000, or almost 75%, were made by males. Both the number and the percentage of female applicants have thus increased over the previous year, when approximately 275, or 18% of the applicant pool, were women. Job offers were actually extended to 44 individuals, and, as for last year, the proportion of male to female successful candidates was slightly greater than their ratio in the total applicant pool (34:10, or 77%:23%). Respondents generally were vague concerning the number of minority applicants, and only 19 applications were noted from this group. One member of a minority was hired. Information concerning the educational background was provided for approximately 1,000 applicants, and the results show that 75% had the Ph.D., 20% were A.B.D., and 5% had other degrees (M.L.S., M.A., or other). Of the 44 who received job offers, 33 (75%) had the Ph.D., 2 were expected to receive the Ph.D. before beginning the job, 1 was A.B.D. with no indication as to a completion date, 4 were M.A. or M.S. (of these being for library-related jobs), and 4 did not report the educational level of the candidates.

Looking more closely at Category I, one finds more than half (3) of the canceled positions and all 8 of the unfilled positions. In some cases the response was simply "Review still in progress" or "Search extended." In other cases the respondents noted, "None suitable, search reopened." Although the applications of males and females in this category paralleled the total pattern [688 males and 219 females, or 76% and 24%], hiring showed a variation in favor of male candidates. Of the 29 individuals offered positions, 24 (86%) were males and only 5 (17%) were females. When the educational level of the successful candidate is known, 22 (88%) had the Ph.D., 1 (4%) was expected to complete the requirements before starting work, 1 (4%) was A.B.D., and 1 (4%) had an M.S. in HSTM. Where noted, all but one of the successful candidates had some work in HSTM; the exception had a degree in American Studies.

In Category II, where HSTM is a second area of expertise, 33% (35) of all applicants were female, and 37.5% (3 out of 8) of the successful candidates were females. Holders of the Ph.D. were hired in 5 cases, and the encouraging thing is that 6 of the 8 positions were filled by individuals trained in HSTM.

The 7 positions filled in Category III, where HSTM is a possible area of expertise, also give reason for encouragement. Although a wide range of primary fields were sought, 4 of the successful candidates had a degree in HSTM. Data are not complete in this category, but on the basis of the answers provided, males made up approximately 70% (185 out of 264) of the applicants and were the successful candidate 62.5% (5 out of 8) of the time.

Comments concerning the applicant pool in general were positive. Statements such as "There were many excellently well-qualified candidates," "Pool of candidates excellent," and "A number of outstanding candidates were volunteered." One institution expressed surprise at the lack of qualified senior scholars considering a move. Other comments included suggestions. For instance, one response

Table II: HSTM the Second Area of Expertise

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Table III: HSTM a Possible Area of Expertise

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DEADLINE

Dental Research lamented the lack of planning academic teaching careers when specialists in dental science history, but today's market—e.g., discipline history—requires an increased emphasis on training, especially the lack of science in museum work, some experience in biology—both women. The successful candidate HSTM male had some experience in museum work, some experience and knowledge of our laboratories. The University of Missouri respondent noted that "my impression is that relative to potential demand, female specialists qualified to handle both medieval history and history of science are rare." One or two comments complained about the narrowness of training, especially the lack of emphasis on European history. Finally, one search committee offered the following suggestion: "Supervised undergraduate teaching experience is a major plus."

Trends are difficult to see or project with small numbers. For instance, during the past two years approximately 85% of all successful candidates in Category II were historians of science, technology, and medicine. It would appear that this year the success rate is only 75%. But a change of one, to 7 out of 8, would have raised the percentage to 87.5%. If we combine Categories I and II, then 34 out of 37 were trained in HSTM, nearly 92%, which is above last year's rate. The rate of hiring for women continues to improve when HSTM is a requested field (Categories I and II) and this year actually reflected the ratio in the applicant pool. The proportion of known minority applicants, the hiring results, and the failure of respondents even to have noted the presence or absence of minority candidates indicate that at least this year there were few minority candidates seeking employment. Whether this reflects a lack of minority students in HSTM graduate programs as well may still need to be determined.

Finally, the sharp increase in the number of positions in HSTM is encouraging. If this year actually does reflect the beginning of an increased demand, then individuals preparing to enter the field may be approaching that period in which breadth within the discipline instead of breadth outside it can be pursued.

POSITIONS

The Department of Energy announces a vacancy open until filled for a historian to write and publish broad historical studies of regional American energy development. Qualifications include excellent writing skills and knowledge of twentieth-century American history or history of science and technology. For more information, write (including a vita) or telephone Terrence R. Fehrer, Chair, Search Committee, History Division, MA-295, U.S. Department of Energy, Washington, DC 20545.

The NASA History Office invites proposals from qualified scholars to research and write a concise monograph history of the Advanced Communications Technology Satellite (ACTS) Program. Qualified proposers should have familiarity with the history of modern space technology and policy. Ph.D. and demonstrable writing ability preferred. NASA is prepared to provide support for two years' full-time research and writing. Deadline for proposals is 1 August 1987. For guidance in preparing proposals and evaluation criteria, contact, prior to 1 July 1987, the NASA History Office, National Aeronautics and Space Administration, Washington, DC 20546; telephone (202) 453-8300.

The NASA History Program invites proposals from individuals with Ph.D.s in history to research and write a book-length history of NASA's Johnson Space Center. Strong proposals will clearly identify principal questions to be explored in understanding the technological and organizational developments that have shaped the Center and effectively relate its history to that of the U.S. space program in general. Proposals should be submitted no later than 1 September 1987 to Sylvia D. Fries, LSH/History Office, NASA, Washington, DC 20546.

APRIL DEADLINE

The Rockefeller Archive Center of the Rockefeller University seeks to appoint an archivist or historian as Assistant Director for program development and administration. The Center holds 20,000 cubic feet of records of the Rockefeller family, the Rockefeller Foundation, the Rockefeller University, and associated institutions and individuals. Its collections document leading events in philanthropy, education, medicine, science, social welfare, Black history, religion, politics, labor, agriculture, international relations and economic development, the arts, and other areas, almost exclusively in the twentieth century. Candidates for the position should have an M.A. in archival management or a Ph.D. in history. Archival or historical agency experience preferred. Salary $30,000–$35,000. The deadline is extended to 15 April 1987. Apply to Darwin H. Stapleton, Director, Rockefeller Archive Center, Pocantico Hills, North Tarrytown, NY 10591-1598; telephone (914) 631-4505.

FOR THE RECORD

The Department of History at Union College in Schenectady, New York, advertised in December, with an application deadline of 31 March, an assistant or associate professorship in modern European intellectual history with a specialization in the history of science. Notice of this position was sent to those who have been asked to be notified of jobs opening up between newsletters.

Woodcut from William Austin, Haec Homo; Wherein the Excellency of the Creation of Women is Described (London, 1639). Courtesy of Lisa Unger Baskin, supplied to HSS Newsletter by Michele Aldrich.
**FELLOWSHIPS & GRANTS**

The Association for Women in Science (AWIS) announces a new publication entitled *Grants-at-a-Glance*, which provides information on over 350 grants, fellowships, scholarships, awards, and prizes in the life, physical, and social sciences and engineering. To order a copy send $8.00 (check payable to AWIS) to AWIS Publications, 2401 Virginia Avenue, N.W., Suite 303, Washington, DC 20037.

