

2000 ANNUAL REPORT

ALFRED P. SLOAN FOUNDATION



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2000 GRANTS AND ACTIVITIES



SCIENCE AND TECHNOLOGY

FELLOWSHIPS

Sloan Research Fellowships

\$4,160,000

The Sloan Research Fellowship Program aims to stimulate fundamental research by young scholars with outstanding promise to contribute significantly to the advancement of knowledge. Over the past 45 years, fellowships have been awarded to over 3,500 scientists and have accounted for expenditures of almost \$87 million. Sloan Research Fellows continue to receive numerous prizes and awards in recognition of their major research accomplishments. Twenty-six Fellows have received Nobel prizes and thirteen have been awarded the prestigious Fields Medal in mathematics.

Fellowships in 2000 were awarded in six fields: chemistry, computer science, economics, mathematics, neuroscience, and physics. Each fellowship is administered by the Fellow's institution and is designed to allow the greatest possible freedom and flexibility in its use. The program is described in detail in the [Sloan Research Fellowships Brochure](#).

Candidates for Sloan Research Fellowships are nominated by department heads or other senior scientists familiar with their work. Within each discipline, a committee of three distinguished scientists reviews all nomination documents and recommends the final selections. During 2000, the Foundation awarded Research Fellowships of \$40,000 each, over a two-year term, to 104 scholars at 53 institutions. The following committees reviewed nominations:

Chemistry: Jon C. Clardy, Cornell University; Stephen J. Lippard, Massachusetts Institute of Technology; William H. Miller, University of California, Berkeley.

Computer Science: Randy Katz, University of California, Berkeley; Barbara Liskov, Massachusetts Institute of Technology; Jeffrey Ullman, Stanford University.

Economics: John Geanakoplos, Yale University; Lars P. Hansen, University of Chicago; Paul Romer, Stanford University.

Mathematics: George C. Papanicolaou, Stanford University; Peter Sarnak, Princeton University; Ronald Stern, University of California, Irvine.

Neuroscience: Darcy B. Kelley, Columbia University; J. Anthony Movshon, New York University; S. Lawrence Zipursky, University of California, Los Angeles.

Physics: Robert J. Birgeneau, Massachusetts Institute of Technology; Joseph Polchinski, University of California, Santa Barbara; Scott Tremaine, Princeton University.

Boston College

Chemistry: Scott J. Miller

Boston University

Neuroscience: Barbara Shinn-
Cunningham

Brandeis University

Chemistry: Wenbin Lin

Brown University

Mathematics: Jan Hesthaven

California, University of, Berkeley

Mathematics: Andrei Okounkov
Physics: Nima Arkani-Hamed

California, University of, Davis

Mathematics: Steve Shkoller
Physics: James Wells

California, University of, Irvine

Chemistry: Keith Allen Woerpel
Physics: Michael Dennin

California, University of, Los Angeles

Chemistry: Michael W. Deem
Mathematics: Christoph Thiele
Physics: James Larkin
Chetan Nayak

California, University of, San Francisco

Neuroscience: Herwig Baier

**California, University of, Santa
Barbara**

Physics: Leon Balents

Carnegie Mellon University

Computer Science: Hui Zhang

Chicago, University of

Chemistry: Milan Mrksich
Economics: Fernando Alvarez
Austan Goolsbee
Owen A. Lamont
Physics: Sean M. Carroll

Cold Spring Harbor Laboratory

Neuroscience: Anthony Zador

Columbia University

Chemistry: James L. Leighton
Computer Science: Luca Trevisan
Neuroscience: Oliver Hobert
Physics: Janet M. Conrad
James L. Nagle

Connecticut, University of

Physics: Barrett O. Wells

Cornell University

Chemistry: H. Floyd Davis
Physics: Piet W. Brouwer

**Cornell University, Weill Medical
College**

Chemistry: Jon S. Thorson
Neuroscience: Gero Miesenbock

Dartmouth College

Computer Science: Prasad Jayanti

Duke University

Chemistry: Mark W. Grinstaff
Ross A. Widenhoefer
Economics: John R. Graham
Mathematics: Thomas P. Witelski
Neuroscience: Michael D. Ehlers
Physics: Ashutosh V. Kotwal

Georgia Institute of Technology
Chemistry: Rigoberto Hernandez

Georgia, Medical College of
Neuroscience: Corey Smith

Georgia, University of
Mathematics: William A. Graham

Harvard University
Chemistry: Matthew D. Shair
Computer Science: Michael
Mitzenmacher
Neuroscience: Mark G. Baxter
Zhigang He
Venkatesh Murthy
Physics: Martin J. White

Illinois, University of
Physics: Ali Yazdani

Johns Hopkins University
Chemistry: Thomas Lectka

Kansas, University of
Chemistry: Robert C. Dunn

Massachusetts Institute of Technology
Economics: Susan Athey
Jaume Ventura
Neuroscience: Pawan Sinha

Massachusetts, University of
Chemistry: Klaus Schmidt-Rohr

McGill University
Mathematics: John A. Toth

Michigan State University
Mathematics: Peter S. Ozsvath
Physics: Stuart H. Tessmer

Michigan, University of
Physics: Cagliyan Kurdak

New York University
Computer Science: Denis Zorin
Neuroscience: Nava Rubin
Physics: Georgi Dvali

North Carolina, University of
Mathematics: David Adalsteinsson
Physics: J. Christopher Clemens

Northeastern University
Physics: Sergey Kravchenko

Northwestern University
Chemistry: Hilary Arnold Godwin
Mathematics: Eric Zaslow
Physics: Hui Cao

Notre Dame, University of
Mathematics: Xiaobo Liu

Ohio State University
Chemistry: Michael K. Chan
Mathematics: Alexander Leibman
Bjorn Sandstede

Oregon State University
Chemistry: Wei Kong

Pennsylvania State University
Mathematics: Dmitry Dolgopyat
Physics: Andrew L. Belmonte

Pennsylvania, University of
Computer Science: Sanjeev Khanna
Physics: Mark Devlin

Princeton University
Computer Science: Adam Finkelstein
Economics: John Morgan
Mathematics: Giovanni Forni
Neuroscience: Samuel S.-H. Wang

Purdue University
Chemistry: Jillian M. Buriak

Rice University

Chemistry: Vicki L. Colvin
Computer Science: Peter Druschel
Lydia Kavraki

Rochester, University of

Neuroscience: David J. Calkins
Alexandre Pouget

Salk Institute for Biological Sciences

Neuroscience: Eduardo J. Chichilnisky

Southern California, University of

Mathematics: Thomas H. Geisser
Igor Kukavica

Stanford University

Chemistry: Thomas J. Wandlass
Computer Science: Balaji Prabhakar
Mathematics: Gigliola Staffilani

Texas, University of

Computer Science: Nina Amenta
Michael Dahlin

Toronto, University of

Mathematics: Michael Molloy

Washington, University of

Chemistry: Younan Xia
Computer Science: Brian Curless
Christopher J. Diorio

Wesleyan University

Chemistry: Anne M. Baranger

Wisconsin, University of

Economics: Yuichi Kitamura
Mathematics: Eleny-Nicoleta Ionel

Yale University

Physics: David DeMille

DIRECT SUPPORT OF RESEARCH

NEUROSCIENCE, TRUSTEE GRANTS

Brandeis University Waltham, MA 02454	\$400,000
California Institute of Technology Pasadena, CA 91125	\$400,000
New York University New York, NY 10012	\$400,000
Salk Institute for Biological Studies San Diego, CA 92186	\$400,000
University of California, San Francisco San Francisco, CA 94143	\$400,000

Grants of over \$1 million made to each of these five institutions in 1994 supported the establishment and operation of research centers for theoretical neurobiology. The aim was to bring young researchers with strong theoretical backgrounds, often with graduate degrees in the mathematical, computational, and physical sciences, into the laboratory world of neurobiology. The initial success of these programs in the recruitment of highly qualified young theoreticians, the effectiveness of their laboratory and other training, and in the development of research initiatives, led to renewal grants in 1997 for their continued operation. Many post-docs at these centers have by now gone on to positions in academic and research institutions. These young theoreticians, now knowledgeable about experimental techniques and problems, have made important research contributions and have produced, often in collaboration with senior scientists at their centers, a large number of publications, abstracts, and presentations. In addition to the fact that theoreticians are being offered tenure-track positions at leading neuroscience departments, there are other signs that the neurobiology community has endorsed the value of theoretical work. An overall recommendation for stronger ties to theory and computation has been put forth by the National Institutes of Health, and the Howard Hughes Medical Institute has begun appointing Hughes investigators in computational neuroscience. The present grants involve equal funding from the Sloan Foundation and the Swartz Neuroscience Foundation, supplying a total of \$800,000 to each center for the continuation of its work. Each center has given assurance that it will continue at its original size and that funds sufficient to sustain this level will be available. Project Directors: Professor Eve E. Marder, Biology Department, Brandeis; Professor Richard A. Anderson, Division of Biology, Cal Tech; Professor Robert M. Shapley, Center for Neural Science, NYU; Professor Thomas D. Albright, Vision Center Laboratory, Salk Institute; Associate Professors Allison J. Doupe and Kenneth D. Miller, Department of Physiology, UC, San Francisco.

California Institute of Technology
Pasadena, CA 91125

\$90,000

The Foundation has funded six summer workshops to bring together both the senior faculties and the younger theoreticians of the Sloan Centers for Theoretical Neurobiology. At least three areas of common scientific interest have been identified as a result of these meetings: statistics of the natural environment, temporal encoding of information, and how neural circuits compute. This new grant supports the continuation of the workshops for three more summers. They will be held on the campuses of the Centers and will feature presentations by Center faculty and post docs, as well as senior guest lecturers. Project Director: Professor Richard A. Anderson, Division of Biology.

NEUROSCIENCE, OFFICER GRANTS

Aspen Center for Physics
Aspen, CO 81611

\$20,000

Partial support for a workshop on pattern formation. Project Director: Professor Charles F. Stevens.

Neural Information Processing Systems Foundation, Inc.
La Jolla, CA 92037

\$10,000

Partial support for a workshop on “Computation in the Cortical Column.” Project Directors: Henry Markram, Senior Scientist, Department of Neurobiology, Weizman Institute of Science, and Jennifer F. Linden, Postdoctoral Fellow, Keck Center for Integrative Neuroscience and Department of Otolaryngology, University of California, San Francisco.

COMPUTATIONAL MOLECULAR BIOLOGY

Sloan/DOE Postdoctoral Awards in Computational Molecular Biology

This fellowship program is a joint venture of the Sloan Foundation and the U.S. Department of Energy. Fellowships provide an in-depth experience in a molecular biology laboratory for recent Ph.D.s, mostly from computationally intensive fields such as mathematics, physics, computer science, engineering, and chemistry. There is exceptional scientific potential in applying modern computational techniques to problems related to data arising from the study of human and other genomes. The program aims to increase the number of scientists possessing the cross-disciplinary skills needed to study these problems. Each two-year fellowship award carries a total budget of \$100,000 (increased to \$120,000 in 2001), which includes stipends, benefits, research expenses,

and institutional overhead. A careful review of applications in the fifth year of the program resulted in the following seven awards in 2000. (Grants for the first five awardees are from Department of Energy funds.) The listing below includes the following: name of awardee; Ph.D. field of awardee; postdoctoral sponsoring institution; sponsoring senior scientist; proposed research plan.

Christine Elsik; Genetics/Forest Science; University of Virginia; William R. Pearson; “The Fate of Duplicated Genes in Model Grass Genomes after Polyploidization.”

Thomas Graeber; Physics; UCLA-DOE Laboratory of Structural Biology and Molecular Medicine; David Eisenberg; “Computational Prediction of Receptor-Ligand Pairs.”

Fatemeh Haghighi; Genetics and Development; Columbia University Genome Center; Conrad Gilliam; “Kernel Principal Component Analysis of Microarray Data.”

Carlo Maley; Computer Science; Fred Hutchinson Cancer Research Center; Hal Caswell; “Evolutionary Dynamics of Cancer.”

Eli Ayumi Stahl; Population Genetics; University of Chicago; Richard Hudson; “Analysis of Population Genetic Models of Epidemic Disease.”

Diana Murray; Physics; Columbia University; Barry Honig; “Protein-Lipid Interactions in Subcellular Targeting: A Computational Analysis.”

Ashley Stuart; Biochemistry & Molecular Biophysics; Rockefeller University; Andrej Sali; “Analysis of Ligand-Binding in Protein Families.”

COMPUTATIONAL MOLECULAR BIOLOGY, OFFICER GRANT

National Academy of Sciences **\$41,534**
Washington, DC 20418

Support for a workshop: “The Interface of Three Areas of Biomedical Science with the Mathematical Sciences.” Project Director: Scott T. Weidman, Director, Board on Mathematical Sciences.

LIMITS TO KNOWLEDGE, OFFICER GRANT

Columbia University **\$45,000**
New York, NY 10027

To convene a workshop of researchers who have studied the known, unknown, and unknowable in a range of disciplines. Project Director: Professor Joseph F. Traub, Computer Science Department.

Consortium for Oceanographic Research and Education
Washington, DC 20036**\$950,000**

A 1999 Foundation grant enabled the Consortium for Oceanographic Research and Education (CORE) to establish a distinguished international committee to advance the Census of Marine Life, designed to assess and explain the diversity, distribution, and abundance of marine life. Among other activities, it also developed a capable staff for the Secretariat, conducted two major international workshops on data management systems for the Census, began formulating a detailed plan for the Census, and developed a Census website. CORE's members include some 60 U.S. public and private institutions concerned with the oceans, including research institutions, universities, laboratories, and aquariums, as well as parts of government agencies. Major tasks to be undertaken by CORE under this new grant include: completing the scientific strategy and developing an implementation plan; fostering of national and regional programs to carry out the actual work and coordinating these efforts; developing further the formal support and participation by international organizations; obtaining financial commitments to the Census for execution as well as planning; and expanding and diversifying the financial support of the Secretariat itself. CORE plans to recruit a full-time chief scientist to join the Census leadership team. Project Director: Admiral James D. Watkins, U.S. Navy (Retired), President.

University of New Hampshire
Durham, NH 03824**\$1,213,000**

The Census of Marine Life would be greatly enhanced in value if historical information could be obtained about what lived in the oceans before fishing by humans became important. Two workshops have been held to explore this possibility, attended by historians, paleoecologists, and modelers. The workshops explored whether sufficient data could be obtained to study the past history of a significant part of the oceans and whether the data could be analyzed in useful ways. The answers were encouraging and this new approach has already succeeded in reconstructing some of the marine ecosystems near Vancouver. This success, it was believed, could be replicated in many marine ecosystems and something approaching a global picture obtained. The conclusion was that the History of Marine Animal Populations (HMAP) is a research venture which, over the course of the decade of the Census project, could fill in one of the major gaps in human knowledge of environmental history. It could also greatly increase the value of the Census for the determination of so-called Marine Protected Areas (underwater national parks), which now lack benchmark information about what is "pristine." The International Scientific Steering Committee for the Census of Marine Life strongly supports the HMAP component of the program. This grant launches the HMAP project by the University of New Hampshire, in cooperation with the University of Hull (UK) and the University of Southern Denmark. Grant funds will be used to compile historical data on marine life for seven major marine ecosystems in easily accessible form on websites. These data will be integrated into the Ocean Biogeographical Information

System, the Census data assimilation framework designed to allow analysis of both past and present ocean data. The funds will help establish centers for the study of the history of marine animal populations and an international network of investigators, based at UNH. Also, funds will support activities to complete the research plans and to obtain commitments for additional sources of support to carry out the subsequent phases of the HMAP project. Project Director: Professor Paul Holm, Syddansk Universitet, Denmark.