The American Philosophical Society continues its program of research grants to individual scholars in a wide range of fields. The grants offer support for travel, consumable supplies, and microfilms, photostats, photographs, and the like, up to a maximum of $3,500 or of $2,500 in the case of full professors. Younger and less well established scholars are encouraged to apply. In some cases travel grants will be given to supplement grants from other institutions, such as the NEH, the Guggenheim Foundation, or the SSRC, when such travel is indispensable to the applicant's research and not otherwise provided for. For application forms, send a brief description of your project and a proposed budget to Committee on Research, American Philosophical Society, 104 South Fifth Street, Philadelphia, PA 19106. Deadlines are 1 December, February, April, August, and October, for a decision approximately three months after the deadline.

The Sidney M. Edelstein Center for the History and Philosophy of Science, Technology, and Medicine of the Hebrew University of Jerusalem announces two postdoctoral fellowships for the academic year 1987-1988. Students with a Ph.D. degree or its equivalent in the history, philosophy, or sociology of science, as well as in the physical and life sciences, are invited to apply. The application should include curriculum vitae, list of publications, letters of recommendation, the abstract and a sample chapter from the doctoral dissertation, and an outline of a planned project. Major relevant collections include the Edelstein Collection (history of medicine). The Edelstein Center is also a repository for the Archive for the History of Quantum Physics assembled by the American Institute of Physics. Applications must be received by 15 June 1987 at the Edelstein Center, Hebrew University, Givat Ram, 91904 Jerusalem, Israel.

The Council for International Exchange of Scholars has announced the opening of competition for the 1988-1989 Fulbright Grants in research and university lecturing abroad. More than 300 grants in research and 700 grants in university lecturing are available. Application deadlines are 15 June 1987 for Australasia, India, and Latin America except lecturing awards to Mexico, Venezuela, and the Caribbean; 15 September 1987 for Africa, Asia, Europe, the Middle East, and lecturing awards to Mexico, Venezuela, and the Caribbean; 1 November 1987 for institutional proposals for the scholar-in-residence program; 1 January 1988 for Administrators' awards in Germany, Japan, and the United Kingdom, the seminar in German Civilization, the NATO research fellowships, and the Spain research fellowships, and 1 February 1988 for travel-only awards to France, Italy, and Germany. Fulbright Awards are granted in virtually all disciplines, and scholars in all academic ranks are eligible to apply. For more information and applications call or write Council for International Exchange of Scholars, 11 Dupont Circle, N.W., Washington, DC 20036-1257; telephone (202) 939-5401.

Don't forget that the next deadline for the History of Science Society Thematic Meetings grant applications is 15 September 1987. For more information see the January 1987 Newsletter, page 3, or contact Ronald L. Numbers, Department of the History of Medicine, University of Wisconsin, 1300 University Avenue, Madison, WI 53706.

The History of Science Society Associated Scholars Program reminds readers of the Newsletter that funds are available to aid scholars trained in the history of science but currently unemployed, unaffiliated with any institution making use of their training as historians of science, or with affiliations that are either part-time or short-term without prospects of continuation or renewal. Awards in amounts up to $1,000 will be made to facilitate research or travel to prospective job interviews. Applicants must have received a Ph.D. in the history of science, technology, medicine, or a related field closely affiliated with the history of science. Membership in the History of Science Society is not a prerequisite, nor shall preference be given to applicants on the basis of age or previous academic or other affiliations.

Applications may be submitted at any time to the Coordinator of Programs of the History of Science Society. Completed applications should include an up-to-date curriculum vitae, a brief description of the applicant's training and research in the history of science, the applicant's career expectations in general and short-term prospects in particular. Requests for funds to cover travel expenses to interviews should describe the position for which the applicant is to be interviewed, along with a brief statement of his or her qualifications and specific interests in regard to the position in question. Requests for funds to support research should indicate briefly the nature and significance of the research proposed. A tentative budget indicating amounts requested and a full justification of each item requested should accompany the application. Awards will usually be announced within eight to ten weeks after receipt of completed applications. Inquiries or completed applications should be directed to Joseph W. Dauben, HSS Coordinator of Programs, Department of History, Herbert H. Lehman College, CUNY, Bedford Park Boulevard West, Bronx, NY 10468; telephone (212) 960-9899. The Unaffiliated Scholars Program has been made possible in part through a generous grant from the Rockefeller Foundation, supplemented by funds from the C. Doris Hellman Pepper Memorial Fund and the Culpeper Foundation and by gifts from the membership of the History of Science Society.

The John D. and Catherine T. MacArthur Foundation announces a program of grants for research and writing in International Peace and Security. The next deadline for submission of proposals is 30 September 1987. For detailed application instructions, write Grants for Research and Writing in International Peace and Security, Continued on next page
The John D. and Catherine T. MacArthur Foundation, 140 South Dearborn Street, Suite 700, Chicago, IL 60603.

The National Endowment for the Humanities Challenge Grants program announces that the next deadline for submission of proposals is 1 May 1987. These grants, which must be matched on at least a three-to-one basis, are intended to help institutions working within the humanities to achieve greater programmatic and financial stability. Preliminary drafts of proposals for this round should have been received by the staff by 16 March 1987. Potential applicants for the next round may receive guidelines and counsel from Challenge Grants Guidelines, Room 409, Public Affairs Office, National Endowment for the Humanities, 1100 Pennsylvania Avenue, N.W., Washington, DC 20506.

The next deadline for applications to the National Endowment for the Humanities Fellowship Programs for University Teachers and for College Teachers and Independent Scholars is 1 June 1987. These fellowships have a stipend of up to $27,500 and a tenure of six to twelve months, which may begin as early as 1 January 1988 or as late as the spring term of the 1988-1989 academic year. For more information, write Division of Fellowships and Seminars, Room 316, National Endowment for the Humanities, 1100 Pennsylvania Avenue, N.W., Washington, DC 20506.

The next deadlines for the National Endowment for the Humanities Division of Research Programs are 1 June 1987 for editions and translations, 1 July 1987 for conferences to be held after 1 April 1988, 1 October 1987 for projects and for the humanities, science, and technology program, and 1 November 1987 for reference materials. For more information, write to Division of Research Programs, Room 318, National Endowment for the Humanities, 1100 Pennsylvania Avenue, N.W., Washington, DC 20506.

The next deadline for the National Endowment for the Humanities Travel to Collections program is 15 July 1987. The maximum stipend for this program is now $750 and scholars can receive support for travel beyond North America and Europe.

The 1987 edition of the National Endowment for the Humanities Overview of Endowment Programs, including program descriptions of the 35 funding areas in NEH and all 1987 application deadline dates, as well as other helpful information, is now available from NEH Overview, Room 409, 1100 Pennsylvania Avenue, N.W., Washington, DC 20506; telephone (202) 786-0438.

The next target dates for submitting preliminary proposals to the National Science Foundation Ethics and Values Studies (EVS) program are 1 May and 1 November 1987. EVS supports research and related activities examining ethical or value aspects of current research or practice in United States science or engineering. The Foundation is particularly interested in studies or issues associated with the kinds of research and educational projects it supports. Further information is available in NSF announcement 86-48. Send preliminary proposals consisting of a cover page with name and address for future correspondence together with a three- to five-page letter identifying an area of inquiry, methods, prior work, contributions expected, dissemination and evaluation plans, investigators' credentials, budget, and starting and ending dates to Rachelle Hollander, Ethics and Values Studies, National Science Foundation, 1800 G Street, N.W., Washington, DC 20550; telephone (202) 357-9894.

Note courtesy of the Harvard Office for Sponsored Research: A new tax credit intended to encourage corporate funding of university basic research is a key feature of the 1986 Tax Reform Act. Under the new law, companies may take a 20% credit on expenditures that exceed a base established by their average contributions to research in 1981-1983. To take advantage of this credit, researchers should think about approaching corporate sources as soon as possible. Companies usually decide upon research budgets well in advance, and the tax credit is scheduled to expire 31 December 1988.

ARCHIVES & ORAL HISTORIES

The History of Science and Technology Program at the Bancroft Library, University of California, Berkeley, has undertaken an oral history series, "Medical Physics at Berkeley." Seven volumes are now available. These oral history interviews, conducted by Sally Smith Hughes, were recorded with twelve people associated with Donner and Crocker laboratories (both parts of the Lawrence Berkeley Laboratory, formerly the Radiation Laboratory) and the Division of Medical Physics and Biophysics at Berkeley. This interview series was made possible by a grant from the National Endowment for the Humanities. Transcripts of interviews with James Born, John Gofman, Alexander Brendon, William Myers, Kenneth Scott, William Siri, and Donald Van Dyke are now available at the Bancroft Library. Copies for deposit in other noncirculating libraries, and in some instances copies for personal use, can be purchased at cost through the History of Science and Technology Program at the library. Other interviews, including those with Hal Anger, Patricia Durbin, Thomas Hayes, John Lawrence, Alexander Nichols, and Cornelius Tobias, will be made available later.

This series will be of interest to researchers concerned with the development of nuclear medicine, nuclear science, and medical physics, as well as the growth of research facilities at Berkeley. Among the issues addressed are the use of radionuclides and radioisotopic tracers; radiation safety; medical research; the Manhattan Engineer District; the role of the U.S. Atomic Energy Commission; growth and diversification of the Radiation Laboratory; the work of Ernest Lawrence, Joseph Hamilton, and Hardin Jones; and the establishment of the Society of Nuclear Medicine. For further information, write or call History of Science and Technology Program, The Bancroft Library, University of California, Berkeley, CA 94720; telephone (415) 642-0959.

Effective 1 July 1987, the Historical Collections of the Library of the College of Physicians of Philadelphia will expand coverage of printed materials [books, pamphlets, and journals] from 1900 through 1965. The Historical Collections, established in 1953, also contain the manuscript collection, photographs and prints, and the archives of the College. For further information, contact Thomas A. Horrocks, Curator, College of Physicians of Philadelphia, 19 South 22nd Street, Philadelphia, PA 19103.
DONORS TO AND SUPPORTERS OF THE FUND DRIVE

As the History of Science Society moves to the conclusion of its first major Fund Drive, we can report a gratifying response to Dr. Bern Dibner's generous second Challenge Grant, announced in November 1986. As of this writing, $157,000 has been received from members and other donors. Contributions to the Endowment Fund received over the years 1987-1989 will be matched from the Dibner Challenge Grant.

Listed below are the Major Donors, Life Members, and Foundations and Corporate Donors from the start of the Fund Drive in 1983. Major Donors have contributed $2,000 or more. Life Members have contributed $1,000 or more. Also listed are those Sustaining Members and Other Donors who contributed to the Fund Drive between 1 March 1986 and 18 February 1987. Earlier lists of donors in these categories may be found in the HSS Newsletter for April 1984, April 1985, and April 1986. Sustaining Members have contributed $100 or more. The History of Science Society extends its thanks to all those who are helping to make the Fund Drive a success and have thereby provided much-needed financial security for our growing organization.

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ISIS CUMULATIVE BIBLIOGRAPHY, 1976–1985

Work is under way on the next ten-year cumulation of the Isis Critical Bibliographies. The editor, John Neu, would greatly appreciate being notified of any errors users may have discovered in annual bibliographies numbered 101 through 110 (1976–1985). Anyone wishing to be certain that their books and papers published during this period are included in the cumulative bibliography should send a list of publications to the editor, who will add any publications not already cited, providing they fall within the scope of the bibliography. Send to John Neu, Isis Cumulative Bibliography, Memorial Library, University of Wisconsin, Madison, WI 53706.

OSIRIS—VOLUMES 3 & 4

Osiris is indeed revived! The third volume will be published in May. The fourth, a guest-edited volume, will soon be in press.

An annual journal, Osiris publishes material in two categories. One category consists of guest-edited volumes devoted to a single theme or topic of wide interest to the history of science community. These guest-edited volumes are composed of articles of standard length. The second category follows the tradition of the original series of George Sarton’s Osiris (1936–1963). Volumes in this category are made up of major articles that explore an eclectic diversity of subjects on the same level of scholarly excellence but in greater depth than is possible in the pages of Isis.

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Teaching in the History of Science

Resources & Strategies

SCIENCE, TECHNOLOGY & PUBLIC POLICY

DOROTHY NELKIN
Cornell University

FOREWORD

This is the second guide in the series Teaching the History of Science: Resources and Strategies, published under the auspices of the Committee on Education by the History of Science Society. These guides, written by specialists, are intended for the use of historians of science as well as general historians and any other teachers who wish to begin or revise a history of science course or to incorporate new topics into an existing course. The guides will be published in the Newsletter first, then as separate pamphlets.

The first guide, The Scientific Revolution, appeared in the July 1986 issue of the Newsletter; three more are planned for publication in the near future. The editorial board for each guide is drawn from the Society's Committee on Education. The committee welcomes comments on the value of these guides, as well as on suggested topics for future guides.

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EFFECTS ON DEMOCRATIC VALUES

The effect of science and technology on the vaguely defined set of values known collectively as democracy is a pervasive theme in the literature on science, technology, and public policy. Political theorists preoccupied with the relationship of knowledge to power have long envisioned the emergence of expertise as a positive force for rational government. But in the 1960s attention turned to the dilemmas of democracy in a society increasingly influenced by scientific and technical expertise. Subsequently the science and public policy literature has grappled with these dilemmas in a variety of policy contexts.

Here I will first review the way the problem has been framed in this literature and then turn to the development of the theme in studies of the relationship between science and the citizen. I have limited the scope of this review to work on the contemporary implications of science and technology and therefore have not attempted to review the broader literature on the history of democratic theory (see historical review by Pateman 1970).

THE PROBLEM DEFINED

The problem is often posed as a question: How can democratic values be preserved in a society where science and technology are increasingly dominant institutions? The science and public policy literature highlights the conflicts between efficiency and democratic ideology, between the tendency to define complex problems as technical, and therefore resolvable by expertise, and the ideal of citizen participation and public choice. These studies point out the difficulties of creating a knowledgeable, participating public and the problems of redefining the role and responsibilities of scientists in a society where their decisions are of increasing public importance. These themes are woven throughout the diverse and diffuse literature that defines this policy field (see review by Nelkin 1977b).

During the 1960s studies on the values of postindustrial society proliferated. The predominant theme was "the end of ideology" and the rationalization of politics through the increased salience of technical expertise (Bell 1960; Lane 1966). J. Meynau (1968) wrote about "technocracy," John Kenneth Galbraith (1967) about the "technostructure," Nigel Calder (1971) about "technopolis," Daniel Bell (1973) about governments organized around knowledge, and Jacques Ellul (1964) about the dominance of technique over political choice. These and other writers (Wheelan 1968; Klaw 1969) observed the increased use of technical expertise as a basis for public decisions and the resulting shift of political power from elected representatives to technocrats, who are not directly accountable to the public. Subsequent analyses developed these themes further by pointing to the ways in which science and technology appear to threaten democratic values.