Scientific Committee on Oceanic Research
Baltimore, MD 21218

\$100,000

The Scientific Committee on Oceanic Research (SCOR), established by the International Council of Scientific Unions in 1957, is the leading non-governmental organization for the promotion and coordination of international oceanographic activities. Its secretariat operates from Johns Hopkins University. SCOR does not fund research directly, but is influential through the networks it operates and their conferences and publications. With this grant, SCOR will establish and operate for three years a Working Group, involving about 30 leading technical experts from more than 20 countries, in support of the Census of Marine Life and concentrating on the theme of New Technologies for Observing Marine Life. Meetings of the Working Group will be scheduled in locations around the world where they would serve best to make the Census better known to researchers who need to be involved in this vast project and whose technical skills and inventiveness will be essential for its success. The overall objective of the Working Group is to produce authoritative recommendations on available technologies that can reliably be used in the Census of Marine Life. Project Director: Edward Urban, Executive Director, Department of Earth and Planetary Sciences, Johns Hopkins University.

The following four grants were funded from an appropriation approved by the Sloan Foundation Board of Trustees to support research on the Census of Marine Life. They are part of a cooperative program in which the Foundation co-funds projects with U.S. government agencies through the National Ocean Partnership Program (NOPP), an interagency consortium led by the U.S. Navy, National Science Foundation, and National Oceanic and Atmospheric Administration. These grants focus on definition, development, and other aspects of an Ocean Biogeographical Information System (OBIS). A major outcome of the Census should be an online three-dimensional geographical information system that would enable researchers or resource managers anywhere to click on a volume of water and bring up data on living marine resources supported in that area. These OBIS research projects concern various problems in designing and building such a database. The small grant to the Consortium for Oceanographic Research and Education supports the convening of a workshop of leaders participating in the development of OBIS.

Academy of Natural Sciences
Philadelphia, PA 19103

\$499,905

Project Director: Gary Rosenberg, Associate Curator of Malacology and Chairman, Department of Malacology.

California Academy of Sciences **\$500,000**
San Francisco, CA 94118

Project Director: William N. Eschmeyer, Senior Curator, Department of Ichthyology.

Consortium for Oceanographic Research and Education **\$26,600**
Washington, DC 20036

Project Director: Admiral James D. Watkins, U.S. Navy (Retired), President.

University of Texas Medical Branch **\$449,472**
Galveston, TX 77551

Project Director: Phillip G. Lee, Director, National Resource Center for Cephalopods.

The following five grants were funded from appropriations approved by the Sloan Foundation Board of Trustees to support projects related to the Census of Marine Life.

Monterey Bay Aquarium Foundation **\$30,000**
Monterey, CA 93940

For a workshop at the Tuna Research and Conservation Center to plan a Pacific pilot project for the Census of Marine Life. Project Director: Barbara A. Block, Professor in Marine Sciences, Hopkins Marine Station of Stanford University.

New England Aquarium Corporation **\$45,000**
Boston, MA 02110

To develop a strategy to involve aquariums and other informal science institutions in the Census of Marine Life. Project Director: Jerry R. Schubel, President.

North Pacific Marine Science Organization **\$21,800**
Sidney, British Columbia
Canada V8L 4B2

To deepen the involvement of the North Pacific marine science community in the Census of Marine Life. Project Director: Alexander Bychkov, Executive Secretary.

Oceanographic Society **\$30,000**
Washington, DC 20036

To prepare a special issue on the biogeographical information system for the Census of Marine Life. Project Director: Richard W. Spinrad, Editor, *Oceanography*.

Ocean Trust
Arlington, VA 22209

\$30,000

To facilitate industry participation in the Census of Marine Life. Project Director: Thor Lassen, President.

OTHER SCIENCE, TRUSTEE GRANT

National Academy of Sciences
Washington, DC 20418

\$750,000

Scientific and technological issues are not limited by national boundaries. Many of the most complex issues, such as climate change, the spread of diseases, and trends in oceans and forests, are regional or even global in scope. A new international organization, the InterAcademy Council (IAC), has been formally established with its headquarters at the Royal Netherlands Academy of Arts and Sciences. The IAC can be considered the international analogue of the U.S. National Research Council, i.e., an agency able to undertake studies of scientific and technical issues at the request and with the financial support of international bodies such as the United Nations and the World Bank, of national governments, and of groups of governments. IAC members include the science and engineering academies of over 80 countries. The Foundation has made an earlier officer grant for travel and staff for initial meetings of the IAC. The current grant will support the first major study by this new consortium and operating expenses during its first year. A number of possible topics have been suggested for the initial study. The newly established Board of the IAC will make a final choice early in 2001. If this critical first study is of high scientific quality and is seen as valuable by international organizations and national governments, it is expected that they would be approached to seek financial support for subsequent studies. Project Director: F. Sherwood Rowland, Foreign Secretary.

OTHER SCIENCE, OFFICER GRANTS

Association of American Medical Colleges
Washington, DC 20037

\$37,698

Preparatory work for a consensus development project on gene patents. Project Director: David Korn, Senior Vice President for Biomedical and Health Sciences Research.

Cold Spring Harbor Laboratory
Cold Spring Harbor, NY 11724

\$40,180

To conduct a workshop on the progress and prospects for mammalian cloning. Project Director: Jan A. Witkowski, Director, Banbury Center.

Drexel University **\$39,800**
Philadelphia, PA 19104

For a collaboration between computational astrophysics and powerful three-dimensional display systems. Project Director: Professor Steve McMillan, Department of Physics.

National Academy of Sciences **\$45,000**
Washington, DC 20418

Startup funding for an InterAcademy Council. Project Director: F. Sherwood Rowland, Foreign Secretary.

University of California, Berkeley **\$45,000**
Oakland, CA 94607

Support to organize multi-disciplinary, multi-institutional research teams for materials science projects. Project Director: Don M. Parkin, Co-Director, Institute for Complex Adaptive Matter, Los Alamos National Laboratory.

University of California, Davis **\$20,000**
Davis, CA 95616

Support for tutorial and for graduate student and postdoc participation at the International Conference on Computational Nanoscience. Project Director: Professor Neils Jensen, Department of Applied Science.

University of Illinois **\$3,000**
Urbana, IL 61801

Partial support for a workshop on chemical ecology. Project Director: Professor May Berenbaum, Department of Entomology.

HISTORY OF SCIENCE AND TECHNOLOGY

TRUSTEE GRANTS

Dibner Institute for the History of Science and Technology **\$1,335,000**
Cambridge, MA 02139

Foundation grants during past years have supported the use of the World Wide Web as a new way of creating an historical record of recent major technical and scientific events. Some 20 web sites were established, each attracting contributions of reminiscences, comments, and source materials by participants in the actual scientific or technical development to which the site is devoted. This new major grant will enable the Dibner Institute, located at MIT, to develop exemplary web sites that will allow scientists, technologists, and others engaged in the actual making of science and technology to act directly in the production of a historical record. The project will introduce and make widely available a set of best practices for the construction of dynamic but enduring web sites. It will involve distinguished historians of science from leading universities working in project teams. They will develop sites on such topics as the emergence of the field of molecular evolution, the development and application of the scanning tunneling microscope, the origins of bioinformatics and the early phases of the Human Genome Project, and the development of the Apollo Guidance Computer, the control system of the spacecraft that went to the moon. A new category of Dibner research fellows associated with history on web sites will be created. Quarterly workshops and frequent seminars will be held that should develop a large number of leading scholars who are significantly involved in helping create this new format for history. The Burndy Library, housed in the Dibner building and containing one of the world's finest collections of rare books and secondary materials in science and technology, will play a major role in this project. The shift of scholarship to the web raises difficult issues having to do with preservation and access. In confronting these issues, the project will draw on the commitment and experience of the Burndy Library with regard to digital libraries. The cost of the full program will be equally shared between the Sloan Foundation and the Dibner Fund, an independent foundation that supports history of science and technology at the Dibner Institute and elsewhere. Project Director: Jed Z. Buchwald, Professor of the History of Science and Technology, and Director, Dibner Institute.

George Mason University **\$720,000**
Fairfax, VA 22030

Five major activities are planned by George Mason's Center for History and the New Media, a leading U.S. center of historians dedicated to the use of new media: (1) an evaluation of the current state of the art in collecting, preserving, and disseminating science and technology history on the World Wide Web; (2) construction of a Virtual Center for the history of science and technology on the web that will include an online, annotated guide to a large number of the best sites in this field; (3) design of a Memory

Bank to encourage visitors to become active participants in recording the recent history of science and technology; (4) creation of a Practical Guide for the collection and dissemination of the history of science and technology online; and (5) outreach and education to encourage different communities, such as history enthusiasts, archivists, graduate students, and retired scientists and engineers, to join in the practice of web history. Project Director: Professor Roy Rosenzweig, Director, Center for History and New Media.

North American Society of Pacing and Electrophysiology **\$146,000**
Natick, MA 01760

The North American Society of Pacing and Electrophysiology (NASPE) includes 3,000 physicians, scientists, and allied professionals concerned with management and study of cardiac arrhythmias. Its website receives many visits, not only from members, but also from millions of patients and their families interested in pacemakers and other devices. With this grant, NASPE will create websites concerned with the history and evolution of cardiac devices and related interventions. The site will encourage and accept contributions not only from founders of the field, but also from technicians, nurses, manufacturers, and patients, who can add different perspectives. NASPE has stated its commitment to a sustained presence in history on the web. Project Director: Dr. Seymour Furman, Chairman, Oral History for Cardiac Pacing and Electrophysiology Committee.

HISTORY OF SCIENCE AND TECHNOLOGY, OFFICER GRANT

Harvard University **\$5,000**
Cambridge, MA 02138

To prepare an online index of Newton's *Principia*. Project Director: Professor Emeritus I. Bernard Cohen, History of Science.

STANDARD OF LIVING AND ECONOMIC PERFORMANCE

INDUSTRIES

INDUSTRY CENTERS, TRUSTEE GRANTS

Columbia University
New York, NY 10027

\$1,200,000

This grant supports the establishment of a Telecommunications Industry Center at Columbia University. This interdisciplinary center will focus its research and related Ph.D. education activities on the development of a solid factual basis for understanding the nature of the industry and the challenges it faces. Research on the following interrelated themes will be undertaken: (1) expansion of network firms (mergers and economies of scale and scope; transition from narrow to high bandwidth; and growth of demand and globalization); (2) network competition and changing business models (organizational and financial restructuring of network firms; and global networks and their human resources issues); and (3) impact of the internet on telecommunications (e-commerce and telecommunications networks; voice transmission on the internet; and impact of the internet on employment and human resources). Graduate students working on Center research are expected to aim for degrees in a new Ph.D. program in Communications, located in Arts and Sciences, in Business, or in such other departments as Law, Political Science, and Electrical Engineering. This initial Foundation grant is to be supplemented by a \$300,000 industry contribution over a three-year period. Links to industry and government constituencies will be facilitated through an Advisory Board as well as by regular visits to telecommunications firms by Center researchers, who will collect data for empirical work and engage management in discussions of research directions and findings. The industry contribution to the Center's operating budget is expected to rise significantly in the future. Project Director: Eli Noam, Professor, Columbia Business School, and Director, Columbia Institute for Tele-Information.

Harvard University
Cambridge, MA 02138

\$1,300,000

The Harvard Center for Textile and Apparel Research (HCTAR) was established with a major 1991 Foundation grant and received renewal support in 1996. The current grant is a final renewal. HCTAR's research has documented how apparel retailing has changed with the use of data captured at the checkout counter and information technology to facilitate rapid response to customer tastes, and new approaches to distribution, including forecasting and planning methods that reduce inventory risk and cost. (See *A Stitch in Time: Lean Retailing and the Transformation of Manufacturing* by Frederick H. Abernathy, John T. Dunlop, David Weil, and Janice H. Hammond, Oxford University Press, 1999.) Research will continue on how the continuing diffusion of lean retailing affects the growing need to manage risk effectively in the textile and apparel channels.

HCTAR will further develop its software simulation tools for apparel decision-making with a goal of making them more widely available. Another project will focus on globalization, with special emphasis on the effect of new WTO agreements and labor standards regulation on the flow of international apparel and textile products. The Center will also continue as a venue for research by Ph.D. students. Project Director: Professor Frederick H. Abernathy, Division of Engineering and Applied Sciences.

Institute of Paper Science and Technology
Atlanta, GA 30318

\$2,044,750

This grant supports the establishment of a new Sloan Industry Center for Paper Business and Industry Studies. Resources of the Institute of Paper Science and Technology (IPST) and the Georgia Institute of Technology will be combined to study this ninth largest manufacturing industry in the country, one of the top ten employers in 43 states, which generates revenues of over \$500 billion. IPST is supported by over 50 member companies that produce over 80% of North American paper and has over the years collaborated with Georgia Tech on technical problems of the industry. The new Center for Paper Business and Industry Studies will expand this alliance into a more extensive research program in five key areas: (1) globalization, which today is raising serious strategic questions for this traditional, region-based industry; (2) enterprise effectiveness, involving the U.S. industry's struggle to develop management structures and practices that will enable it to remain competitive; (3) workplace transformation, the study of organizational changes aimed at developing newer and more flexible work systems to achieve higher levels of quality and productivity; (4) commercialization, centering on how firms can better harness their scientific and technical knowledge for product and process innovation; and (5) the community, involving the complex interactions between firms and the social, organizational, and political environment in which they are embedded. The Center's work will be carried out by faculty and graduate students from both institutions and their departments and schools of management, engineering, economics, public policy, and liberal arts and sciences. Courses and curricula for graduate and undergraduate students, and for executive education and industry training programs will be developed. Both Ph.D. and master's degree candidates will work on Center research projects. For the initial three-year period, firms in the paper industry will contribute over \$1 million, or one-third of the institutional support for the Center. The industry contribution is expected to increase and become an even larger percentage of future budgets. Project Director: Thomas J. McDonough, Associate Director, Academic Affairs.

Massachusetts Institute of Technology
Cambridge, MA 02139

\$25,278

This grant was funded from an appropriation approved in 1999 by the Sloan Board of Trustees in support of forming a larger national community made up of Sloan Industry Centers and others doing similar work on industries. This MIT grant funds planning for the 2001 industry centers annual meeting. Project Director: Professor Richard K. Lester, Director, Industrial Performance Center.

University of Texas at Austin
Austin, TX 78712

\$1,576,000

This grant renews support for the Center for Construction Industry Studies (CCIS), first established with a 1996 Foundation grant. The Center grew out of the Construction Industry Institute (CII), a University of Texas based alliance of 90 companies, half building owners and half building contractors. During the past three years the Center has worked on three major programs: (1) workforce issues of the construction industry; (2) changing management relationships among owners and builders; and (3) the impact of information technology on the industry. Thirteen faculty members from the engineering and business schools of the university and from the LBJ School of Public Policy have been involved in Center research. Five Ph.D. and 23 master's degrees have been earned by students working on Center projects and about 20 more Ph.D. candidates are in the pipeline. Members of the Center's board include executives from such major companies as Bechtel, Turner, and DuPont, as well as from the carpenters union. For each of its program areas, there are company representatives who advise faculty and students and help in obtaining owner and builder company data. During the renewal period, the plan is to continue work in the three established program areas and to add a fourth on technology. Examples of new topics include: (1) the impact of new technology on the construction industry in general, including the workforce, focused on e-commerce and other information technology based systems; (2) the roles of prefabrication, modularization and pre-assembly as part of "just-in-time" building; (3) understanding and defining "lean construction;" and (4) application of new technology studies to the public construction sector (e.g., highways). The Center has received financial support from the 90 companies of the CII, the NSF, the Texas Department of Transportation, and the Electric Power Research Institute. Such outside funding is expected to continue and expand. Project Director: Professor Richard L. Tucker, Department of Civil Engineering.

INDUSTRY CENTERS, OFFICER GRANT

University of Minnesota Foundation
Minneapolis, MN 55455

\$13,500

Support to develop an industry center proposal for the audio-visual industry. Project Director: Stephanie Lenway, Department of Strategic Management and Organization, Carson School of Management.