One threat explored in the literature is the power afforded to those who control technical information. In the 1960s Harvey Brooks (1965) warned that broad areas of public policy were shifting from the arena of politics to that of expertise, so that problems of political choice are buried in debates among experts over technical alternatives. Science policy analysts continue to observe the growing importance of scientific knowledge as an apolitical basis of policy formation (Ezrahi 1980; Lakoff 1977). However, the actual political role of technical expertise is a matter of some debate. Several writers see a real shift of political power from elected representatives to a new class of experts (Gouldner 1979; Ellul 1964). Others see experts as "mandarins," simply used to reinforce the power and political legitimacy of those who dispose of technological and economic resources (Marcuse 1964; Eulau 1973).

Still other discussions of the power of knowledge dwell on the possibilities of social manipulation inherent in the use of expertise to justify and legitimate political decisions (Melanson 1973; Winner 1986). They suggest that expertise is a political resource and that the ability to capture this resource has profound implications for the distribution of power. Larry Sabato (1981), for example, examines the implications of limited access to costly social technologies (such as surveys and direct mail) on electoral politics. In his history of science-based industry, David Noble (1977) sees scientific expertise as a "handmaiden" to capitalist forces. Guy Benveniste (1977) studies the techniques of expertise and the increasingly central political role of technical consultants. These studies imply that the political legitimacy of the government is based less on representation than on the ability to manipulate and control the context of facts and values in which policies are shaped (see also Lowi 1972).
Along with the increased importance of technical expertise, researchers find an apparent reduction of political choice. Winner (1977) documents how technologies themselves can legislate our existence, becoming in a sense "technological regimes." While decisions are initially made to implement certain technological systems, once set in motion these systems become deterministic, limiting and shaping future options. And while the very scale and economic importance of technological systems call for democratic decision making, complexity limits people's role in influencing decisions affecting their lives (Hoos 1972). Meanwhile increased requirements of technical expertise as a basis for public decisions create a sense of political alienation and a loss of political efficacy. Jeffrey Straussman (1978) develops this theme, documenting the growing confusion between efficiency and the social purposes of public policy and emphasizing the limits of technocratic politics.

Finally, analysts have addressed how developments in science and technology can affect certain rights that we have come to expect in democratic societies. Technological opportunities presented by computers threaten to violate individual privacy (Westin 1970; Westin and Baker 1972; Burnham 1983). Some research in genetics evokes old images of eugenic controls (Keves 1985). Brain research raises specters of social and psychological manipulation (Chorover 1980; Valenstein 1973). Research on the biological basis of human behavior threatens to violate individual rights (Lewontin et al. 1984).

**SCIENCE AND THE CITIZEN**

General concerns about the social and political implications of science and technology are reflected in analyses of specific policy questions bearing on the relationship between science and the citizen. Considerable scholarly attention has been directed to four issues: the political roles and responsibilities of scientists; problems in the dissemination and use of technical knowledge by laypersons; controversies emerging out of growing concern about the impacts of science and technology; and dilemmas of citizen participation in science and technology policy.

*The Political Roles and Responsibilities of Scientists.* In 1969 Joseph Haberer (1969) defined the relationship of science to government as one of "prudential acquiescence." In his review of the political behavior of scientists from Bacon to Oppenheimer, he suggested that in their effort to immunize their enterprise against the disease of politics scientists historically have disengaged themselves from politics or else quietly acquiesced to the demands of the state. However, Alice Smith (1965) and Daniel Kevels (1977) provided examples, especially in the post-WWII period, of political activism among atomic scientists in support of civilian control of atomic energy. Moreover, the literature on scientific advisory systems (Brooks 1964; Gianos 1974; Skolnikoff and Brooks 1975), on scientists and national policy (Salomon 1973; Schooler 1971), and on professionalism among engineers and scientists (Perrucci 1971; Price 1969) suggested the growing engagement of scientists in public affairs. This increased political activity resurrected concern about the growing political influence of technical expertise and prompted discussions about the social responsibility of scientists and engineers (Edsall 1975). Scientists, it was argued, hold a unique position because of their expertise, and this status gives rise to special social obligations. In effect they must compensate for the narrow distribution of knowledge in society (Teich 1974; Brown 1971).

These discussions stimulated the formation of public interest science organizations. Scientists organized to oppose the antiballistic missile and military research in universities (Lakoff 1977). They became involved in the environmental movement, working with citizen advocacy groups (Primack and von Hippel 1974). Whistle-blowing became a widely debated activity when scientists and engineers called public attention to industrial or governmental practices that violated the public interest (Chalk 1982; Westin 1981).

Scientists have developed increasing sophistication in political affairs, but their actions raise controversial questions: Are scientists responsible for the social consequences of their work? To what extent should they use their expertise to engage in political activity in the public interest? What is the effect of political actions on science itself and on the public image of science? The debates over such questions reflect the tensions between the scientists' traditional disengagement from politics and the movement for greater social responsibility.

*The Dissemination and Use of Technical Knowledge.* The realization that knowledge is intrinsically linked to power and influence has provoked a variety of studies bearing on questions of public access to esoteric technical information. Harold Orlans (1979) and Paul Sabatier (1978) call attention to the contradictions that arise in applying scientific knowledge to public policy. While science is often uncertain, incomplete, and complex, politicians and administrators demand practicability, certainty, and simplicity. Several studies (Rich 1975; Orlans 1971) focus on the use of social science knowledge and, in particular, on its vulnerability to political interpretation. Philip Melanson (1973) suggests that knowledge has a double-edged role as both a source of political liberation and an instrument to narrow political options. He sees the struggle over knowledge as a reflection of basic conflicts within American democracy. Michael Brown (1985) looks more specifically at questions of access to information and the barriers that can obstruct dissemination.

Distinguishing between information and the knowledge necessary to take action, he asks how workers in hazardous jobs can obtain information and transform it into the knowledge they need to protect themselves. John Gaventa (1985) asks similar questions about Appalachia mountain people who are concerned about protecting themselves against the effects of toxic wastes. Both authors define the control of knowledge as a struggle between powerful and powerless groups.

Studies of access to information extend to analyses of laws such as the Freedom of Information Act (Relyea 1980), government classification policies and export laws (Nelkin 1984b), trade secrecy (McGarity and Shapiro 1980), and the legal issues involved in access to data (Boruch et al. 1981). Issues concerning the ownership and control of information are also analyzed in studies of the trend toward secrecy in the 1980s, as the preoccupation with national security and international industrial competition encourages restrictions on the dissemination of information about science and technology (Dickson 1984; Science, Technology and Human Values 1985).

*Technological Controversies and Resolution of Disputes.* During the 1970s and 1980s potentially hazardous technologies—airports (Milch 1976), toxic dumps (Levins 1982), nuclear plants (Nelkin and Pollak 1981)—have become sources of public controversies. Science-based programs such as fetal research (Ramsey 1975) and recombinant DNA research (Krimsky 1982) have also provoked public disputes. Studies of these controversies (Mazur 1973; Nelkin 1984a) emphasize their political implications as various interests seek greater control over science and technology decisions. Controversies involve political lobbying, demonstrations, and litigation. Joseph DiMento (1977) documents the increased litigation; William Thomas (1974) and Laurence Tribe (1971), the problems of the courts in dealing with citizen concerns about scientific and technological issues.

The proliferation of controversies has led to a widespread belief that the public is "anti-science" (Sklar 1971). However, attitude surveys have consistently suggested that the public is ambivalent, as its concern about the harmful effects of science and technology is mixed with continued faith in their role as the basis of social and economic progress (Pewitt 1982; Yankelovich 1982).