INDUSTRY STUDIES, TRUSTEE GRANTS

Case Western Reserve University
Cleveland, OH 44106

\$328,600

This grant supports a study of the metal and plastic component manufacturing industry. Firms in this industry fabricate and/or assemble molded, forged, formed and machined goods made of metal and plastic, principally for sale to manufacturers of automobiles and

other transportation equipment, industrial and construction machinery, electrical appliances and electronic equipment. Because of this sector's critical importance to American manufacturing and its very large inter-firm variation in productivity, a better understanding of the attributes of the strong performers in this sector would be helpful. A research team based in the major Midwestern manufacturing states of Ohio, Illinois, Michigan, and Wisconsin will consider a variety of measures of performance such as productivity, quality, new product introductions, firm survival and growth, profits, wages, and environmental emissions. They will use a combination of surveys and interviews, along with existing databases, to investigate the impact on performance of current firm practices as well as others suggested as advances in manufacturing. Project Director: Associate Professor Susan Helper, Department of Economics.

Massachusetts Institute of Technology
Cambridge, MA 02139

\$518,120

The four Sloan industry centers established at MIT, as well as all the other centers, have accumulated extremely valuable knowledge and data of how specific industries function and how companies within these industries compete successfully. This grant supports the reformatting and packaging of these data, computer models, business simulations, and problem descriptions to make them readily accessible as teaching modules for graduate and undergraduate courses, as well as for professional short courses offered to industrial clients. Ten such case studies from its own centers will be developed by MIT. After being tested in various MIT courses, plans will be developed for broader dissemination. Project Director: Professor Charles L. Cooney, Department of Chemical Engineering.

University of California, Berkeley
Berkeley, CA 94720

\$182,500

As part of its industry centers program, the Foundation has supported a center at Berkeley for the study of the semiconductor industry. Known as the UC Berkeley Program in Competitive Semiconductor Manufacturing, this center has mainly focused on semiconductor fabrication, though they have recently broadened their research program to include value creation and innovation in the product development process. This grant will allow them to branch out further by studying how e-commerce on the Internet is affecting certain aspects of the industry. E-commerce processes now in place or being planned are expected to increase efficiencies in the relationships between firms that design chips and those that manufacture the end products, within vertically integrated firms that carry out both functions (e.g., IBM and Intel) and also between manufacturers and their equipment suppliers. The project will rely on a combination of field work (involving graduate students) and written surveys. Major firms are expected to participate and the industry is picking up 50% of the project's cost. Results will be disseminated through annual meetings with industry participants, published papers, and a report. Project Director: Professor David Mowery, Haas School of Business.

INDUSTRY STUDIES, OFFICER GRANT

University of California, Berkeley
Berkeley, CA 94720

\$35,000

To support a conference on the impact of e-commerce on specific industry sectors. Project Director: Professor Stephen S. Cohen, Co-Director, Berkeley Roundtable on the International Economy.

GLOBALIZATION, TRUSTEE GRANT

University of California, Davis
Davis, CA 95616

\$150,000

A critical strength of the U.S. economy has been its ability to generate entrepreneurial start-ups that create entirely new industries. Many major technology companies (Cisco, Intel, Apple Computer, and Sun Microsystems are examples) and the recent commercialization of the Internet have been initially funded by the venture capital industry. This grant supports a study of the globalization of this industry. Quantitative data will be collected through the various national venture capital associations and from web sites of venture capital firms. Detailed case studies will be prepared for the following six countries: Germany, India, Israel, Sweden, Taiwan, and the United Kingdom. Finally, the impacts of globalization on the structure of the industry and its implications for the U.S. will be analyzed. The results of this research will be disseminated to the venture capital industry, policy makers, and academics. Project Director: Professor Martin Kenney, Department of Human and Community Development.

GLOBALIZATION, OFFICER GRANT

University of California, Davis
Davis, CA 95616

\$45,000

Support for an edited volume on globalization of industries. Project Director: Professor Martin Kenney, Department of Human and Community Development.

BUSINESS ORGANIZATIONS, TRUSTEE GRANT

Columbia University
New York, NY 10027

\$236,000

The team production model of the firm argues that to be productive and efficient a firm must take into account the incentives that are required to hold all the participants in the team production enterprise together: shareholders, managers, debt holders, employees, etc. Underlying the simpler traditional principal/agent model of the firm, which presumes

that the main problem of the firm is how to align the interests of shareholders and top management, is the assumption that by maximizing the return to shareholders a corporation is maximizing the total value of the firm. However, it is possible that the losses incurred by other members of the team, whose inputs are also necessary for creating value, outweigh shareholder gains to such an extent that the total firm value suffers. This grant supports the testing of this notion empirically using data drawn from the airline industry in the post deregulation years 1978-1996. The study will determine whether there is empirical evidence for the team production theory of the firm and also whether it is feasible to calculate a meaningful measure of labor value comparable to equity of shareholders and debt holders. Project Director: Professor Jeffrey N. Gordon, Columbia Law School.

BUSINESS ORGANIZATIONS, OFFICER GRANTS

Babson College **\$36,750**
 Wellesley, MA 02457

To write a book on the history of management ideas within their political and cultural context. Project Director: Professor James Hoopes, Division of History and Society.

Boston University **\$29,450**
 Boston, MA 02215

To produce papers, a workshop, an edited volume, and a future research plan on the positive externalities created by business institutions. Project Director: Professor Peter L. Berger, Director, Institute for the Study of Economic Culture.

Conference Board **\$30,000**
 New York, NY 10022

To assess the effectiveness of public affairs committees of corporate boards. Project Director: Melissa A. Berman, Senior Vice President, Research and Program Development.

OECD Development Centre **\$30,000**
 Paris, France

To compare how corporate ownership and control in seven developing and emerging countries in Asia, Latin America, and Africa differ from U.S. practices. Project Director: Charles P. Oman, Head of Research Program.

University of California, Berkeley **\$20,000**
 Berkeley, CA 94720

For dissemination of research results on the demography of corporations and industries. Project Director: Professor Glenn R. Carroll, Haas School of Business.

University of Pennsylvania
Philadelphia, PA 19104

\$45,000

To support a conference on the non-legal rules and standards governing business organizations, and their relationship to corporate law. Project Director: Edward B. Rock, Co-Director, Institute for Law and Economics.

ECONOMICS RESEARCH, OFFICER GRANT

Yale University
New Haven, CT 06520

\$44,700

To support extensive field work for a book on the economics of price decisions. Project Director: Professor Truman F. Bewley, Department of Economics.

NONPROFIT SECTORS

UNIVERSITIES, TRUSTEE GRANTS

Teachers College, Columbia University
New York, NY 10027

\$2,100,000

The goal of the Foundation's program in higher education is to understand how individual educational institutions actually work and how they function together as an industry. A 1996 major grant in this program established the Sloan Community College Research Center (CCRC) at Teachers College. Community colleges are worthy of study since they enroll six million students, expend some \$30 billion per year, and play a major role in preparing the American workforce. Researchers associated with the CCRC have conducted studies at over 50 community colleges, mainly around two topics: (1) conflicts and complementarities of the diverse and growing missions of community colleges, including especially their missions in workforce development; and (2) the actual perspective and experience, often fragmental and confusing, of the individual student who moves through the system. The Center has also sought to build a stronger research community focused on the community colleges and the nonselective four-year colleges that compete with them. These efforts include training graduate students, solidifying a growing core of faculty committed to community college research, recruiting new scholars to the field, and developing measures to forge stronger connections between researchers and practitioners. This new grant renews support for the Center's activities for a second 3-year period. The Center will carry out research on new for-profit competitors in the market for higher education, on distance and internet-based education, on alternative (non-degree) certification and skill standards, and on accountability and outcomes assessment. Central to this research will be detailed case studies of 16 community colleges in 8 states. A book is planned to synthesize research findings for the relatively broad audience concerned with higher education. Project Director: Professor Thomas R. Bailey, Institute for Education and the Economy.

University of Pennsylvania
Philadelphia, PA 19104

\$26,000

This grant is funded from an appropriation approved by the Sloan Board of Trustees for projects to complete the development of the university simulator, enhance its marketing, and make its underlying programs more accessible for further research and development. The University of Pennsylvania project supports various efforts to enhance use of the university simulator in higher education research and training. Project Director: Professor Robert Zemsky, Director, Institute for Research on Higher Education.

Financial Accounting Foundation
Norwalk, CT 06856**\$682,000**

A 1997 Foundation grant to the Governmental Accounting Standards Board (GASB), through its parent body, Financial Accounting Foundation, supported staff work on whether performance measures have developed to the point where GASB could consider establishing standards for reporting on such measures in published reports. Such reporting would then become part of “generally accepted accounting practices” and therefore would become more common in state and local government public reports. These governments would also have to comply with any citizen involvement requirements that GASB decided to include in its standards. This work is still underway. The current renewal grant, over the period from 2001-2003, will allow GASB sequentially to (1) produce a report on the findings from focus group sessions with citizens and elected officials concerning the present state of performance measurement reporting and how participants believe such reporting can be improved; (2) prepare guidelines for reporting performance measures; (3) report on the results of experimentation with the guidelines; (4) produce an assessment of whether performance measures reported using the guidelines possess the characteristics necessary for GASB to establish standards for reporting on such measures in published reports; and (5) produce a staff recommendation to GASB on whether to require inclusion of performance measures in published reports, and if so, how to proceed toward that end. Project Director: James Fountain, Assistant Director of Research.

National Civic League
Denver, CO 80202**\$658,652**

In 1995 a Foundation grant to the Urban Institute (UI) allowed UI to assist the International City/County Managers Association (ICMA) to create and institutionalize a program of comparative performance assessment in cities and counties across the country. The Urban Institute brought in the National Civic League (NCL) as a partner to conduct workshops in order to ensure that citizens participated in the performance assessment. Such workshops were conducted in 16 jurisdictions, but there appeared to be less than the desired effect on the level of citizen participation in performance assessment. Since then, the receptivity to citizen participation among government professionals has increased greatly due to enhanced familiarity with the process and the presence of new jurisdictions with experience in public participation who have joined the project. A majority of respondents in a recent ICMA survey of participating jurisdictions indicated an interest in citizen participation and requested assistance in moving toward this goal. The current grant will allow the NCL, supported by ICMA, to work intensively with at least three jurisdictions interested in such assistance. In each location, a series of focus groups will identify citizens’ concerns that can be translated into performance measures. Such measures will then be developed and tested. A data collection process will be developed and implemented for each measure. Once the data are collected, they

will be shared with the jurisdiction's media and its citizens. This entire process will be carried out so as to connect the performance assessment data to each jurisdiction's budget and resource allocation decision-making and to institutionalize and continue the citizen-based performance assessment in the future. Project results will be widely disseminated by NCL and ICMA on their websites, and by written reports and articles in the ICMA journal and presentations at ICMA conferences. Project Director: Derek Okubo, Director, Community Services.

Neighborhood Capital Budget Group
Chicago, IL 60605

\$438,000

The Neighborhood Capital Budget Group, a Chicago public policy research and advocacy group, is leading a consortium of organizations that have launched the Campaign for Better Transit (CBT), focused on the problems of and opportunities for improving public transportation in and around Chicago. The CBT is starting with the rail and bus service of the Chicago Transit Authority (CTA). This grant supports the CBT over the next three years as the following plan is carried out: (1) identify riders' top concerns about public transportation by means of a rider opinion survey undertaken early in 2001 and biennially thereafter; (2) prepare an annual report reviewing and analyzing CTA's performance data; (3) develop performance measures for bus and rail service to be used by CBT volunteers to rate these services; (4) complete service assessments on at least two rail lines and ten major bus routes during the first year and repeat with the addition of at least ten bus routes and two rail lines annually; (5) produce an annual report analyzing CTA's capital spending plans and develop recommendations for program-based capital and operations budgeting for the CTA and for more user-friendly budget presentation. Broadcast and print media will be used for dissemination of reports. All CBT reports will also be made available on its website, which will include an interactive component that will allow transit users to input complaints, concerns, and suggestions directly and in a public manner. Such interactive websites may well move citizen-based performance assessment to a new level by enabling citizens to provide real-time performance data to government agencies in a manner that will facilitate attention and response. Project Director: Jacqueline Leavy, Executive Director.

New York Public Interest Research Group Fund
New York, NY 10007

\$274,740

Two Foundation grants, one in 1996 and another in 1998, have supported the New York Public Interest Research Group Fund's Straphangers Campaign to conduct performance assessment of the subways and buses in New York City. State-of-the-subways reports, state-of-the-buses reports, subway announcement surveys, subway cleanliness surveys, subway station telephone surveys, a survey of the conditions of the largest subway stations, and a report comparing ridership gains on individual bus routes with service additions have been prepared and disseminated. There is evidence that these reports have influenced decisions of the Metropolitan Transit Authority to take actions to correct

conditions pointed out in the reports. The current grant renews support for the work of the Straphangers Campaign for another two years. Project Director: Eugene Russianoff, Staff Attorney.

Santa Barbara Foundation
Santa Barbara, CA 93101

\$393,258

With Foundation support the Fund for the City of New York has pioneered an approach to involving residents directly in designing and carrying out measurement of municipal government agency performance. Residents convene to decide what observable features of their neighborhoods (such as the condition of roads, sidewalks, streetlights, and trees; the presence of abandoned buildings, unsightly vacant lots, and graffiti) they want to monitor and then go out with hand-held computers to record what they see block by block. The data are processed and then sent to responsible government agencies where they can inform the deployment of services and repair assets. This program is being successfully implemented in a growing number of areas within New York City and also, with Foundation support, in Hartford and Stamford, CT. It has attracted the interest of other cities. This grant will allow Santa Barbara County to implement the program. Neighborhood groups in the urbanized but unincorporated parts of the county will be the first invited to participate. The Santa Barbara Foundation, a community-based foundation serving the County, has agreed to host the program and actively to promote the project to potential funders in the County, who are expected to provide an increasing share of the operating cost over the three-year term of the project. Project Director: Charles Slosser, Executive Director.

Worcester Municipal Research Bureau
Worcester, MA 01609

\$535,680

The Worcester Municipal Research Bureau (WMRB) has developed a set of indicators designed to assess progress toward achieving goals in five broad areas identified by the City's strategic plan prepared by a committee of citizens appointed by the City Manager. These areas are economic development, public safety, public services, education, and youth services. Data are available from federal, state, and municipal agencies for some of the indicators, but others will require original work. For public services, WMRB will employ ComNET, a technique developed by the Fund for the City of New York that equips citizen volunteers with hand-held computers and sends them out to record the observable conditions of their neighborhoods. WMRB has arranged for the Fund to provide training and technical assistance to help launch ComNET in Worcester. WMRB will also develop a website at which its data and reports will be available and will explore the possibility of an interactive component by means of which citizens can provide real-time performance data to government agencies. Project Director: Roberta Schaefer, Executive Director.

Connecticut Public Expenditure Foundation

\$45,000

Hartford, CT 06103

To support the planning phase and a pilot study for an interactive website to solicit citizen feedback regarding local government services. Project Director: Michelle Doucette Cunningham, Director, City Scan Project, Connecticut Policy and Economic Council.

Rutgers University

\$30,000

Newark, NJ 07102

To institutionalize performance assessment in Montclair, New Jersey and disseminate the results of Sloan-sponsored government performance assessment projects. Project Director: Marc Holzer, Executive Director, National Center for Public Productivity.

DUAL-CAREER MIDDLE CLASS WORKING FAMILIES

CENTERS ON WORKING FAMILIES, TRUSTEE GRANTS

University of California, Los Angeles
Los Angeles, CA 90024

\$3,609,454

This grant supports the establishment and work of a Center on the Everyday Life of Families. The Center will carry out microethnographic documentation of family activities by videotaping the daily, weekly, and annual rhythms and routines of 30 families in West Los Angeles. Such an intensive investigation into the lives of the core families and their interactions with family members, friends, extended family, and community members will result in a new and valuable data set to be studied by both Center faculty and graduate students. The videotapes are expected to supply a deeper and richer understanding of what life is like for dual-earner households with children. They will be digitized and archived for use by other Sloan-sponsored researchers. Located primarily within the Department of Anthropology, the Center will involve scholars from the four subfields of the discipline: cultural anthropology, linguistic anthropology, archaeology, and biological anthropology. Faculty will also be drawn from other departments, including applied linguistics, education, and clinical psychology. Center research will relate to the organization of family and household activities and their impact on the well-being of middle class families in which both parents work. Research projects, involving both faculty and graduate students, will focus on such topics as: daily routines of the families around meals, homework, children's extracurricular schedules, and bedtime rituals; patterns of communications among parents and children; use of space and artifacts within the home and community; and means by which families socialize their children to specific value orientations. The basic videotapes, supplemented when appropriate with data from surveys and interviews, will be relied on for these studies. Project Director: Professor Elinor Ochs, Department of Anthropology.

University of Chicago
Chicago, IL 60637

\$3,249,997

A major 1997 Foundation grant established the Center on Working Families at the University of Chicago. The Center's goals were to carry out research on dual-earner working families and to train a next generation of scholars who would sustain this research emphasis. The Center has designed and is now completing data collection for an original study of 500 dual-earner working families in seven U.S. metropolitan areas. These dual-earner families included 300 with teenage children and 200 with kindergarten age children. Surveys, personal interviews, standardized child assessments, and the Experience Sampling Method were used to collect data from each member of these 500 families. Over 40 advanced undergraduates, graduate students, postdoctoral fellows, and faculty were engaged in data collection and other aspects of this research project. The resulting data are being analyzed around a number of themes: stress and coping in working families; families and religion; family influences on adolescent future

expectations; socialization of young children; and the influence of television, housework, and other activities on family life. Using other existing data sources, Center researchers conducted secondary analyses of issues facing dual-earner working families, published their findings as a series of working papers and in numerous journal articles, and made over 70 conference presentations. The Center made a significant impact on the training and development of students studying working families. Over the last three years, 16 predoctoral students participated in Center research projects. Seven of these are expected to write Ph.D. dissertations on working families. Twenty-two faculty and seven postdoctoral fellows are also currently engaged in Center research. Five postdoctoral students trained at the Center have received appointments at major research universities. This grant renews support for both Center training and research activities. Project Directors: Professors Barbara Schneider and Linda J. Waite, Department of Sociology.

CENTERS ON WORKING FAMILIES, OFFICER GRANT

University of California, Los Angeles
Los Angeles, CA 90024

\$30,000

Preliminary work for a proposed Center on Family Interaction in Dual-Career Households. Project Director: Professor Elinor Ochs, Department of Anthropology.

UNDERSTANDING THE FIRST JOB, TRUSTEE GRANT

Boston College
Chestnut Hills, MA 02467

\$399,922

Whereas traditional families consisted of two adults and two jobs, one paid and one unpaid, dual-earner families are composed of two adults and three jobs, two paid and one unpaid. The “first job” is the unpaid work done at home that is essential to building one’s family, maintaining the physical home, and contributing to the greater good of society. With this grant, Boston College, in collaboration with Purdue University, will study the nature of this first job. This research project is directed at four key questions: (1) What do employed mothers and fathers see as the content and meaning of their first job? (2) What resources do they marshal to carry out the first job? (3) What day-to-day behaviors are associated with the first job? and (4) How do different social contexts, such as the workplace, the neighborhood, and schools, offer opportunities and constraints for fulfilling the demands of the first job? Essential to this research is the notion of generativity, a stage in mid-adult life involving a shift in individual interest from the focus on “I” and “me” characteristic of adolescence and young adulthood to a focus on the larger world, to “we.” Project Director: Assistant Professor Marcie Pitt-Catsouphes, Center for Work and Family.

ALTERNATE WORKPLACE STRUCTURES, OFFICER GRANTS

Clark University **\$29,865**
Worcester, MA 01610

To conduct research on entrepreneurship as a way to create an alternate workplace.
Project Director: Professor Susan Hanson, Department of Geography.

College of William and Mary **\$21,500**
Williamsburg, VA 23187

To analyze data on tenure and tenure-track part-time professors. Project Director:
Professor David W. Leslie, School of Education.

New Jersey Chamber of Commerce Foundation **\$17,000**
Trenton, NJ 08608

To conduct a work-family options fair for small and medium-sized New Jersey firms.
Project Director: Christian Kjeldsen, Vice President, Community and Workplace
Programs, Johnson & Johnson.

Pennsylvania State University **\$44,354**
University Park, PA 16802

For research on university practices affecting faculty with family responsibilities. Project
Director: Professor Robert Drago, Department of Labor Studies and Industrial Relations.

University of Texas at Austin **\$26,041**
Austin, TX 78713

For research on home-based work. Project Director: Professor Gerald S. Oettinger,
Center for Applied Research in Economics.

FAMILY-CENTERED PUBLIC POLICY, TRUSTEE GRANT

American University **\$490,861**
Washington, DC 20016

Although flexible work arrangements, including part-time work, are increasingly common in American firms, a number of studies suggest that managers may not implement them or employees may hesitate to use them, fearing, often correctly, significant career penalties. Joan Williams has proposed that this concern about career penalties can be understood in terms of the concept of the “ideal worker,” typically a male who can work at least 40 hours a week throughout his career without taking time off for child rearing or family issues of any sort, other than for emergencies of short duration. The pervasive though often subconscious acceptance of this notion of the ideal worker

often tends to penalize those who deviate from the norm. This grant supports study of the ideal worker concept. Data will be collected on women's workforce participation and on part-time work patterns. Working with psychologists who specialize in cognitive bias research, Professors Williams and Suzanne Bianchi of the University of Maryland will examine the unconscious and subtle ways that the ideal worker concept can penalize workers who are effective but do not match that image. A second part of this project consists of work with both businesses and the general public (through the media) to raise awareness of the ideal worker concept and its consequences. Project Director: Joan Williams, Professor of Law.

FAMILY-CENTERED PUBLIC POLICY, OFFICER GRANTS

Industrial Relations Research Association **\$1,000**
Champaign, IL 61820

To co-sponsor a two-day policy meeting on work and family issues. Project Directors: Sheldon Friedman, President, IRRA, and James A. Auerbach, Senior Vice President, National Policy Association, Washington, DC.

Research Foundation of City University of New York **\$44,846**
New York, NY 10007

Support of research on the comparison of U.S. and European family leave policies. Project Directors: Janet Gornick, Associate Professor of Political Science, Baruch College of CUNY, and Marcia Meyers, Associate Professor of Social Work and Public Affairs, Columbia University.

PUBLIC UNDERSTANDING OF WORKING FAMILIES, TRUSTEE GRANTS

ETV Endowment of South Carolina, Inc. **\$2,205,000**
Spartanburg, SC 29302

This grant supports the preparation and airing of a two hour documentary on public television, "Work and Family in America: Walking a Tightrope." The documentary will focus on the contemporary American family and its "three jobs, two people" predicament, showing how dual-earner couples with children must struggle to balance the competing claims of career, marriage, and bringing up children. This imbalance between needs and resources has created tremendous stress for working families, exacerbated by the fact that vital social institutions such as the workplace, the legal framework governing employment and labor, and even the design of homes and communities have not changed to accommodate this profound familial shift. After dramatizing the problem through representative personal stories and expert commentary, the documentary will attempt to identify possible remedies. These will include efforts by several progressive firms as well as other approaches to restructuring the time and timing of work. In addition to the broadcast, there will be extensive outreach efforts. A live webcast symposium on work-

family issues at the National Press Club will precede the broadcast. An interactive web site will be established. A public education program will stimulate public discussion about this pressing national issue by providing a wide range of organizations, such as the National Parents Association, the League of Women Voters, employer groups, and labor unions, with discussion guides and a video-clip reel on work-family issues. Project Director: Hedrick Smith, President, Hedrick Smith Productions, Inc.

The following two grants were funded from an appropriation approved by the Sloan Board of Trustees for projects to disseminate to professional and trade organizations the results of Sloan-sponsored research on part-time careers.

American University **\$43,576**
Washington, DC 20016

To develop a model policy on part-time careers and disseminate it to the District of Columbia's legal community. Project Director: Joan Williams, Co-Director, Gender, Work & Family Project.

Brandeis University **\$44,491**
Waltham, MA 02454

Support to disseminate findings on part-time medical careers. Project Director: Rosalind C. Barnett, Senior Scientist, Women's Studies Program.

PUBLIC UNDERSTANDING OF WORKING FAMILIES, OFFICER GRANTS

ETV Endowment of South Carolina, Inc. **\$15,262**
Spartanburg, SC 29302

To develop a pilot for a television series on work-family issues. Project Director: Hedrick Smith, President, Hedrick Smith Productions, Inc.

Families and Work Institute **\$30,000**
New York, NY 10001

To conduct research on the father-friendly workplace and enhance public understanding of working fathers. Project Director: James Levine, Director, The Fatherhood Project.

Massachusetts Institute of Technology **\$45,000**
Cambridge, MA 02139

Support for a book on work, family, and community. Project Director: Ann Bookman, Director, Center for Interdisciplinary and Special Studies, College of the Holy Cross.

GENERAL

TRUSTEE GRANT

Council on Competitiveness
Washington, DC 20005

\$160,000

The Council has been organizing a program of briefings for congressional decision-makers on issues that cannot properly be understood without some understanding of the underlying science or technology. This Congressional Forum on Technology and Innovation provides direct access to a cross-section of the nation's leading thinkers and practitioners in science and technology. It is nonpartisan, open to the media, and presents a range of views on each issue addressed. It has the support of Senators Bill Frist (R-Tennessee) and John D. Rockefeller (D-West Virginia), who serve as co-chairs of the Forum. Forums have been held on such topics as high speed communications access; digital audio: who owns the music?; and internet taxation. An average of 180 persons attended each session, including chiefs of staff, legislative directors, professional committee staff, legislative assistants, and other Congressional personnel. This grant supports a continuation of the Forum program for another year. Project Director: Peter W. Rooney, Executive Director, Forum on Technology and Innovation.

EDUCATION AND CAREERS IN SCIENCE AND TECHNOLOGY

SCIENTIFIC AND TECHNICAL CAREERS

INFORMATION ABOUT CAREERS, TRUSTEE GRANT

American Association for the Advancement of Science **\$130,000**
Washington, DC 20005

Science's Next Wave (www.nextwave.org) is a web-based magazine and information resource produced by *Science Magazine* (published by the AAAS) for graduate students in science and engineering fields. The project supported by this start-up grant builds upon this existing web-based infrastructure and aims to provide a new and actively-managed on-line site for postdoctoral fellows at U.S. universities, through which now-scattered postdocs and postdoc associations can interact easily, exchange ideas and concerns, and discuss topics of mutual interest. The new site includes articles and other material written and commissioned by *Next Wave* staff and addressed to the special needs and concerns of postdocs, including an up-to-date bulletin board of activities for postdocs at U.S. universities and a database containing information on numbers of postdocs by institution, compensation scales, benefits, etc. To bring the existence of this virtual community to the attention of postdocs will involve a special promotional effort. The assistance of associations of postdocs created at research universities is being sought and an annual meeting of the leaders of these associations is planned. Project Director: Emily L. Klotz, Manager, Postdoc Network.

INFORMATION ABOUT CAREERS, OFFICER GRANT

Institute of Electrical and Electronic Engineers **\$35,000**
Piscataway, NJ 08855

To add a software careers videotape to the Careers Cornerstone Series. Project Director: Peter Wiesner, Director, Continuing Education.

ENTRY AND RETENTION, TRUSTEE GRANTS

California Tomorrow **\$93,077**
San Francisco, CA 94612

California Tomorrow is an analysis and advocacy group that focuses on equal opportunity in education. This grant supplies partial funding for a study of the record of California community colleges in educating students of color and immigrants and the preparation of a report on how this record can be improved. The study will involve interviews with a sample of students, as well as with teaching faculty, student services,

and faculty development staff, at each of nine community colleges. These data will be combined with campus-specific and system-wide data, and other available information, to develop a set of recommendations aimed at improving the retention and success of the target students. Results will be brought to the attention of both practitioners and legislative and state education policy makers. They will be nationally disseminated by means of published articles and presentations at regional and national professional meetings. The University of California and California State University systems are expected to provide major funding for this project. Project Director: Laura Woodlief, Senior Project Associate.

Virginia Polytechnic Institute and State University **\$89,621**
Blacksburg, VA 24061

In recent years, evidence has grown that underrepresented minorities' and women's experience of "stereotype threat" causes them to perform below their ability on difficult mathematics tests and discourages their entering and continuing in math-based fields. "Stereotype threat" is the experience of being in a situation where one risks being judged negatively due to a commonly held devaluing stereotype that exists about one's group, for example, being taught math by someone who believes that "women don't understand math." This grant supports an investigation of whether and to what extent stereotype threat is a determinant of the under-performance and lower retention of women in engineering. The subjects in the study will be undergraduate women engineering students at Virginia Tech. Results will be disseminated by means of journal articles and presentations at meetings and conferences of both engineers and psychologists. Project Director: Assistant Professor Amy E. Bell, Department of Electrical and Computer Engineering.

ENTRY AND RETENTION, OFFICER GRANTS

American Institutes for Research in the Behavioral Sciences **\$25,000**
Washington, DC 20007

To enhance the promotion of Barbara Lovitts' book, *Leaving the Ivory Tower*. Project Director: Barbara Lovitts, Research Analyst, Pelavin Research Center.

Carnegie Mellon University **\$15,000**
Pittsburgh, PA 15213

For a popular book on recruitment and retention of women in computer science. Project Director: Allan Fisher, Associate Dean for Undergraduate Education.

Persephone Productions, Inc. **\$45,000**
Arlington, VA 22201

To fund one show of *To The Contrary*, on how to get more women into the study of computer science using the successful model produced at Carnegie Mellon University. Project Director: Bonnie G. Erbe, CEO.

Towson University Foundation, Inc.
Adelphi, MD 20783

\$40,680

Support of the teaching and curriculum reform workshop series to promote retention of women in the sciences. Project Director: Professor Luz Mangurian, Department of Biological Sciences.

University of New Mexico
Albuquerque, NM 87131

\$30,000

To fund a pilot study of recruitment and retention of undergraduate minority students in computer science, computer engineering, and information systems. Project Director: Assistant Professor Roli Varma, School of Public Administration.

PROFESSIONAL MASTER'S DEGREES, TRUSTEE GRANTS

Pennsylvania State University
University Park, PA 16802

\$420,000

This grant supports the introduction at Penn State of new professional master's degree programs in Applied Statistics, Biotechnology, and Bioanalytical Chemistry. The Applied Statistics program will involve faculty not only from the Department of Statistics but also from biology, ecology, and other fields in the natural and social sciences. The Biotechnology program will include work in the underlying science and technology, but also in the social and ethical issues surrounding applications. The Bioanalytical Chemistry degree is aimed at preparing students for careers in the pharmaceutical and chemical industries as well as in associated regulatory and safety agencies. Each degree will provide workplace internship experience and will develop related courses in such fields as intellectual property and communications in order to strengthen the professional dimension of the degree. Project Director: Associate Dean Norman Freed, Eberly College of Science.

University of Arizona
Tucson, AZ 85721

\$223,000

A 1999 Foundation grant to the University of Arizona funded outreach efforts in support of the Sloan Science Master's Degree Program. The outreach was intended to help forge a distinct identity for the professional master's degree in the sciences and mathematics and to win acceptance for it. This grant will renew and expand these activities. The project will continue to be led by Sheila Tobias, science-education consultant to the university. Its basic goals are to reach potential applicants (students), providers (faculty), and employers to bring their common interests into alignment in professional master's degrees. The main mechanisms to achieve these ends remain publicity, site visits to universities and companies, and networking, via the sciencemasters.com website as well

as at a conference of grantees and other interested stakeholders. Project Director: Joaquin Ruiz, Professor of Geosciences and Dean, College of Science.