In the 1980s controversies have increasingly focused on the potential hazards of technology, spawning a literature on the perceptions, dissemination, and management of risk.
While much of this literature consists of technical assessments of hazards, social scientists have emphasized that risk is a social and political concept, that perceptions of risk are influenced by political world views. Mary Douglas and Aaron Wildavsky (1982) developed this in a cultural context; Dorothy Nelkin and Michael Brown (1984; and Nelkin 1985) in the context of the workplace; Baruch Fischhoff et al. (1981) in the context of environmental risks. Each work points to the concerns about decision making and political choice that pervade risk disputes.

The dilemmas of democratic decision-making in technical areas are evident in a growing literature on techniques of dispute resolution. The key to resolving disputes, according to many scholars, is somehow to distribute sufficient expertise so that citizens about decision making and political choice.

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CURRICULAR SUGGESTIONS

A shift in the discourse about science, technology, and democratic values is emerging in the 1980s—an era of increased concern over industrial competitiveness, technological prowess, and national security. While today's sophisticated technologies have deep social and political implications, the trend in governmental policy is to limit public access to information, to manage controversies, and to reduce citizen participation. These trends are exacerbating the persistent tension between democracy and science and technology, making the study of and teaching about these issues all the more important.

My Cornell graduate seminar, "The Politics of Technical Decisions," suggests the kind of course that can be developed from this material. This seminar explores the origins of technocratic politics, the role of technical experts in decision making, and the questions of political versus professional control that arise in disputed areas of public policy. I develop the themes described above in the context of controversial policy choices where technical and political issues tend to converge. The students, coming to the seminar from a broad range of disciplines, write case studies of disputes, some of which have been published in my edited volume (Nelkin 1984a).

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BIBLIOGRAPHY


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GUIDE 1986

The paperback Guide to the History of Science 1986 has been mailed to all individual members of the History of Science Society. Please contact the HSS Business Office, P.O. Box 529, Canton, MA 02021, if you have not received your copy by the end of April. The hardbound copy will be ready about the time this Newsletter is mailed. Contact the HSS Publications Office, 215 South 34th Street, Philadelphia, PA 19104-6310, if you ordered a hardbound copy and have not received it by the end of May.

Plans are also under way for a supplement to the Guide, to appear in 1988. If you have no entry in the 1986 Guide or wish to update your entry, please fill out the form below.

April 1987
MEETINGS

Correction: A recently arrived pamphlet concerning the international conference on "The Philosophy of Science and Science Policy" to be held in New Delhi lists the dates of the meeting as 14-19 January 1988. For more information, contact the President, William Shea.

The nineteenth annual Binghamton Geomorphology Symposium on the History of Geomorphology will take place 23-25 September 1988. For more information, contact K. J. Tinkler, Brock University, St. Catharines, Ontario, Canada, L2S 3A1; telephone (416) 688-5550, ext. 3486.

The nineteenth annual meeting of Cheiron, The International Society for the History of Behavioral and Social Sciences, will be held at Bowdoin College, Brunswick, ME 04011.

A Conference on the History of Technology will be held at the University of Surrey during 3-5 August 1987. Synopses of papers have been received on the relationship between science and technology, milestones in the development of transport, technological development in medicine, and ethical and social considerations in technological development. All queries and correspondence concerning the conference shall be sent to either Patricia Smart, Department of Educational Studies, or Edward Wilson, Department of Mechanical Engineering, University of Surrey, Guildford GU2 5XH, U.K. The deadline for reserving accommodations is 1 May 1987.

The Eighth International Congress of Medieval Philosophy, under the auspices of the Société International pour l'Etude de la Philosophie Médiévale, will take place 24-29 August 1987 in Helsinki, Finland, with the overall theme Knowledge and the Sciences in Medieval Philosophy. Registration forms should be sent in as soon as possible. For more information, write to The Eighth International Congress of Medieval Philosophy, University of Helsinki, Neitsytrolku 1 b, SF-00140 Helsinki, Finland.

The twelfth annual European Studies Conference, sponsored by the University of Nebraska at Omaha, will take place 8-

CALLS FOR PAPERS

The Society for the History of Technology [SHOT] has issued a call for papers for their 1987 annual meeting to be held jointly with the History of Science Society with a 1 April submission date to allow publication of their program in the July Newsletter, along with the HSS program. For those who would like to plan ahead for the 1988 SHOT meeting, the program chair will be Larry Owens, Department of History, University of Massachusetts, Amherst, MA 01003.

The 1988 meeting of the American Association for the History of Medicine will be held in New Orleans, Louisiana, 4-7 May 1988. Papers reporting original research not already published or in press may concern any subject in the history of medicine and should not exceed twenty minutes. Deadline for submission of abstracts of proposed papers is 15 October 1987. For an abstract form, write Arthur J. Viseltear, Chairman, AAHM Program Committee, Section of the History of Medicine, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06510.

A Principia Tricentennial Symposium, Newton's Legacy, will be held in New Orleans 12-14 November 1987 at Tulane University. The symposium will examine Newton's impact on the development of science and on the broader intellectual, political, and social history of the West during the 300 years following the publication of the Principia. The program will be divided into five half-day sessions organized around the centennial years 1687, 1787, 1887, and 1987, and will include contributed papers. For more information concerning the program, invited plenary speakers, or participation, contact Frank E. Durham or Robert D. Purrington, Department of Physics, Tulane University, New Orleans, LA 70118; telephone (504) 865-5520.

The fourteenth annual Saint Louis Conference on Manuscript Studies will be held at St. Louis University 16-17 October 1987. An invitation has been extended for papers dealing with one of the four following aspects of the manuscript: codicology, illumination, paleography, and texts. Those wishing to participate should request additional information from the Conference Committee, Vatican Film Library, Pius XII Memorial Library, 3650 Lindell Boulevard, Saint Louis, MO 63108.

The twenty-seventh Transdisciplinary Symposium on Philosophy and Medicine will take place 11-12 December 1987 in San Francisco on the topic Historical and Philosophical Problems in Medical Genetics. Final papers, due no later than 1 July 1987, will be competitively reviewed. For a more detailed description of the confer-

The British Society for the History of Mathematics announces a conference on Mathematics, Mechanics, and Astronomy: Newton (1687), Lagrange (1788), Poincaré (1889), to be held 17–20 September 1987 at Gonville and Caius College, Cambridge. For further information, contact D. C. Fletcher, Department of Mathematics, University College of Wales, Aberystwyth, Dyfed SY23 3BZ.

The seventh Medieval Science Colloquium will take place in June 1987 at St. John’s University in Collegeville, Minnesota. The plan is to devote half days to sessions and half days to the use of the Microfilm Collection housed at the Hill Monastic Manuscript Library. Funding has been received from the History of Science Society Thematic Conferences Program to help defray travel expenses of graduate students. For more information, contact Wilfred Theisen, Physics Department, St. John’s University, Collegeville, MN 56321.

Don’t overlook the symposium on The Michelson Era in American Science, 1870–1930, to be held on the campus of Case Western Reserve University, 29–29 October 1987. For more information see the October 1986 Newsletter, page 11, or contact Alan Rocke, Program in History of Science and Technology, Case Western Reserve University, Cleveland, OH 44106.

A conference on Newton’s Scientific and Philosophical Legacy will take place 9–12 June 1987 at the Catholic University of Nijmegen, Nijmegen, The Netherlands. Invited papers will be given by Gals Christianson, I. Bernard Cohen, Guy Debrock, B. J. T. Dobbs, Mordechai Feingold, Richard Popkin, and P. B. Scheurer. For more information, contact the Department of Philosophy, Faculty of Science, Catholic University of Nijmegen, Toernooiveld, 6522 ED Nijmegen, The Netherlands; telephone (0)80-558833, ext. 2247.