University of Pittsburgh
Pittsburgh, PA 15260

\$267,000

This university is in a metropolitan area with a large potential pool of applicants as well as a strong demand for technically trained professionals. This grant supports the offering of new master's degree programs in mathematics and in geographical information systems (GIS). The mathematics degree will include analytical and computational methods in finance and risk, scientific computing, industrial mathematics, and modeling of complex systems. GIS is important in many applications, including resource and facilities management, geohazard reduction, marketing, vehicle tracking, public health, and traffic flow management. Faculty from geology and planetary science will lead the development of this program, together with colleagues from computer science, statistics, and other fields. Students in both degree programs will also be exposed to such topics as intellectual property, management, and communications in courses developed and conducted in association with the university's business school. Project Director: Steven Husted, Associate Dean, Graduate Studies and Research.

University of South Carolina
Columbia, SC 29208

\$400,000

The region served by this university is increasingly high-tech, both through the growth of new industries and also due to the transformation of traditional industries such as farming and forestry. To enhance its role in regional development, the university plans to develop a number of professional master's degree programs in the sciences and mathematics. This grant supports the introduction of such degrees in computational sciences (involving also the physics and mathematics departments and emphasizing simulation, data analysis, and business applications), environmental geology (involving life sciences, earth science, and engineering departments), and plant biotechnology/phytoremediation (involving chemistry, ecology, cell biology, and microbiology). All degree candidates will also take clusters of skills-oriented modules in such areas as regulation, technical writing, and communication. Each degree will require a 3-6 month "capstone" experience in an appropriate corporate setting. Project Director: Gerard M. Crawley, Dean, College of Science and Mathematics.

Worcester Polytechnic Institute
Worcester, MA 01609

\$290,000

WPI has a tradition of offering master's level training in engineering to serve the regional technical labor market. Led by its mathematics faculty, WPI with this grant will create new master's programs in industrial mathematics (involving mathematics, statistics, physics, and computer science) and in quantitative finance, directed at the design and support of those parts of financial services that are increasingly dependent on professionals with such training. All WPI master's programs will include components

designed to provide complementary management and communication skills. Project Director: Associate Professor Bogdan M. Vernescu, Director, Center for Industrial Mathematics and Statistics.

The following eight grants made in 2000 are funded from an appropriation approved by the Board of Trustees in 1999 to provide start-up funding for new professional master's degree programs in bioinformatics and computational molecular biology. These specialties offer real promise for developing attractive scientific career paths at the master's level and there is strong and growing demand for skilled scientists in these fields at this level, both in industry and academic institutions.

Boston University **\$90,597**
Boston, MA 02215

This program is conducted jointly with Northeastern University. Project Director: Charles P. Delisi, Dean, College of Engineering.

Keck Graduate Institute of Applied Life Sciences **\$130,000**
Claremont, CA 91811

Project Director: Henry E. Riggs, President.

New Jersey Institute of Technology **\$121,123**
Newark, NJ 07102

Project Director: Associate Professor Michael L. Recce, Department of Computer and Information Science, and Director, Center for Computational Biology and Bioengineering.

Northeastern University **\$126,358**
Boston, MA 02115

This program is conducted jointly with Boston University. Project Director: Professor H. William Detrich, Department of Biology.

Rensselaer Polytechnic Institute **\$111,000**
Troy, NY 12180

Project Director: Professor John C. Salerno, Chair, Department of Biology.

University of California, Los Angeles **\$127,500**
Los Angeles, CA 90095

Project Director: Professor Fred Fox, Department of Microbiology and Molecular Genetics.

University of California, Santa Cruz **\$150,000**
Santa Cruz, CA 95064

Project Director: Professor David Haussler, Computer Science Department.

University of Texas at El Paso **\$150,000**
El Paso, TX 79968

Project Director: Professor Thomas E. Brady, Dean, College of Sciences.

PROFESSIONAL MASTER'S DEGREES, OFFICER GRANTS

American Institute of Physics **\$14,250**
College Park, MD 20740

To increase support in universities and industry for professional master's degrees in physics. Project Director: Dr. Philip W. Hammer, Assistant Manager, Education.

Michigan State University **\$8,000**
East Lansing, MI 48824

For a symposium on professional master's degrees in mathematics at the SIAM 2001 meeting. Project Director: Professor Charles R. MacCluer, Department of Mathematics.

LEARNING OUTSIDE THE CLASSROOM, TRUSTEE GRANTS

Hampton University **\$550,000**
Hampton, VA 23668

This grant supports the development at Hampton of an asynchronous learning network (ALN) bachelor's degree program in religious studies. Hampton is the first historically black college or university to become a member of the Sloan Consortium of ALN grantees, now numbering about 70 institutions. Hampton will develop 48 courses under this grant and will deliver them nationally through the commercial software platform CourseInfo, a product of Blackboard Inc. The university has for the past 85 years hosted an annual conference of ministers. The network of contacts developed through this conference and by other means gives Hampton unusual insight into the educational needs of the ministerial profession and particularly of African American ministers. Learners will be able to access these new online Hampton courses through conventional PCs and Internet connections. It is expected that the first pilot delivery of courses will occur during the spring of 2001. Project Director: Sulayman Clark, Vice President.

New Jersey Institute of Technology
Newark, NJ 07102

\$370,000

Distance learning and ALN programs in particular now have a significant presence in higher education. It is estimated that for the academic year 1999-2000, about 300,000 learners enrolled in fully online for-credit classes. This number is expected to double in 2000-2001. Of course, these courses vary greatly in format, ranging from mainly self-study to fully collaborative efforts as emphasized in the Sloan ALN program. (See www.sloan-c.org for a listing of participants in the Sloan Consortium of ALN institutions.) This grant funds a study of the learning effectiveness of ALN programs. The project will begin by creating and making available on the web a “knowledge-base” of information about evaluation studies of ALN. Published journal and book reports and unpublished field reports from ALN projects will be collected and organized. Not only results, but also methods used and the strengths and weaknesses of the reported results will be identified. The website will be maintained and updated as new evaluation studies are reported. Project Director: Starr Roxanne Hiltz, Distinguished Professor of Computer and Information Science.

Pennsylvania State University
University Park, PA 16802

\$1,000,000

A 1998 Foundation grant supported Penn State’s work in establishing its World Campus to provide education and training through ALN, including full degree programs available online for off-campus learners. Total enrollments have grown rapidly. This grant will enable Penn State to add a number of new degrees (such as an MBA, a Petroleum Engineering M.S., and bachelor’s and master’s degrees in Information Sciences) and certificate programs (e.g., Supply Chain Management, Telecommunications Management, and Gerontology). They will also continue to upgrade services for remote students, such as financial aid and records access. University policy issues such as intellectual property rights and coordination with branch campuses will be addressed. Project Director: Gary E. Miller, Associate Vice President for Distance Education.

Salish Kootenai College
Pablo, MT 59855

\$215,000

Salish Kootenai College is the tribal college of the Confederated Salish and Kootenai Tribes of the Flathead Indian Reservation. Partly assisted by a previous Foundation grant, the college offers 39 ALN courses to students on the reservation and others in the northwest U.S. and in Alberta, Canada. This new grant will enable the college to develop 52 additional courses, complete four full-degree ALN programs, and explore the possibility of extending ALN educational services to populations of indigenous people outside the U.S. and Canada. For the academic year 2002-2003, the college expects to enroll 1,000 Native American students and another 100 or so indigenous learners from countries like New Zealand and Australia. Another aspect of this project is to explore

whether the college's success with Native Americans can be successfully extended to serve other indigenous groups. Dropout rates for Native American students at the college are significantly lower than for similar students at other U.S. colleges. The college believes this is due to teaching that is sensitive to the beliefs and culture of their students. College faculty and faculty from similar institutions abroad will collaborate closely in an attempt to capture this same quality elsewhere. Project Director: Michael T. O'Donnell, Director of Distance Education.

University of Pennsylvania
Philadelphia, PA 19104

\$270,000

In 1997, a Foundation grant enabled Penn to develop and offer six ALN courses in telecommunications and networking. By the end of the academic year 1999-2000, some 5,000 students were enrolled. This new grant will support the development of additional courses to complete three master's degree programs (Electrical Engineering, Systems Engineering, and Telecommunications and Networking) and parts of an Executive Master of Technology Management, all to be earned online via ALN. These closely related degrees require only 15 ALN courses to allow a learner to choose any one of the three options. Penn has pioneered the use of streaming media, audio and video, for ALN lecture delivery, aided by instructor-led and student-to-student discussions. This approach makes the total faculty effort in ALN course preparation approximately equal to that of traditional face-to-face courses. Penn has recognized the importance of bringing faculty effort for ALN and traditional course preparation into alignment since the regular faculty teach in both modes. As part of this grant, Penn will study the important issue of faculty effort required for course preparation. Project Director: Professor Dwight L. Jaggard, Department of Electrical Engineering.

The following twelve grants were made from appropriations approved by the Sloan Foundation Board of Trustees to support small projects for the ALN Program, year 2000 summer ALN workshops, and new services for learners and institutions in the Program.

Accreditation Board for Engineering and Technology
Baltimore, MD 21202

\$28,000

Support to begin defining laboratory criteria for ALNs. Project Director: George Peterson, Executive Director.

Association of Academic Health Centers
Washington, DC 20036

\$35,000

Support for a workshop on ALN programs for the health professions. Project Director: Professor Jean K. Johnson-Pawlson, Associate Dean, School of Medicine and Health Sciences, George Washington University.

Council for Adult and Experiential Learning **\$45,000**
Chicago, IL 60603

Support to expand to additional industries the model National Coalition for Telecommunications Education and Learning (NACTEL) program. Project Director: Pamela Tate, President.

Franklin University **\$45,000**
Columbus, OH 43215

Support to continue ALN course development. Project Director: Paul Otte, President.

Franklin W. Olin College of Engineering **\$45,000**
Needham, MA 02492

Support for an ALN newsletter and speakers' bureau. Project Director: John R. Bourne, Professor of Electrical and Computer Engineering.

Interbrand Foundation **\$44,000**
New York, NY 10011

To explore branding opportunities for Sloan-C and ALN. Project Director: John Grace, Executive Director.

North Idaho College **\$30,000**
Coeur d'Alene, ID 83814

Support to develop four ALN courses toward HVAC/R Certification. Project Director: Chris Compton, HVAC/R Instructor.

Old Dominion University Research Foundation **\$4,000**
Norfolk, VA 23508

Support for a special ALN session at the National University Telecommunications Network (NUTN) annual conference. Project Director: Joy Riach, Administrator, NUTN Secretariat.

Pennsylvania State University **\$25,000**
University Park, PA 16802

Support to explore involvement of Sloan-C in the U.S. Army ALN project. Project Director: Gary Miller, Associate Vice-President for Distance Education, and Executive Director, The World Campus.

Research Foundation of State University of New York **\$90,000**
Albany, NY 12246

Support to host year 2000 ALN summer workshops. Project Director: Eric E. Fredericksen, Assistant Provost for Advanced Learning.

Stevens Institute of Technology **\$30,000**
Hoboken, NJ 07030

Support for the development via ALN of a master's degree in telecommunications. Project Director: Robert Ubell, Director, Web-based Distance Learning.

University of Massachusetts, Lowell **\$45,000**
Lowell, MA 01854

Support for an ALN certificate program in multimedia applications. Project Director: Jacqueline Moloney, Dean, Continuing Studies.

LEARNING OUTSIDE THE CLASSROOM, OFFICER GRANTS

American Association of University Professors **\$13,000**
Washington, DC 20005

Support for a one-day conference on quality in distance education. Project Director: Mary Burgan, General Secretary.

**Association of Joint Labor/Management
Educational Programs Foundation** **\$30,000**
New York, NY 10016

Support to explore ALN training opportunities in civil service professions. Project Director: Marshall Goldberg, Executive Director.

Council for Adult and Experiential Learning **\$30,000**
Chicago, IL 60603

Support to create a NACTEL-like organization for the electric power industry. Project Director: Pamela Tate, President.

Kettering University **\$30,000**
Flint, MI 48504

Support to develop four ALN courses. Project Director: Associate Professor Srinivas Chakravarthy, Science and Mathematics Department.

University of Pennsylvania
Philadelphia, PA 19104

\$30,000

Support for two ALN courses. Project Director: Professor Dwight L. Jaggard,
Department of Electrical Engineering.

HUMAN RESOURCES, OFFICER GRANT

Commission on Professionals in Science and Technology
Washington, DC 20005

\$13,730

Support for an edited book, "Who Will Do Science and Engineering? Research on
Human Resource Development for Policy and Practice." Project Director: Eleanor L.
Babco, Executive Director.

EDUCATION FOR MINORITIES AND WOMEN

MINORITIES, TRUSTEE GRANTS

An appropriation approved by the Sloan Foundation Board of Trustees for funding the Minority Ph.D. program included funds for the feeder part of the program. Grants are made only to departments having a high percentage of minority students and also sending a significant number of their minority graduates, at the bachelor or master's degree level, on for Ph.D.s in science and technology fields. The aim is to encourage and support efforts within such selected departments to increase this number. The following four grants were made as part of this feeder program.

North Carolina A & T State University Foundation **\$139,725**
Greensboro, NC 27411

To increase the number of minority graduates from the Industrial and Systems Engineering Department who enter Ph.D. programs. Project Director: Professor Eui Park, Chair, Department of Industrial and Systems Engineering.

University of Puerto Rico, Mayaguez **\$240,000**
Mayaguez, PR 00681

To increase the number of graduates from the Departments of Biology and Chemistry who go on for the Ph.D. degree. Project Director: Professor Mildred Chaparro, Department of Biology.

University of Puerto Rico, Mayaguez **\$180,000**
Mayaguez, PR 00681

To increase the number of graduates from the Department of Chemical Engineering who go on for the Ph.D. degree. Project Director: Professor Jose A. Colucci-Rios, Department of Chemical Engineering.

University of Puerto Rico, Mayaguez **\$150,000**
Mayaguez, PR 00681

To increase the number of graduates from the Department of Civil Engineering who go for the Ph.D. degree. Project Director: Assistant Professor Didier Valdez-Diaz, Department of Civil Engineering.

Under the same Board-approved appropriation for funding the Minority Ph.D. Program, grants of \$2,000 for each newly enrolled Sloan Scholar in the indicated departments were made in 2000 to the following institutions for recruitment of additional minority doctoral students in science and technology fields. The total number of such \$2,000 grants made

in 2000 to each institution is given in parentheses. (See below for the names of students designated as Sloan Scholars in 2000.)

City College of the City University of New York (1)
Department of Civil and Environmental Engineering

Cornell University (1)
Department of Biometry

Massachusetts Institute of Technology (1)
Department of Civil and Environmental Engineering

Michigan State University (6)
Department of Chemical Engineering
Department of Civil and Environmental Engineering

Pennsylvania State University (1)
Department of Civil and Environmental Engineering

Purdue University (11)
Department of Chemistry

University of Georgia (2)
Department of Pharmaceutical and Biomedical Science

University of Rhode Island (1)
Department of Fisheries, Animal and Veterinary Sciences

University of South Carolina (1)
Department of Chemical Engineering

University of Virginia (1)
Department of Chemical Engineering

The following students were designated in 2000 as **Sloan Scholars** in the departments and graduate institutions indicated below.

Tiffany Adams, Department of Pharmaceutical and Biomedical Science, University of Georgia.

Edgardo Alvira, Department of Chemistry, Purdue University.

LaKeya Belcher, Department of Chemical Engineering, Michigan State University.

Ivette Cruzado, Department of Chemical Engineering, Michigan State University.

Sydney Forrester, Department of Chemical Engineering, Michigan State University.

Kenya Goins, Department of Civil and Environmental Engineering, Pennsylvania State University.

Jamila Greene, Department of Chemistry, Purdue University.

Brian Harris, Department of Materials and Nuclear Engineering, University of Maryland.

Jesus Hernandez-Torres, Department of Chemistry, Purdue University.

Carey Hines, Department of Pharmaceutical and Biomedical Science, University of Georgia.

Randolph N. Jacobs, Department of Materials and Nuclear Engineering, University of Maryland.

Malikah Jenkins, Department of Chemistry, Purdue University.

Jaree'L Johnson, Department of Fisheries, Animal and Veterinary Sciences, University of Rhode Island.

Elvis Jones, Department of Chemistry, Purdue University.

Alicia Joseph, Department of Civil and Environmental Engineering, City College of the City University of New York.

Yejide Mack, Department of Civil and Environmental Engineering, Michigan State University.

Angel Morales, Department of Chemistry, Purdue University.

Tenaya Mullins, Department of Chemistry, Purdue University.

Miriram Nuno, Department of Biometry, Cornell University.

Tochi Nwoga, Department of Chemical Engineering, University of South Carolina.

Neil Provi Mayo, Department of Chemistry, Purdue University.

Maria Rodriguez, Department of Chemical Engineering, Michigan State University.

Antonio Ubiera, Department of Chemical Engineering, University of Virginia.

Burret T. Vaughan, Department of Agricultural and Biological Engineering,
Pennsylvania State University.

Leslie Vazquez-Serrano, Department of Chemistry, Purdue University.

Angels Velez, Department of Chemical Engineering, Michigan State University.

Victor Viteri, Department of Civil and Environmental Engineering, Massachusetts
Institute of Technology.

Michelle Waddell, Department of Chemistry, Purdue University.

Michele Williams, Department of Chemistry, Purdue University.

WOMEN'S PROGRAMS, TRUSTEE GRANTS

The following thirteen grants were made from an appropriation approved by the Sloan Board of Trustees for a pilot phase of the Sloan Pre-Tenure Leave Fellowship Program. The goal of this program is to make more acceptable a faculty member's taking of a leave for purposes of childbearing, infant care, and other unexpected dependent care, and to promote institutional mechanisms that will minimize the career cost of taking such a leave. Each grant provides for a fellowship to the indicated faculty member, the amount to be matched by the faculty member's home institution. In each case, a supplement of \$5,000 has been added for the fellowship holder's department, to be used to focus attention on and address work-family issues for other faculty, postdoctoral fellows, or graduate students.

North Carolina State University **\$25,000**
Raleigh, NC 27695

Fellowship to Dr. Gina Fernandez, \$20,000. Project Director: Professor Thomas Monaco, Head, Department of Horticultural Science.

North Carolina State University **\$24,744**
Raleigh, NC 27695

Fellowship to Dr. John Goodwin, \$19,744. Project Director: Professor Thurman L. Grove, Head, Department of Zoology.

Pennsylvania State University **\$25,000**
University Park, PA 16802

Fellowship for Dr. Elise Miller-Hooks, \$20,000. Project Director: Professor Paul J. Jovanis, Head, Department of Civil and Environmental Engineering.

Pennsylvania State University **\$25,000**
University Park, PA 16802

Fellowship for Dr. Linda Hanagan, \$20,000. Project Director: Professor Richard A. Behr, Head, Department of Architectural Engineering.

Rose-Hulman Institute of Technology **\$18,500**
Terre Haute, IN 47803

Fellowship for Dr. Elaine Kirkpatrick, \$13,500. Project Director: Professor Charles Joenathan, Chair, Department of Physics and Applied Optics.

University of California, Santa Cruz Santa Cruz, CA 95064	\$25,000
Fellowship for Dr. Lindsay Hinck, \$20,000. Project Director: Professor C. Leo Ortiz, Chair, Department of Biology.	
University of Maryland College Park, MD 20742	\$13,497
Fellowship for Dr. Elizabeth Boyle-Roden, \$8,497. Project Director: Professor Phylis B. Moser-Veillon, Acting Chair, Department of Nutrition and Food Science.	
University of Michigan Ann Arbor, MI 48109	\$25,000
Fellowship for Dr. Joanne Mirecki Millunchick, \$20,000. Project Director: Professor John W. Halloran, Interim Chair, Department of Materials Science and Engineering.	
University of Michigan Ann Arbor, MI 48109	\$15,218
Fellowship for Dr. Rosemary Rochford, \$10,218. Project Director: Professor George A. Kaplan, Chair, Department of Epidemiology.	
University of Michigan Ann Arbor, MI 48109	\$25,000
Fellowship for Dr. Margaret Wooldridge, \$20,000. Project Director: Professor A. Galip Ulsoy, Chairman, Department of Mechanical Engineering and Applied Mechanics.	
University of Pittsburgh Pittsburgh, PA 15260	\$25,000
Fellowship for Dr. Mary Besterfield-Sacre, \$20,000. Project Director: Professor Harvey Wolfe, Chairman, Department of Industrial Engineering.	
University of Pittsburgh Pittsburgh, PA 15260	\$25,000
Fellowship for Dr. Charleen Chu, \$20,000. Project Director: Professor George Michaelopoulos, Chair, Department of Pathology, School of Medicine.	

Virginia Commonwealth University
Richmond, VA 23284

\$25,000

Fellowship for Dr. Charlene Crawley, \$20,000. Project Director: Professor Fred M. Hawkrige, Chair, Department of Chemistry.

WOMEN'S PROGRAMS, OFFICER GRANTS

Association for Women in Science
Washington, DC 20005

\$1,000

Support for a workshop, "Beyond the Bench: Career Options for Scientists," to be held at the 2001 AAAS meetings. Project Director: Jonghui K. Lee, Director, Berkeley Biotechnology Education, Inc.

National Academy of Sciences
Washington, DC 20418

\$30,000

To provide partial funding for A Guide to Recruiting and Advancing Academic Women in Science and Engineering. Project Director: Jong-On Hahm, Director, Committee on Women in Science and Engineering, National Research Council.

University of Arizona
Tucson, AZ 85721

\$30,000

To fund a meeting of the College and University Work/Family Association focused on work/life issues for women faculty. Project Director: Mimi Gray, Director, Planning and Development, Child Development Center Project.

University of Michigan
Ann Arbor, MI 48109

\$11,000

To partially fund a career-enhancement leave. Project Director: Assistant Professor Kristen Moore, Department of Mathematics.

PUBLIC UNDERSTANDING OF SCIENCE AND TECHNOLOGY

BOOKS, TRUSTEE GRANT

Massachusetts Institute of Technology **\$435,000**
Cambridge, MA 02139

The Foundation has sponsored the research and writing required to prepare a new American history textbook, slated for publication in late 2001 by W.W. Norton & Co., in which the roles of science, technology, and business are properly integrated into the nation's history. This additional grant supports the development of a state-of-the-art, fully electronic version of the new text and a series of regional workshops to promote the entire project. The multimedia electronic book will include all the text of the printed edition plus 150 animated and interactive versions of original maps, 700 historical images (including motion and audio), and streaming video of authors walking through historical sites and appearing at workshops to explain their ideas. The innovative set of user features includes a notebook, sticky notes, and highlighters. Highlighted passages can be saved, searched, and shared. The resizable notebook can include text, images, audio, and video dragged in from any other document. The electronic version provides an additional option for both professors and students, since it can be used instead of or in addition to the printed book. This grant also funds a series of regional workshops by the four authors to promote the idea of a new American history textbook that integrates science and technology into the nation's history. The authors will visit large institutions and talk with history instructors about their textbook and ways to teach such a new American history course most effectively. Project Director: Steven Forman, Vice President and Editor, W. W. Norton & Co.

BOOKS, OFFICER GRANTS

Merritt Ierley **\$45,000**
Sussex, NJ 07461

To research and write a book about the impact of technology.

Stephen S. Hall **\$45,000**
Brooklyn, NY 11225

For research and writing of a book on aging.

Victor K. McElheny **\$45,000**
Cambridge, MA 02138

To research and write an intellectual biography of James Watson.

Massachusetts Institute of Technology
Cambridge, MA 02139

\$20,000

To pilot modules of the proposed electronic edition of an American History textbook.
Project Director: Robert Martello, Graduate Student, Program in Science, Technology
and Society.

SLOAN TECHNOLOGY BOOK SERIES

The Foundation is sponsor of a series of books intended to broaden public understanding of important modern technologies. Books in the Sloan Technology Series describe the development of specific technologies, including the circumstances of their emergence, their early development and use, their applications, and their actual and potential impacts on society.

The first fifteen books in the series are as follows:

Craig Canine, *Dream Reaper: The Story of an Old-Fashioned Inventor in the High-Tech, High-Stakes World of Modern Agriculture* (Knopf, 1995)

T. A. Heppenheimer, *Turbulent Skies: The History of Commercial Aviation* (Wiley, 1995)

Richard Rhodes, *Dark Sun: The Making of the Hydrogen Bomb* (Simon & Schuster, 1995)

Robert Buder, *The Invention That Changed the World: How a Small Group of Radar Pioneers Won the Second World War and Launched a Technological Revolution* (Simon & Schuster, 1996)

Martin Campbell-Kelly and William Aspray, *Computer: A History of the Information Machine* (Basic Books, 1996)

David E. Fisher and Marshall Jon Fisher, *Tube: The Invention of Television* (Counterpoint, 1996)

Stephen S. Hall, *A Commotion in the Blood: Life, Death, and the Immune System* (Henry Holt, 1997)

Robert Kanigel, *The One Best Way: Frederick Winslow Taylor and the Enigma of Efficiency* (Viking, 1997)

Bettyann Holtzmann Kevles, *Naked to the Bone: Medical Imaging in the Twentieth Century* (Rutgers University Press, 1997)

Robert Pool, *Beyond Engineering: How Society Shapes Technology* (Oxford University Press, 1997)

Michael Riordan and Lillian Hoddesen, *Crystal Fire: The Birth of the Information Age* (Norton, 1997)

Victor K. McElheny, *Insisting on the Impossible: The Life of Edwin Land*
(Perseus Books, 1998)

Dorsey, Gary, *How One Small Start-Up Went Over the Top to Beat the Big Boys
Into Silicon Heaven* (Perseus Books, 1999)

Hecht, Jeff, *City of Light: The Story of Fiber Optics* (Oxford University Press,
1999)

Rhodes, Richard (Editor), *Visions of Technology: A Century of Provocative
Readings* (Simon and Schuster, 1999)

The Series, which is fully commissioned, has three books still outstanding, one of which will be published in 2001.

American Communications Foundation**\$730,000**

Mill Valley, CA 94941

With this grant, the American Communications Foundation (ACF), recipient of previous Foundation grants for producing radio spots on CBS radio's *The Osgood File*, will research and produce 60 more radio pieces on science and technology for Charles Osgood. A weekly audience of 12 million people is estimated to hear these broadcasts. The ACF has also developed a new model for increased coverage of science and technology on television news. They find stories for their partner TV stations and do extensive research to help the stations themselves develop the stories for broadcast. Four television stations in California, representing an audience of three million, have broadcast such segments. Several pieces already broadcast using this new and experimental approach have established a new level of in-depth reporting about science and technology on regular television news. Several major news outlets, including *The CBS Evening News with Dan Rather* and *NBC Nightly News* have now signed on to receive the science and technology stories. With this grant ACF will develop 70 science and technology stories for broadcast on television news. Project Director: Cynthia Perry, President.

Public Radio International**\$600,000**

Minneapolis, MN 55403

The popular one-hour radio program *The World* reports on global current affairs. It is a co-production of Public Radio International, the BBC World Service, and WGBH in Boston, reaches 119 stations nationwide, and has an audience of over one million. A 1998 Foundation grant supported a project to magnify technology's place in *The World's* daily news agenda and thereby to bring technology stories from around the world to the attention of an American audience. Since then the program has doubled its technology coverage, hired an experienced journalist to staff its new technology desk, and has launched a new weekly feature exploring innovative technology emerging from laboratories around the world. It has built a track record of high-caliber technology coverage. This new grant renews support for *The World's* global technology coverage. It will fund a full-time technology reporter who will be able to travel more to research new stories. The program's international network of journalists will be trained to identify technology stories. PRI will also do some testing and evaluation of the show's technology coverage, including focus groups in selected cities. Project Director: Melinda Ward, Senior Vice President of Production.

SoundVision Productions**\$418,000**

Berkeley, CA 94705

A 1997 Foundation grant to SoundVision supported the production of the award-winning documentary series, *The DNA Files*, which focused on the latest developments in genetics. The current grant will partially fund five additional one-hour radio documentaries on genetics. National Public Radio is committed to airing all the shows,

thus guaranteeing an audience numbering well over a million. The noted commentator and host of the first series, John Hockenberry, has agreed to act as host again. Subjects under consideration include: genetic medicine; genetic engineering; emerging and re-emerging diseases; evolution of human distinctiveness; and the genetics of memory and aging. SoundVision will also create an expanded and enriched web site for the series. Project Director: Bari Scott, Executive Producer.

PUBLIC TELEVISION, TRUSTEE GRANTS

Documentary Educational Resources

\$579,530

Watertown, MA 02172

This grant funds the production of a one-hour PBS documentary about fiber optics, based on Jeff Hecht's Sloan Technology Series book, *City of Light* (Oxford University Press, 1999). Cables of optical fibers are now everywhere. Their tiny pulses of light carry phone conversations and computer data, instantaneously crossing oceans and thus eliminating distance as a barrier to communication. *Light of the 21st Century: The Story of Fiber Optics* will show how a transforming technology is born, using state-of-the-art animations, location filming, historical reenactments, archival footage, and interviews with many of the pioneers of this industry. Author Jeff Hecht will provide on-screen commentary. The film is likely to draw an audience of several million viewers and will make a significant contribution to the public's understanding of science and technology. Project Director: Jon Palfreman, Producer.

ETV Endowment of South Carolina, Inc.

\$787,000

Spartanburg, SC 29302

This grant supports the production of a one-hour PBS documentary about developments in computer technology since the appearance of the pioneering 1968 film, *2001: A Space Odyssey*. The documentary will take the film's central character, the HAL 9000 computer, as a springboard for scientists to explain the current state of artificial intelligence, computer speech and language understanding, computer vision, computer emotion, and prospects for technology in the 21st century. It will include about 15 minutes from the original Stanley Kubrick film. The producers will also prepare a 90-minute version of the documentary that could find commercial theatrical release. In addition to increasing the potential audience, this would qualify the documentary for possible Academy Awards nomination. Project Director: David Kennard, Executive Producer.

ETV Endowment of South Carolina, Inc.

\$143,000

Spartanburg, SC 29302

Benoit Mandelbrot (1924-) is one of the important mathematicians of the 20th century. He coined the term "fractals" in the 1970s. He showed how fractals occur in many

applications in both mathematics and in such diverse fields as engineering, metallurgy, art, stock prices, the distribution of galaxies, and turbulence. His creation of fractal geometry and the notion of fractal dimension have led to the creation of fundamental new mathematics and, with the aid of modern computers, to visually beautiful pictorial representations. This grant supports the production of a one-hour documentary about Mandelbrot, from his origins in pre-war Poland and his education in France to his emigration to the U.S., his work here at IBM's Watson Research Center, and the challenges he faced until his work became widely accepted. Nigel Lesmoir-Gordon's previous highly acclaimed film about fractal geometry was seen in 20 countries, including over 70 PBS stations in the U.S. South Carolina Public Television has agreed to be his presenting station for this new film, which should facilitate wide national distribution. Project Director: Nigel Lesmoir-Gordon, Filmmaker.

WGBH Educational Foundation
Boston, MA 02134

\$1,000,000

With this grant, NOVA will produce a 3-part public television series on string theory in physics. The planned show is based on the best-selling book, *The Elegant Universe*, by Brian Greene, who will serve as host and take viewers on a scientific journey in search of a unified set of laws governing the universe. Part I, Forces of Nature, will explore our historical understanding of matter and the forces governing it, from the Greeks, Galileo, Newton, Maxwell, to Einstein and his theory of relativity. Part II will look at quantum theory and its role in modern theoretical physics, especially questions about the incompatibility of general relativity and quantum mechanics. In Part III, A Symphony of Strings, string theory, as the best attempt so far to reconcile the two domains, will be presented, juxtaposing the seductiveness that its mathematics has for physicists with experimental efforts to verify that "the theory of everything" really is able to describe the real world. The entire series will permit viewers not only to learn about the theory of strings with the help of rich animation and sound effects, but also to visit the worlds of traditional physics, general relativity, and quantum mechanics. NOVA anticipates an audience exceeding five million for the first broadcast and plans three possible rebroadcasts over a three-year period. Project Director: Paula Apsell, Executive Producer, WGBH Science Unit.