The 1988 annual meeting of the Organization of American Historians will take place in early April 1988 in Reno, Nevada. A call for papers especially encouraging scholars from other social science and humanities disciplines was issued in January with a 15 March 1987 deadline. For more information, contact the chair of the program committee, Paul Boyer, Department of History, Humanities 4131, University of Wisconsin, Madison, WI 53706.

**STUDY OPPORTUNITY**

The 1988 Summer Institute in the History and Philosophy of Science will be held from Friday, 17 June 1988, to Tuesday, 5 July 1988, at the Humboldt University of Berlin, German Democratic Republic, in cooperation with Robert S. Cohen, Boston University, Erwin Hiebert, Harvard University, and William R. Woodward, University of New Hampshire. The Summer Institute will concentrate on highlights in the theoretical development of science (especially physics, psychology, and biology) in the nineteenth and twentieth centuries and on the discussion of basic problems in the historiography and philosophy of science. Leading historians and philosophers of science of the GDR will speak. Applicants wishing to present a colloquium paper please submit topics (2 pages or 500 words) to the Preparations Committee. Archival work will be possible during the Institute; send a one-page letter in advance to request access. Visits to important cultural and historical sites are also planned.

Participants from the United States and United Kingdom please apply by 15 May 1987 to the Berlin 1988 Vorbe reitungskomitee, Bereich Philosophische Probleme der Naturwissenschaften, Sek tion Philosophie, Humboldt-Universität, Am Kupfergraben 5, Berlin, DDR-1086, German Democratic Republic; and to Professor W. Woodward, Department of Psychology, Conant Hall, University of New Hampshire, Durham, New Hampshire 03824, USA.

The registration fee (including room, board, and spending money) is $500 for full and associate professors; $300 for scholars under 35 who are not tenured professors; and free for doctoral students with appropriate identification. Information on visa application, archives, and lodging will be sent to those who request it.

Collaborators are invited to join a small British-American *ad hoc* group to produce a readers’ guide to Abraham Rees's *Cyclopaedia*. The guide will include biographical notes on the contributors to this multivolume nineteenth-century work; a concordance to the major articles; an analytical subject index; and chapters on the printing and publishing history of both the English and the American editions. Because the *Cyclopaedia* is so inclusive, collaborators from many fields, including all the humanities, the sciences, medicine, the arts, and technology, can be accommodated in areas coinciding with their scholarly interests. For further details, write either to R. J. Law, The Newcomen Society, The Science Museum, South Kensington, London, SW7 2DD, or to June Z. Fullmer, Department of History, Dulles Hall, Ohio State University, Columbus, OH 43210.
MEETINGS, continued

You are reminded that the deadline for submission of papers to the Swedenborg Symposium to be held 7–9 February 1988 in Bryn Athyn, Pennsylvania, is 1 May 1987. See January 1987 Newsletter, page 9, for further details.

The American Antiquarian Society (AAS) will sponsor a conference on Teaching the History of the Book: Methods and Concepts to take place at AAS in Worcester 12–13 June 1987. Deadline for applications to attend is 1 May 1987. For more information, contact John B. Hench, Associate Director for Research and Publication, American Antiquarian Society, 185 Salisbury Street, Worcester, MA 01609; telephone (617) 752-5813.

The Bradbury Science Museum at Los Alamos National Laboratory is sponsoring a Symposium on the Transfer of Instrumentation from Wartime Los Alamos to Peacetime Research to be held 27–28 May 1987. The symposium will focus on the transfer of technological innovations during the war to postwar scientific work in high-energy physics, computers, and other fields. For more information, contact Robert W. Scidel, Museum Administrator, Bradbury Science Museum, MS B286, Los Alamos, New Mexico 87545; telephone (505) 667-4444.

FOR THE RECORD

Student Pugwash USA announces that its fifth biennial International Conference will be held 28 June to 4 July 1987 at Stanford University. The theme of this year’s program is “Choices for Our Generation: Ethics and Values at the Cutting Edge of Technology.” The conference is limited to 100 students, and the deadline for application was 20 March 1987. Student Pugwash USA seeks to foster a generation of leaders concerned with science and technology issues. Papers from their 1985 Princeton conference were published in a recent issue of Technology in Society.

The West Coast History of Science Society held its annual meeting at Pomona College 14 March 1987. There were two invited talks: Donald B. McIntyre’s “The Bicentennial of James Hutton’s Theory of the Earth,” and Mott Greene’s “If the History of Science Is the Answer, What Is the Question?”

Awards, Honors & Appointments

David K. Allison has become the Curator of Computers, Information, and Society at the National Museum of American History.

Joseph W. Dauben has been named Outstanding Teacher of the Year for 1986 at Herbert H. Lehman College of the City University of New York. Professor Dauben has taught history of science at Lehman College since 1972 and is also the deputy executive officer of the Ph.D. Program in History of the City University’s Graduate Center, where he oversees the specialization in history of science. The selection was based upon student nominations and upon student and faculty teaching evaluations.

Alan H. DeCherney of Yale University School of Medicine has been awarded the American College of Obstetricians and Gynecologists–Ortho Fellowship in the History of American Obstetrics and Gynecology for his research into the history of the diagnosis and treatment of infertility.


Robert K. Merton, University Professor Emeritus, Columbia University, has been awarded the Sarton Medal of the University of Ghent and has been designated the first occupant of that university’s George Sarton Chair in the History of Science, defined to encompass historical sociology of science. His pro tempore appointment does not require continued residence in Ghent.

Michael Mulkay, Head of the Department of Sociology at the University of York, England, has won the John Desmond Bernal Award for 1986. The award was presented by The Institute for Scientific Information, in association with the Society for Social Studies of Science (4S), at the 45 annual meeting held in Pittsburgh, Pennsylvania, in October 1986. Professor Mulkay was chosen as this year’s recipient of the award for his outstanding achievements in science-oriented sociology over the past twenty years. Past recipients of the Bernal Award, established in 1981, were Derek de Solla Price, Robert K. Merton, Thomas Kuhn, Joseph Needham, and Joseph Ben-David.

At a ceremony in Rome in November 1986, Otto Neugebauer was awarded the Balzan Prize for his work in the history of science. Established in 1961 to honor achievements in fields in which Nobel Prizes are not awarded, the Balzan Prize has not previously been given for work in the history of science.

Shirley Roe has been appointed Associate Professor at the University of Connecticut beginning September 1987. She replaces John Greene, who retires 1 June 1987.

Arnold W. Thackray has been appointed to the Joseph Priestley Chair in the History and Sociology of Science at the University of Pennsylvania.

D. T. Whiteside has been elected to a personal chair with the title of Professor of the History of Mathematics and Exact Sciences, Cambridge University.

Prize Competitions

The American College of Obstetricians and Gynecologists [ACOG] announces the 1988 competition for the ACOG-Ortho Fellowship in History of American Obstetrics. The award carries a stipend of $5,000 to be used to defray expenses while spending a month in the ACOG historical collection and other medical or historical collections in the Washington, D.C., area continuing research into some area of American obstetric and gynecologic history. Deadline for applications is 1 September 1987. For further information and application forms, contact Gay Takakoshi, Librarian, Historical College, ACOG, 600 Maryland Avenue, S.W., Washington, DC 20024; telephone (202)638-5577.