WGBH Educational Foundation
Boston, MA 02134

\$247,500

Docere Digital Studios, a respected producer of quality, nonfiction television programming, in association with WGBH Educational Foundation and Scientific American, will research and produce five half-hour segments for public television featuring leading figures of the world of technology. The shows, called Great Minds of Technology, will be the fifth in a successful series that has included Great Minds of Science, Medicine, Business, and American History. Scientific American will fund half this project. Each show in the new series will consist of a one-on-one conversation with

an outstanding technologist whose inventions and/or other innovations have had an impact on modern life. The interview subjects will come from the fields of computing, the Internet, engineering, aerospace, and medicine/genetics. An advisory committee will select the final interview subjects. The programs will include historical and contemporary footage, photographs, and 3-D graphics. The interviewer will be a knowledgeable journalist from the world of network television or cable. Simon & Schuster will publish a supplementary audio book. Great Minds of Technology dovetails with one of the Foundation's aims in its program for public understanding of science and technology: to convey the challenges and rewards of the scientific and technological enterprise through the lives of the men and women who undertake it. Project Director: Timothy E. Smith, President, Docere Digital Studios, Inc.

PUBLIC TELEVISION, OFFICER GRANT

Cold Spring Harbor Laboratory **\$45,000**
Cold Spring Harbor, NY 11724

To research and write a treatment for a multi-part PBS series on genetics. Project Director: James D. Watson, President.

COMMERCIAL TELEVISION AND FILMS, TRUSTEE GRANT

Hamptons International Film Festival **\$165,000**
East Hampton, NY 11937

With this grant, the Hamptons International Film Festival will establish an annual Sloan Feature Film prize for the best science and technology film and will award the \$25,000 prize for the next three years. Filmmakers from across the country and abroad will be invited to submit their work in this new category. A selection committee of judges from the Hamptons Festival and including at least four scientists and engineers will make the final decision. The winning film will be showcased widely. The five-day Hamptons Festival attracts a film industry crowd of some 20,000 from both coasts, but especially from New York, including major figures from the studios, networks, agencies, publishing, advertising, and business communities. It receives widespread coverage in the general and film press. Film distributors attend to identify new emerging talent. A major new prize for a science and technology film should attract significant attention and serve the Foundation's program to encourage young filmmakers to create more realistic films about science and technology and to challenge existing stereotypes about scientists and engineers. Project Director: Denise Kasell, Executive Director.

COMMERCIAL TELEVISION AND FILMS, OFFICER GRANT

Anthology Film Archives
New York, NY 10003

\$20,000

For partial support of a science film series and gallery exhibition. Project Director: Robert A. Haller, Director of Collections/Special Projects.

THEATER, TRUSTEE GRANT

Manhattan Theatre Club
New York, NY 10036

\$215,000

This grant funds a three-year project at the Manhattan Theater Club to develop new plays about science and technology. A Sloan Fellowship will be created to support one new playwright each year to develop a play about science and technology. The new play will receive a reading cast with professional actors and will be seen by a small invited audience. Two additional readings of new plays dealing with science and technology will also be supported. These plays will be selected, from the very large number submitted each year, by an advisory committee that will include representatives of the scientific and engineering communities. The most promising new play each year will be the subject of an intensive two-week workshop to further develop the script. A professional cast with an established director will produce the play and it will be performed for special audiences. At least once during the three-year grant period, a full production of a science and technology play will be staged as part of the Club's regular series. Project Director: Barry Grove, Executive Producer.

THEATER, OFFICER GRANT

Manhattan Theatre Club
New York, NY 10036

\$40,000

To hold a daylong event around the Broadway-bound play *Proof*. Project Director: Barry Grove, Executive Producer.

GENERAL, TRUSTEE GRANT

Arizona State University Foundation
Tempe, AZ 85287

\$500,000

The Institute of Human Origins, the respected research center founded by paleoanthropologist Don Johanson, will establish a comprehensive and popular web site

to act as a clearinghouse for information on human evolution. The site will draw on the science of paleoanthropology, which integrates Darwinian evolutionary theory and the study of geological history to understand human origins. The site will create a content-rich, up to date, interactive public forum for discussion, debate, and information. People will be able to learn the elements of human evolutionary theory in an easy format with timelines and photographs. If they wish, they can delve deeper into the latest research findings from fieldwork around the world. Paleoanthropology will be presented as an exciting activity uncovering new fossil evidence and challenging or confirming existing hypotheses, with links to other sites for paleontology, geology, primatology, and molecular evolution. There will be a monthly calendar of events, public lectures, symposia and programs, book reviews, and educational games. Visitors to the web site will be able to provide feedback or enter into monitored forums for serious discussion. Partnerships with other related sites, such as The American Museum of Natural History and the Smithsonian Institution, will be created. For those interested in the ongoing debate with creationists, there will be links to the National Center for Science Education, the National Academy of Sciences, and various discussion sites. This project will allow use of the World Wide Web, increasingly a major choice for general information, to advance public understanding of evolution. Project Director: Donald C. Johanson, Director, Institute of Human Origins.

GENERAL, OFFICER GRANT

Massachusetts Institute of Technology
Cambridge, MA 02139

\$25,000

For a major conference and exhibition on communicating science and technology through visual media. Project Director: Boyce Rensberger, Director, Knight Science Journalism Fellowships.

SELECTED NATIONAL ISSUES AND CIVIC PROGRAM

SELECTED NATIONAL ISSUES

CIVILIAN BIODEFENSE, TRUSTEE GRANT

Johns Hopkins University
Baltimore, MD 21202

\$3,500,000

Communities are reasonably well-prepared for traditional acts of terrorism, such as bombings. However, potential acts of bioterrorism have not received the attention they deserve. Such acts are neither highly visible nor easily detected. The effect of a biological attack would show up only gradually as patients begin appearing in doctors' offices and hospital emergency rooms. Diagnosis might be delayed because of unfamiliarity of doctors with the most likely disease agents. By the time the true nature of the attack was recognized, infection could have spread widely. Hospitals and public health agencies are unprepared to respond to such an epidemic problem. National preparedness is in its early stages. There is, as yet, only limited understanding at the national level that medical care and public health personnel would be critical to detecting and responding to a bioterrorism attack and should be deeply involved in emergency planning.

The Johns Hopkins Center for Civilian Biodefense Studies is one of the few institutions in the country trying to improve the country's preparedness for bioterrorism attacks. This grant will support the Center's program of education and outreach to the public, opinion-makers, policy makers, and the medical community. Its plan is to promote the expansion and better preparation of the U.S. public health infrastructure, including hospitals, as key responders to a bioterrorism attack. A program of research and action will be developed to reduce the threat of bioterrorism and to strengthen international norms against the use of biological agents. The Center can play a central role in catalyzing the creation of a national program of civilian biodefense that appropriately links relevant agencies at the federal, state, and local levels, and provides adequate funding for research, public and professional education, and for the necessary improvement of medical response capabilities. Project Director: Dr. Donald A. Henderson, University Distinguished Professor and Director, Center for Civilian Biodefense Studies, School of Hygiene & Public Health.

SELECTED NATIONAL ISSUES, OFFICER GRANTS

American Chemical Society
Washington, DC 20036

\$30,000

For planning toward a possible science and technology resource group. Project Director: Mary L. Good, Managing Member, Venture Capital Investors, LLC.

National Association of Graduate-Professional Students **\$11,500**
Washington, DC 20003

Supplemental grant in support of the web-based National Doctoral Program Survey.
Project Director: Malaina Brown, Employment Concerns Coordinator.

University of Maryland Foundation **\$20,000**
Adelphi, MD 20783

Support for travel and related costs to improve Federal practices in survey research.
Project Director: Robert Groves, Chair, Joint Programs in Survey Methodology,
University of Maryland.

University of Southern California **\$30,000**
Los Angeles, CA 90089

Partial support for a symposium on science, ethics, and society. Project Director:
Professor Alexander M. Capron, School of Law.

CIVIC PROGRAM

TRUSTEE GRANTS

City University of New York
New York, NY 10011

\$2,000,000

City University of New York (CUNY) provides graduate, baccalaureate, and community college programs to 200,000 students attending 19 campuses in New York City. Past Foundation grants have funded beginning efforts by CUNY to experiment with a multi-campus, centrally coordinated distance learning effort based on asynchronous learning networks (ALNs). These initial efforts were successful. This grant will fund an expansion of the program so that over the next three years it encompasses all 19 CUNY campuses and enrolls 10,000 learners in 400 ALN and hybrid-ALN courses. A hybrid-ALN course is basically one where campus visits for a student are reduced because only a portion of a course requires classroom attendance, the rest being online. Community colleges, with a largely commuter student population, are likely to find the hybrid approach useful. CUNY expects that by the end of the grant period it will have implemented about 200 fully ALN and 200 hybrid-ALN courses. Full master's degree programs are planned to be available via ALN in a number of disciplines, including library science, education, and mechanical engineering. Bachelor's degrees will be developed in fire science, hospitality management, and biochemistry. A number of Associate degree programs will be offered online, primarily using the hybrid model. (CUNY also plans, as part of a separate project distinct from this one, to place special emphasis on ALN education for workforce development in two areas of special importance to New York City: health and new media. Plans are to model these industry-specific programs after NACTEL, the Sloan project at Pace University, which provides an A.S. degree online to telephone technicians. This program requires industry and union involvement in curriculum development and other matters, as well as excellent coordination among program participants.) The entire project should lead to a significant enlargement of educational opportunities in the City. Project Director: Colette A. Wagner, Director of Education and Training.

Fund for the City of New York
New York, NY 10013

\$500,000

The goal of the Sloan Public Service Awards is to recognize outstanding contributions by outstanding New York City civil servants. These awards, operated by the Fund for the City of New York, are awarded to six persons or teams of workers each year. Winners are selected by an independent selection committee and receive an award of \$7,500. In addition, awardees receive a personalized original drawing by the artist Niculae Ascium, depicting the nature of the winner's work for the City. On the day the Sloan awards are announced, the selection committee travels to the office of each of the six awardees for a celebration with their co-workers. This is almost always chaired by a senior executive (the Commissioner or equivalent) of the City agency. That same evening, a gala awards

reception attended by the awardees' families, friends, and co-workers is held in the historic Great Hall of the Cooper Union. Every Mayor of New York since the inception of the program has spoken at this event. The awards receive extensive attention from the New York press. This Foundation grant renews partial support of the awards program for another five years. Project Director: Barbara Cohn, Vice President.

Greenpoint Manufacturing and Design Center **\$150,000**
Brooklyn, NY 11222

A large number of small and mid-sized firms in the New York City food manufacturing sector are in need of new and often larger space. Greenpoint Manufacturing and Design Center (GMDC) has purchased an unused industrial building in the Greenpoint section of Brooklyn and plans to lease space at going market rates to food manufacturers after renovating to meet their needs. The building, to be called the Greenpoint Food Exchange, will include cost-shared facilities for sanitation, refrigeration, waste handling, purchasing, delivery, equipment maintenance, and conferencing. This strategy of providing shared facilities has been successful at GMDC's site for the woodworking sector, which pioneered this model for how New York's many unused industrial buildings can be transformed into venues for well-paying manufacturing employment. This grant will be used for certain early expenses unable to be included in the purchase financing. It is expected that grant funds will be repaid within six years. Project Director: David Sweeny, CEO.

Polytechnic University **\$397,800**
Brooklyn, NY 11201

In 1975, George Bugliarello, Chancellor of Polytechnic University, launched the successful effort to create Metrotech, a large university-industry park that surrounds Polytechnic and of which it was a co-developer. Metrotech is the largest urban university-industry park in the United States and has attracted well over 20,000 jobs, mostly from the financial industry. This grant funds efforts by Bugliarello, assisted by William Shore, a long-time leader of the Regional Plan Association and now a Senior Associate of New York University's Institute of Public Administration, to explore the possibility of developments similar to Metrotech elsewhere in the City. If these efforts are successful, they would bring significant benefits to the City by leading to the creation of one or two major centers of economic activity and would provide a precedent for others who might consider launching similar university-industry urban parks. Project Director: George Bugliarello, Chancellor.

Polytechnic University **\$110,000**
Brooklyn, NY 11201

Polytechnic University has created a partnership with six liberal arts colleges in New York City and the immediate surrounding area for the purpose of allowing students at the partner colleges to obtain in five years a bachelor's degree from their home college and a M.S. from Polytechnic. Initially the M.S. degree will be in computer science, a subject in

which Polytechnic is strong but the partner colleges are not. Other fields, such as management of technology and financial engineering, will be added later. Transitional courses will be created and offered to students to bridge the gap between the regular programs at the colleges and the technology-oriented graduate courses at Polytechnic. In order for this to work for students at widely dispersed campuses, these transitional courses will be offered online in ALN mode. This grant supports the creation of four such bridge courses by Polytechnic, the first two by January 2001 and the others by July 2001. The plan is to have all required graduate courses in computer science available online by Fall 2003. This will allow students to complete the five-year program without having to travel to the Polytechnic campus. Project Director: Noel N. Kriftcher, Director, David Packard Center for Technology and Educational Alliances.

Pratt Institute

\$318,800

Brooklyn, NY 11205

A 1998 Foundation grant assisted in the launching of an in-house not-for-profit organization, called SPAN, through which Pratt's faculty and students would provide design services to small and medium-sized manufacturers in New York City. Such firms rarely employ the services of designers and often do not appreciate the extent to which incorporation of design sensitivity could improve the appeal and marketability of their products. Although it took somewhat longer than expected, SPAN has now attained reasonable sales goals and its client base is expanding. It has mobilized faculty and students in the eight Pratt design departments and offers one-stop design services such as product development and evaluation, prototyping, component sourcing, communication design, photography, computer graphics, and interactive multimedia. In addition to serving its business clients, SPAN also provides excellent real-world experience for Pratt design students. As SPAN grows, it will play an increasingly important role in the education of these students, two thirds of whom typically pursue careers as designers in the City. This grant will supply two final years of support for SPAN, by which time it is expected either to be self-sufficient or to have arranged for a subsidy from Pratt that will perpetuate its services. Project Director: Peter Barna, Chairman, Industrial Design Department.

Textile/Clothing Technology Corporation

\$483,015

Cary, NC 27511

Studies have shown that American apparel manufacturers should concentrate on high-end products and convert to so-called "short-cycle manufacturing." Were they to do so, they would be able rapidly to restock retailers' shelves and racks, thereby allowing retailers to respond quickly to market vagaries without maintaining large and expensive inventories. The value to retailers of reducing inventory costs and overstocking is so great that, for high-end items, they are willing to pay higher U.S. manufacturing costs rather than rely on overseas suppliers from whom they must order in large quantities months in advance of sales. This conversion to short-cycle manufacturing has hardly begun in New York City, where cut-and-sew operations, although employing about 84,000 people, are almost entirely small, under-capitalized family owned businesses. The preservation of this

industry by encouraging and helping the cut-and-sew operations convert to short-cycle manufacturing would yield significant benefits to the City. A 1999 grant to the Textile/Clothing Technology Corporation (TC)² supported Phase I of a program, in partnership with the Garment Industry Development Corporation (GIDC), to introduce short-cycle manufacturing, to the New York City garment industry. This effort has produced three facilities that (TC)² believes are ready to convert to short-cycle manufacturing and whose owners want to convert. (TC)² has also connected with a handful of national retailers, based in New York City, that want to increase their purchasing from New York cut-and-sew operations if they provide rapid resupply of inventory. This new grant supports Phase II, the actual conversion of these three cut-and-sew operations to short cycle manufacturing. (TC)² and GIDC personnel will help the three operations convert. All costs of the conversion itself will be borne by the companies, who have agreed to open their facilities as showcases to others in the New York City industry. As part of the grant, (TC)² will also organize programs to educate at least 180 other industry people about the advantages and fundamental requirements of short-cycle manufacturing, perform at least eight additional plant assessments, conduct two open houses at each of the three showcase facilities (one for retailers and one for cut-and-sew operators), and arrange for an average of 60 industry persons to tour each of the three showplaces annually. Project Director: Michael Fralix, Corporate Vice President and Director of Industry Services.