The University of Delaware Press announces a new $1,000 award for the best book-length manuscript submitted in the fields of history of science, medicine, and technology. The scope encompasses studies of specialized developments and their intellectual histories, as well as the social and cultural aspects of the three fields. Manuscripts must be submitted before 30 September 1987. For details and entry form, contact History of Science, Medicine, and Technology Manuscript Competition, University of Delaware Press, 326 Hullihan Hall, Newark, DE 19716; telephone (302) 451-1149.

The Society for the History of Technology (SHOT) announces the establishment of the Institute of Electrical and Electronics Engineers [IEEE] Life Members' Prize in Electrical History. The prize, which will be administered by SHOT, was established by the History Committee of IEEE and is supported by the IEEE Life Member Fund. A cash prize of $500 and a certificate will be awarded annually to the best paper in electrical history published in the previous year. Any historical paper published in a learned journal or magazine is eligible if it treats the art or engineering aspects of electrotechnology and its practitioners. Electrotechnology encompasses power, electronics, telecommunications, and computer science. The cash portion of the prize will be shared among all joint authors; individual certificates will be presented to each joint author. Authors should submit three copies of papers published in 1986 by 15 April 1987 to James E. Brittain, Chair, IEEE Prize Committee, Department of Social Sciences, Georgia Institute of Technology, Atlanta, GA 30332.

PUBLICATIONS

The Centre National de la Recherche Scientifique, Paris, announces the publication of a new journal, Actual-Merx. The aim of the journal, which is published twice a year, is to provide regular information on Marxist research on an international scale. Each issue contains research and review articles and reviews of fifty to a hundred books. Each article is preceded by a summary in English. For information on subscriptions, write L'Harmattan, 7 rue de l'Ecole Polytechnique, 75005 Paris. Send editorial correspondence to Jacques Bidet or Jacques Texier, Université de Paris X-Orsay, 200 Avenue de la République, 92001 Orsay Cedex.

The National Library of Medicine has just published a short pamphlet, A Biomedical Index to the Correspondence of René Descartes, prepared by Thomas S. Hall. Single copies are available to scholars without charge. Address requests to Chief of the History of Medicine Division, National Library of Medicine, 8600 Rockville Pike, Bethesda, MD 20894.

The American Institute of the History of Pharmacy announces the publication of A Selection of Primary Sources for the History of Pharmacy in the United States: Books and Trade Catalogs from the Colonial Period to 1940. The bibliography, compiled and annotated by Nydia M. King, lists 89 works tracing the history of pharmacy as a science and a profession in the United States—by categories, chronologically by publication dates, and alphabetically by author. Each categorical entry is followed by a brief essay on the significance of the work and a biographical sketch of the author. The categories include dispensaries, pharmacopoeias and formularies, textbooks and reference books, and trade catalogues.

University Microfilms International has filmed 85 of the works listed, available as a set of microfiche or individually. Hardbound facsimile editions of individual works can also be obtained from UMI (UMI catalogue numbers follow the entries in the bibliography).

A Selection of Primary Sources for the History of Pharmacy in the United States can be ordered from the American Institute of the History of Pharmacy ($10; $6 to members), Pharmacy Building, 425 N. Charter Street, Madison, WI 53706.

SCHOLARLY SOFTWARE

The Modern Language Association has announced the availability of version 2.0 of Nota Bene, a word-processing, text-retrieval, and indexing program designed by scholars for scholars. Special features of Nota Bene include flexible page layout; automatic footnoting and numbering; automatic generation of tables of contents, lists of illustrations, bibliographies, and multiple indexes; and display and printing of accented characters. Nota Bene requires IBM or IBM-compatible hardware, two double-sided floppy disk drives or a hard disk, at least 256K of memory (384K is preferable), and DOS 2.0 or higher. For more information and a special-offer price list, write to the MLA at 10 Astor Place, New York, NY 10003.

For news of Society publications see pages 10-11. Pictured above are the Isis Cumulative Bibliography, 1965-1975, Osiris 1 and 2, and the 1986 Guide. See also the Teaching Guide "Science, Technology & Public Policy" by Dorothy Nelkin, bound in this issue.
Lund, Sweden. The first program was initiated in September 1986, and the deadline for applications to the second program, to begin in February 1988, was 1 March 1987.

The Society for Utopian Studies has a new newsletter entitled *Utopus Discovered*, covering society news, news of conferences, teaching aids, etc., and selected scholarship checklists of recent and forthcoming works. To join the society, send $10 for regular membership or $5 for student or unemployed membership to the society's secretary-treasurer, Lawrence Hough, Political Science, East Carolina University, Greenville, NC 27834.

The last event in the 1986–1987 series of the Boston Colloquium for the Philosophy of Science will be a talk by Jürgen Renn "On the Fourth Day: Projectile Motion in the Discorsi of Galileo," with commentaries by Winifred Wisan and Thomas Settle. The talk will take place on Tuesday, 5 May 1987, at 8 p.m. in the Terrace Lounge of the George Sherman Union.

The last event in the 1986–1987 series of the New York Academy of Sciences, Section of History and Philosophy of Science, will be a talk by Martin Fichman, "The Darwin-Wallace Tradition in Biogeography and the Continental Drift Controversy." The talk will take place at 8:00 p.m. on 27 May 1987 at the Society’s building at 2 East 63rd Street.

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**Books Received by Isis December 1986–February 1987**

**Ordering information:** Books and publications listed in the HSS Newsletter are available from the publisher. The History of Science Society cannot fill orders for non-HSS publishers.

**Note:** Most books on the Books Received List that will be reviewed in Isis have already been assigned to reviewers. If you are interested in reviewing a forthcoming book for Isis, please fill in the coupon "News of Forthcoming Books" in this section.


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**Let’s Finish the Job! An Appeal to Every Member**

If you have not already done so, please help the Society strengthen its programs by sending a donation to the final stage of the Fund Drive. Your pledge will count toward matching the additional $200,000 recently pledged by Dr. Bern Dibner. These funds can be matched over the years 1987–1989.

Send your contributions to the History of Science Society Membership Office, 215 South 34th Street, Philadelphia, PA 19104-6310. Use the coupon at the bottom of the page.

Those who have contributed to the Fund Drive are listed on page 9 of this Newsletter and in the earlier Newsletters mentioned there. The History of Science Society again extends its thanks to all those who are helping to make the Fund Drive a success.

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**YES, I want to help the History of Science Society meet Dr. Bern Dibner’s challenge.**

- I wish to become a **Life Member** of the society by donating $1,000 minimum. I understand that this will free me from the obligation of paying annual dues and ensure that I continue to receive *Isis*, the Newsletter, and the Guide at no additional cost.

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*Jeremy Atack, Fred Bateman.* *To Their Own Soil: Agriculture in the Antebellum North.* (Henry A. Wallace Series on Agricultural History and Rural Studies.) xi + 322 pp., illus., figs., bibl., index. Ames: Iowa State University Press, 1987. $29.95.

*Scott Atran.* *Rondement de l’histoire naturelle: Pour une anthropologie de la science.* (Collection Le Genre humain.) 244 pp., bibl., index. Brussels: Editions Complexe, 1986. (Paper.)


*Howard Ball.* *Justice Downwind: America’s Atomic Testing Program in the 1950’s.* xvii + 280 pp., illus., bibl., index. New York/Oxford: Oxford University Press, 1986. $22.95.


*Davide Bigalli* [Editor]. *Ragione e “Civiltàs”: Figure del vivere associato nella cultura del ’500 Oltre l’Utopia.*
Europe. (Based on papers presented at a conference in Milan, 7–9 November 1984) 355 pp., index. Milan: Franco Angeli, 1986. L 31,000 [paper].


Béla Bollobás [Editor]. Littlewood’s Miscellany. 200 pp., illus. London: Methuen, 1953; Cambridge/London/New York: Cambridge University Press, 1986. $32.50 (cloth), $11.95 (paper).

Henri Bouasse. Thyauex et rasonsleurs: Introduction à l’étude des instruments à vent. Préface and analytical index by M. Kergomard. xxvii + 166 pp., illus., figs., index. Paris: Delagrave, 1929; Albert Blanchard, 1986. Fr 245 [paper].

William Brandon. New Worlds for Old: Reports from the New World and Their Effect on the Development of Social Thought in Europe. 1500–1800. x + 256 pp., index. Athens/ London: Ohio University Press, 1986. $26.95 (cloth); $13.95 (paper).


Manlio Calegari. La manifattura Genovese della carta (Sec. XVI–XVII). 174 pp., illus., index. Genova: Edizioni Culturali Internazionali Genova, 1986. [Distributed by Consiglio Nazionale delle Ricerche, Genova.] L 20,000 [paper.]


Guido Canziani; Gianni Paganini [Editors]. Le edizioni dei testi filosofici e scientifici de ‘500 e del ‘600: Problemi di metodo e prospettive d’ ricerca. (Based on papers presented at a conference in Milan, 1–3 April 1985.) 228 pp., Milan: Franco Angeli, 1986. L 19,000 (paper).


J. A. V. Chapple. Science and Literature in the Nineteenth Century. [Context and Commentary.] xi + 192 pp., illus., bibl., index. London: Macmillan, 1986. [Distributed in U.S. and Canada by Humanities Press, Atlantic Highlands, N.J.] $29.95 (cloth), $9.95 (paper).


Horce W. Davenport. Fifty Years of Medicine at the University of Michigan, 1891–1941. 252 pp., illus., index. Ann Arbor: University of Michigan Medical School, 1987.


Paul R. Ehrlich. The Machinery of Nature. 320 pp., illus., apps., bibl., index. New York: Simon & Schuster, 1986. $8.95 (paper).


Antony Flew [Editor]. Readings in the Philosophical Problems of Parapsychology. 376 pp., bibl., index. Buffalo, N.Y.: Prometheus Books, 1987. $24.95 (cloth), $16.95 (paper).

Adrian Forsyth; Ken Miyata. Tropical Nature: Life and Death in the Rain Forests of Central and South America. Foreword by Thomas Lovejoy. xvi + 248 pp., bibl., index. New York: Charles Scribner’s Sons, 1987. $7.95 (paper).

Allan Franklin. The Neglect of Experiment. xii + 290 pp., figs., index. Cambridge/London/New York: Cambridge University Press, 1986. $42.50.


José A. García-Diego. Juanelo Turriano, Charles V’s Clockmaker: The Man and His Legend. Translated by Charles David Ley. [Antiquarian Horological Society Monographs, 26.] xix + 165 pp., illus., bibl., index. Nantucket, Mass.: Science History Publications/USA, 1986. $35 (cloth); $20 (paper).


R. Cargill Hall [Editor]. History of Rocketry and Astronautics: Proceedings of the Third through the Sixth History Symposia of the International Academy of Astronautics. [AAS History Series, 7, Parts 1 and 2.] [IAA History Symposia, 2.] 2 volumes. 726 pp., apps., indexes. San Diego, Calif.: American Astronautical Society, 1986. $100 (cloth); $80 (paper).

Rom Harré [Editor]. The Physical Sciences Since Antiquity. viii + 140 pp., index. New York: St. Martin’s Press, 1986. $29.95.


Tim Ingold. *Evolution and Social Life*. (Themes in the Social Sciences.) xv + 431 pp., figs., bibl., indexes. Cambridge/London/New York: Cambridge University Press, 1986. $54.50 (cloth); $15.95 (paper).

Stanley W. Jackson. *Melancholia and Depression: From Hippocratic Times to Modern Times*. x + 441 pp., illus., indexes. New Haven, Conn./London/Yale: Yale University Press, 1986. $35.


David A. King. *Islamic Mathematical Astronomy*. (Collected Studies Series, 231.) xi + 342 pp., illus., app., indexes. London: Variorum Reprints, 1986. £34.


Sally Gregory Kohlstedt; Margaret W. Rossiter (Editors). *Historical Writing on American Science: Perspectives and Prospects*. 321 pp., illus., index. Philadelphia: History of Science Society, 1985; Baltimore/London: Johns Hopkins University Press, 1986. $15 (paper).


Sol Levine; Abraham Lilienfeld (Editors). *Epidemiology and Health Policy*: (Contemporary Issues in Health, Medicine, and Social Policy.) xvi + 301 pp., figs., indexes. New York/London: Tavistock, 1987. $35 (cloth); $15.95 (paper).

Richard Levins; Richard Lewontin. *The Dialectical Biologist*. ix + 303 pp., bibl., index. Cambridge, Mass./London: Harvard University Press, 1985. $20 (cloth); $8.95 (paper).


Yuval Ne’eman; Yoram Kirsh. *The Particle Hunter*. xii + 272 pp., illus., figs., app., indexes. Cambridge/London/New York: Cambridge University Press, 1986. $49.50.


Charlotte F. Otten (Editor). *A Lycanthropy Reader*: *Werewolves in Western Culture*. xvi + 337 pp., bibl., index. Syracuse, N.Y.: Syracuse University Press, 1986. $32.50 (cloth); $14.95 (paper).


ISIS NEWS OF FORTHCOMING BOOKS

The Editor is anxious to improve the speed and quality of the Book Review section of Isis. Editor, author, reader—all are best served by prompt and authoritative reviewing. To that end, it is of the greatest help to have advance intelligence of forthcoming books that should be reviewed. As authors, potential reviewers, readers, critics, “invisible college” members, conference participants, referees, gossips, and grapevine tenders, the members of the Society are more widely informed than the editorial team can ever hope to be about work in progress. Please fill in and return the attached slip to Book Reviews, Isis, Smith Hall/D6, University of Pennsylvania, 215 South 34th Street, Philadelphia, PA 19104.

<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
<th>Publication date and publisher (if known)</th>
<th>Suggested Reviewers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


CONTENTS

News from Washington 1
News of the Society 2
Related Groups 3
Employment Survey 4
Positions 6
Fellowships & Grants 7
Archives & Oral Histories 8
Fund Drive Update 9
Society Publications 10
Meetings 12
Calls for Papers 12
Awards, Honors & Appointments 14
Prize Competitions 15
Publications 15
Books Received by Isis 16

The Newsletter of the History of Science Society is published in January, April, July, and October. Regular issues are sent to those individual members of the Society residing in North America. Air-mail copies are sent to those members overseas who pay $5 yearly to cover postal costs. The Newsletter is available to non-members and institutions for $20 a year.

The Newsletter is overseen by a Steering Committee consisting of the President, the Secretary, and the Editor of the History of Science Society. It is edited by the Secretary, Dr. Edith Sylla, and is produced at the Society's Publications Office under the supervision of Dr. Frances Kohler. Send news items to Newsletter, History of Science Society, c/o Edith Sylla, School of Humanities and Social Sciences, North Carolina State University, Box 8101, Raleigh, NC 27695-8101.

Deadline for receipt of news is the tenth of the month prior to publication; for articles and other long copy, the first of the month.

Brooklyn Museum with Harry N. Abrams, 1986. $37.50 (cloth); $24.95 (paper).