CIVIC PROGRAM, OFFICER GRANTS

Greater Jamaica Development Corporation
Jamaica, NY 11432

\$30,000

To analyze and prepare to take advantage of the opportunities in Jamaica, Queens for economic growth offered by the synergy between the new FDA Regional Laboratory and York College. Project Director: Carlisle Towery, President.

New York Industrial Retention Network
Brooklyn, NY 11201

\$30,000

To support development and implementation of strategies to help New York City's printing industry. Project Director: Adam Friedman, Executive Director.

ADDITIONAL GRANTS

OFFICER GRANTS

Council on Foundations **\$45,000**
Washington, DC 20036

Partial support for launching an electronic newsletter for foundation-related news, information, and commentary. Project Director: Dorothy S. Ridings, President & CEO.

Council on Foundations **\$45,000**
Washington, DC 20036

General support (dues). Project Director: Dorothy S. Ridings, President and CEO.

Independent Sector **\$10,500**
Washington, DC 20036

General support (dues). Project Director: Sara E. Melendez, President and CEO.

New York Regional Association of Grantmakers **\$10,500**
New York, NY 10018

General support (dues). Project Director: Barbara Bryan, President.

The Foundation Center **\$30,000**
New York, NY 10003

Support to upgrade the software license for the “Grantmaker Web Search” search engine. Project Director: Sara L. Engelhardt, President.

2000 FINANCIAL REPORT



2000 FINANCIAL REVIEW

The financial statements and schedules of the Foundation for 2000 and 1999, have been audited by KPMG LLP. They include the balance sheets, statements of activities and cash flows, and schedules of management and investment expenses.

Investment income for 2000 was \$37,215,975, a decrease of \$5,960,099 from \$43,176,074 in 1999. After the deduction of investment expenses and provision for federal excise tax, net investment income was \$25,387,364 in 2000 as compared with \$32,608,389 for the prior year. Investment expenses during 2000 totaled \$8,478,611 of which \$6,950,091 represented investment management fees. The provision for Federal excise tax amounted to \$3,350,000. The total of these deductions from investment income in 2000 was \$11,828,611 versus \$10,567,685 in 1999.

Grants authorized (net of grant refunds) and management expenses during 2000 totaled \$67,612,989, which was \$42,225,625 greater than 2000 net investment income. Of this total, grants authorized (net of refunds) amounted to \$62,783,640 while management expenses were \$4,829,349. Since the Foundation's inception in 1934, the cumulative excess of grants and expenses over the Foundation's net investment income has amounted to \$181.5 million.

Grant payments in 2000 were \$52,672,072 compared with \$45,995,266 for the prior year. Together with management expenses, investment expenses, federal excise taxes paid and other charges, the total of cash expenditures net of grant refunds in 2000 was \$68,989,151 while in 1999 the amount was \$60,717,946.

Grants authorized and payments made during the year ended December 31, 2000 are summarized in the following table:

Grants unpaid at December 31, 1999	\$ 56,409,381
Authorized during 2000	63,223,521
Payments during 2000	<u>(52,672,072)</u>
Grants unpaid at December 31, 2000	<u>\$ 66,960,830</u>

The fair value of the Foundation's total assets was \$1,373,141,818 at December 31, 2000 including investments valued at \$1,372,614,002 as compared with total assets of \$1,373,911,437 at December 31, 1999.

AUDITORS' REPORT

Report of KPMG LLP
Independent Auditors

The Board of Trustees
Alfred P. Sloan Foundation

We have audited the accompanying balance sheets of the Alfred P. Sloan Foundation as of December 31, 2000 and 1999, and the related statements of activities and cash flows for the years then ended. These financial statements are the responsibility of the Foundation's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly in all material respects, the financial position of the Alfred P. Sloan Foundation as of December 31, 2000 and 1999, and the changes in its net assets and its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

Our audits were made for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplementary information included in the schedules of management and investment expenses for the years ended December 31, 2000 and 1999 is presented for purposes of additional analysis and is not a required part of the basic financial statements. Such information has been subjected to the auditing procedures applied in the audits of the basic financial statements and, in our opinion, is fairly stated in all material respects in relation to the basic financial statements taken as a whole.

KPMG LLP

February 23, 2001

BALANCE SHEETS
DECEMBER 31, 2000 AND 1999

	<u>2000</u>	<u>1999</u>
Assets		
Cash	\$ 527,816	\$ 712,199
Investments:		
Equities	981,882,845	1,047,282,082
Fixed income	262,547,227	228,890,770
Limited marketability	128,183,930	97,026,386
Total investments	<u>1,372,614,002</u>	<u>1,373,199,238</u>
Total	<u>\$1,373,141,818</u>	<u>\$1,373,911,437</u>
Liabilities and Net Assets		
Grants payable	\$ 66,960,830	\$ 56,409,381
Deferred federal excise tax	2,006,909	3,278,344
Other	189,746	193,043
	<u>69,157,485</u>	<u>59,880,768</u>
Net assets - unrestricted	1,303,984,333	1,314,030,669
Total	<u>\$1,373,141,818</u>	<u>\$1,373,911,437</u>

See accompanying notes to financial statements.

STATEMENTS OF ACTIVITIES
YEARS ENDED DECEMBER 31, 2000 AND 1999

	<u>2000</u>	<u>1999</u>
Investment Income:		
Interest	\$ 23,767,570	\$ 26,289,555
Dividends	13,448,405	16,886,519
	<u>37,215,975</u>	<u>43,176,074</u>
Less:		
Investment expenses	8,478,611	7,592,685
Provision for Federal excise tax	3,350,000	2,975,000
	<u>11,828,611</u>	<u>10,567,685</u>
Net investment income	<u>25,387,364</u>	<u>32,608,389</u>
Expenses:		
Grants authorized (net of refunds of \$439,881 in 2000 and \$265,137 in 1999)	62,783,640	55,076,046
Management expenses	4,829,349	4,488,132
	<u>67,612,989</u>	<u>59,564,178</u>
Excess of expenses over net investment income	<u>(42,225,625)</u>	<u>(26,955,789)</u>
Investment Gains (Losses):		
Net gain on disposal of investments	94,479,601	98,321,948
(Decrease) increase in unrealized appreciation of investments, net of deferred federal excise tax	(62,300,312)	121,024,426
	<u>32,179,289</u>	<u>219,346,374</u>
(Decrease) increase in net assets	(10,046,336)	192,390,585
Net assets at beginning of year	1,314,030,669	1,121,640,084
Net assets at end of year	<u>\$1,303,984,333</u>	<u>\$1,314,030,669</u>

See accompanying notes to financial statements.

STATEMENTS OF CASH FLOWS
YEARS ENDED DECEMBER 31, 2000 AND 1999

	<u>2000</u>	<u>1999</u>
Cash flows from operating activities:		
(Decrease) increase in net assets	\$ (10,046,336)	\$ 192,390,585
Adjustments to reconcile (decrease) increase in net assets to net cash used in operating activities:		
Net gain on disposal of investments	(94,479,601)	(98,321,948)
Decrease (increase) in unrealized appreciation of investments	63,571,747	(123,494,313)
(Decrease) increase in deferred federal excise tax	(1,271,435)	2,469,887
Decrease in other assets	-	232,396
(Decrease) increase in other liabilities	(3,297)	193,043
Increase in grants payable	10,551,449	9,345,917
Net cash used in operating activities	<u>(31,677,473)</u>	<u>(17,184,433)</u>
 Cash flows from investing activities:		
Proceeds from sales of investments	2,404,224,292	2,084,696,537
Purchases of investments	<u>(2,372,731,202)</u>	<u>(2,066,973,055)</u>
Net cash provided by investing activities	<u>31,493,090</u>	<u>17,723,482</u>
 Net (decrease) increase in cash	(184,383)	539,049
Cash at beginning of year	712,199	173,150
Cash at end of year	<u>\$ 527,816</u>	<u>\$ 712,199</u>

See accompanying notes to financial statements.

NOTES TO FINANCIAL STATEMENTS

1. Summary of Significant Accounting Policies

The accompanying financial statements have been prepared substantially on the accrual basis of accounting. Investment income and investment and management expenses, including post-retirement benefit expense, are recorded on the cash basis, the effect of which on the accompanying financial statements is not materially different from the accrual basis. Grants are accrued when authorized by the Trustees. Certain accounting estimates are a routine part of financial statements prepared by the management and are based upon management's current judgments.

Gains or losses on disposal of investments are determined on the first-in, first-out basis. Fair value for traded securities is based on quoted market prices. Investments within equity hedge funds, focused equity strategies and of limited marketability are reported at estimated fair values as provided by the managers of the various interests.

2. Investments

Investments at December 31, 2000 and 1999, are summarized as follows:

	2000		1999	
	<u>Cost</u>	<u>Fair Value</u>	<u>Cost</u>	<u>Fair Value</u>
<i>Equities</i>				
Large Capitalization	\$ 287,214,174	\$ 307,652,979	\$ 397,213,892	\$ 441,905,432
Small Capitalization	95,515,147	125,553,893	98,572,377	154,013,075
Equity Hedge Funds	75,000,000	88,583,380	20,000,000	23,520,000
Focused Equity Strategies	252,664,642	248,582,017	180,282,438	189,865,227
Non-US	186,984,179	213,441,457	177,697,953	236,324,484
Pending equity transactions, net	(1,930,881)	(1,930,881)	1,653,864	1,653,864
<i>Fixed Income</i>	205,345,721	212,805,582	146,288,992	141,042,747
Pending fixed income transactions, net	49,741,645	49,741,645	87,848,023	87,848,023
<i>Limited Marketability</i>				
Real Estate	7,445,108	6,381,470	8,660,118	7,990,591
Private Equity	114,288,870	121,802,460	90,961,266	89,035,795
Total	<u>\$1,272,268,605</u>	<u>\$1,372,614,002</u>	<u>\$1,209,178,923</u>	<u>\$1,373,199,238</u>

2. Investments (continued)

At December 31, 2000, the Foundation had unfunded commitments to limited partnerships of approximately \$55 million.

3. Financial Instruments with Off-Balance Sheet Credit or Market Risk

The Foundation's investment strategy incorporates certain financial instruments which involve, to varying degrees, elements of market risk and credit risk in excess of the amounts recorded in the financial statements. These instruments include financial futures, forward foreign currency contracts, loaned securities and securities sold, not yet purchased.

The Foundation is subject to market risk associated with the changes in the value of the futures contracts. Below is a table summarizing the long and short exchange-traded financial futures positions at December 31, 2000 and 1999.

<i>Index Futures Contract</i>	<u>December 31, 2000</u>		<u>December 31, 1999</u>	
	<i>Number of Contracts</i>	<i>Value (Millions)</i>	<i>Number of Contracts</i>	<i>Value (Millions)</i>
<i>S & P 500</i>				
Long	-	\$ -	206	\$76.5
<i>U.S. Treasury Futures</i>				
Long	418	65.8	159	15.6
Short	(306)	(32.1)	(338)	(32.4)

These amounts, however, may differ from the Foundation's future cash requirements as the Foundation may close out futures positions prior to settlement and thus be subject only to the change in value of the futures contracts since the contracts are valued daily using the mark-to-market method. The net appreciation in the market value is recognized as received. The margin requirements on deposit with a third party for futures contracts were approximately \$0.3 million at December 31, 2000 and \$7.5 million at December 31, 1999.

In addition, one of the Foundation's investment advisors engaged from time to time in options (puts and calls), swaps, futures and forwards, for the purpose of hedging, risk management and return enhancement or to implement investment strategies in a more efficient manner. These transactions were discontinued in 2000 and, therefore, no transactions were outstanding at December 31, 2000; however, the value of these transactions at December 31, 1999 was approximately \$12.1 million. Such transactions are subject to market risk as described above and, to varying degrees, risk of loss, arising from the possible inability of counterparties to meet the terms of the contract. Required collateral was held by a third party.

3. Financial Instruments with Off-Balance Sheet Credit or Market Risk (continued)

The Foundation purchases forward foreign currency contracts as a hedge against fluctuations in currency prices. Forward foreign currency buy and sell contracts held as of December 31, 2000 were valued at approximately \$16.6 million and \$15.3 million, respectively, and, as of December 31, 1999, at approximately \$25.6 million and \$26.0 million, respectively. Such contracts involve, to varying degrees, risk of loss arising from the possible inability of counterparties to meet the terms of the contract.

Through a securities lending program managed by a custodian firm, the Foundation loans certain stocks and bonds included in its investment portfolio. The custodian firm has indemnified the program. The Foundation's gross securities loaned to certain borrowers at December 31, 2000 and 1999 amounted to \$51 million and \$46 million, respectively.

Securities sold, not yet purchased (none at December 31, 2000 and \$65.9 million at December 31, 1999) were recorded net in the Foundation's investment accounts. These securities had market risk to the extent that the Foundation, in satisfying its obligations, may have had to purchase securities at a higher value than recorded. Required collateral was held by a third party.

Management does not anticipate that losses, if any, resulting from its market or credit risks would materially affect the financial position of the Foundation.

4. Federal Excise Tax

The Foundation is liable for federal excise taxes of 2 percent of its net investment income, which includes realized capital gains, for the year. However, this tax is reduced to 1 percent if certain conditions are met. The Foundation did not meet the requirements for the reduced tax for the years ended December 31, 2000 and December 31, 1999. Therefore, current taxes are estimated at 2 percent of the net investment income for 2000 and for 1999. Deferred taxes represent 2 percent of unrealized appreciation of investments at December 31, 2000 and 1999, as qualification for the 1 percent tax is not determinable until the fiscal year in which gains are realized.

5. Retirement Plan

The Foundation has a defined contribution retirement plan covering substantially all employees under arrangements with Teachers Insurance and Annuity Association of America and College Retirement Equities Fund which provides for the purchase of annuities for employees. Retirement plan expense was \$402,260 and \$381,726 in 2000 and 1999 respectively.

In addition, the Foundation provides certain health care and life insurance benefits to its retirees. The cost of providing these benefits to retirees was \$95,586 and \$97,470 in 2000 and 1999, respectively, on a pay-as-you-go basis.

6. Lease

The Foundation entered into a ten-year lease effective January 1, 1999. The lease contains an escalation clause which provides for rental increases resulting from increases in real estate taxes and certain other operating expenses. Annual rent expense is approximately \$633,000; however, as a result of certain rent abatement clauses effective in the initial years of the lease, rent expense for 2000 was \$501,852. In 1999, rent expense amounted to \$392,698.

**SCHEDULES OF MANAGEMENT AND INVESTMENT EXPENSES
YEARS ENDED DECEMBER 31, 2000 AND 1999**

	<u>2000</u>	<u>1999</u>
Management expenses		
Salaries and employees' benefits:		
Salaries	\$3,257,024	\$2,916,837
Employees' retirement plan and other benefits	<u>1,147,023</u>	<u>1,074,543</u>
Total	<u>4,404,047</u>	<u>3,991,380</u>
Rent	501,852	392,698
Program expenses	628,638	598,530
Office expenses	517,201	476,645
Website and publications	60,862	78,047
Professional fees	<u>245,269</u>	<u>146,224</u>
Total management expenses	6,357,869	5,683,524
Less management expenses allocated to investments	<u>1,528,520</u>	<u>1,195,392</u>
Management expenses	<u>\$4,829,349</u>	<u>\$4,488,132</u>
Investment expenses		
Investment management fees and expenses	\$6,950,091	\$6,397,293
Management expenses allocated to investments	<u>1,528,520</u>	<u>1,195,392</u>
Investment expenses	<u>\$8,478,611</u>	<u>\$7,592,685</u>