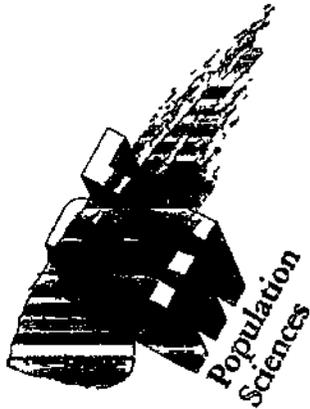

**THE
PRESIDENT'S
REVIEW
AND
ANNUAL
REPORT
1985**



**THE
ROCKEFELLER
FOUNDATION**



THE
PRESIDENT'S
REVIEW
AND
ANNUAL
REPORT
1985

THE
ROCKEFELLER
FOUNDATION

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TRUSTEE
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December 31, 1985

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¹Retired in April, 1985.

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¹Retired August 31, 1985.

²Resigned January 31, 1986.

³Appointed Acting Secretary, January 31, 1986.

AGRICULTURAL
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| JOAN ZULKOSKI | <i>Program Associate</i> |

FIELD STAFF

| | |
|-------------------|--|
| PETER R. JENNINGS | <i>CIAT, Cali, Colombia</i> |
| JAMES E. JOHNSTON | <i>West Africa Rice Development Association, Monrovia, Liberia</i> |
| A. COLIN McCLUNG | <i>IADS, Arlington, Virginia¹</i> |
| ACHOLA PALA OKEYO | <i>Nairobi, Kenya</i> |

ARTS AND
HUMANITIES

| | |
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EQUAL
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| ELIZABETH N. TAURANAC | <i>Program Associate³</i> |
| THEODORE LESTER | <i>Program Associate</i> |
| AIDA RODRIGUEZ | <i>Research Associate</i> |

¹Retired May 31, 1985.

²Effective January 1, 1986.

³Resigned October 25, 1985.

HEALTH
SCIENCES

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SCOTT B. HALSTEAD, M.D. *Associate Director*
CAROL C. JIMENEZ *Program Associate*

INTERNATIONAL
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FIELD STAFF

KATHERINE CH'IU LYLE *Beijing, China*

INFORMATION
SERVICE

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TARAS KOSTECKY *Administrative Associate*

ORGANIZATIONAL INFORMATION

MEETINGS

The annual meeting of the Board of Trustees was held on April 2, 1985, and regular meetings of the board were held on June 21, September 20, and December 2-3. A meeting of the Executive Committee of the trustees was held on April 19 to take action within the general policies of the board.

TRUSTEES AND PRINCIPAL OFFICERS

James C. Fletcher retired from the Board of Trustees, effective April 2, 1985. He was elected a Trustee in 1978 and served as chair of the Audit Committee and as a member of the Executive Committee.

Lane Kirkland retired from the Board of Trustees, effective April 2, 1985. He was elected a Trustee in 1973 and served as a member of the Budget and Compensation, Executive, and Nominating Committees.

Jane C. Pfeiffer retired from the Board of Trustees, effective April 2, 1985. She was elected a Trustee in 1973 and served as chair of the Budget and Compensation and Nominating Committees and as a member of the Executive and Finance Committees.

Alice M. Rivlin resigned from the Board of Trustees, effective April 23, 1985. She was elected a Trustee in 1982 and served as a member of the Audit and Finance Committees.

James D. Wolfensohn resigned from the Board of Trustees, effective April 2, 1985. He was elected a Trustee in 1979 and served as chair of the Finance Committee and as a member of the Budget and Compensation and Executive Committees.

Laurence D. Stifel, Vice-President, retired from the Foundation, effective August 31, 1985, to become Director-General of the International Institute of Tropical Agriculture in Ibadan. He joined the Foundation as a field staff member stationed in Thailand from 1967 to 1974. He was elected Secretary of the Foundation in 1974 and Vice-President in 1978.

Simon P. Gourdine, Secretary, resigned from the Foundation, effective January 31, 1986 to become Director of Labor Relations of the Metropolitan Transportation Authority. He joined the Foundation as Secretary in 1984.

James O. Gibson, President of the Eugene and Agnes E. Meyer Foundation, was elected Director for Equal Opportunity, effective January 1, 1986.

**THE
PRESIDENT'S
REVIEW**

Although interdependence among nations is today widely recognized as a fact of life, few grantmaking foundations attempt to work internationally. Fewer still, with such notable exceptions as Ford, Carnegie, Kellogg, Rockefeller Brothers, and Tinker, show a consistent concern for the problems and potentialities of those countries today aggregated as the Third World. A reasonable estimate of the fraction of U.S. foundation grantmaking that goes toward international subjects of all kinds would be 7 percent.

The involvement of the Rockefeller Foundation with developing countries goes back all the way to its founding almost 73 years ago, beginning with the professionalization on a truly global scale of the then fledgling field of public health—its practitioners, institutions, and field operations. During the years between the two World Wars, the Foundation mounted large-scale campaigns against health hazards, such as yellow fever and malaria, that were carried out in the field by its own staff, rather than by grantmaking in the usual sense.

Beginning in the 1940s, similar operational means were employed to design and carry out large food crop improvement programs in countries threatened by serious food deficits. These national programs were rapidly internationalized (at the initiative of the Ford and Rockefeller foundations) to the point where an innovative mechanism was created in 1971: a consortium of national and international development agencies and foundations known as the Consultative Group on International Agricultural Research. Last year, the Consultative Group raised more than \$180 million to support 13 centers devoted to improving food crops basic to life in the Third World.

I raise past accomplishments only to place in context the subject matter of this Review: experienced as this foundation is in international work on a substantial scale, the field known today as "development" is now perceived to be far more complicated than most of us had at one time anticipated. Furthermore, a substantial number of international agencies have come into being whose resources dwarf those of the Rockefeller Foundation. The World Health Organization and the Food and Agricultural Organization, for example, each expends some \$260 million a year.

As a consequence of this altered perception, a Task Force of the Foundation's Board of Trustees has been addressing throughout 1985 the question of whether our present programs dealing with the problems of the Third World, programs to which the Foundation allocates roughly 60 percent of its resources, are appropriate and well targeted for the 1990s. The Task Force has asked a comprehensive question: "What should the Rockefeller Foundation do with its limited resources to speed human and material progress in the developing countries over the next 15 years?"

At the root of this question lies the fact that the developing world we knew 30 years ago has changed and that those of us with a continuing or new commitment to help improve the quality of life of the majority of the world's people must understand those changes if our activities in support of our commitment are to be effective.

The Third World no longer looks in the least homogeneous, even superficially. Newly industrialized countries, such as Taiwan, South Korea, Hong Kong, and Singapore, have emerged; other and much larger countries, such as Mexico and Brazil, are well on their way. The difference between a less-developed country with oil reserves and one without is striking, despite wild price fluctuations. Looking closely, one can find among poorer countries remarkable differences in the indices of well-being. Certain countries, among them Costa Rica, Sri Lanka, Kerala State in India, and China, have achieved significant reductions in infant and child mortality rates and increases in life expectancy, without massive gains in GNP.

Not least important, the interactions between North and South, in developed and less-developed countries, have undergone a number of changes. Their interdependency is both greater and more widely recognized, however much it may be chafed at or resented, on both sides. Indigenous, trained manpower remains in short supply almost everywhere, but in a good many countries the situation has improved enough to make it at least possible to do virtually without foreigners on the ground, which is just as well, since the cost of keeping expatriate field staff abroad has become all but prohibitive for any but the largest and richest organizations.

In a world so much changed, it is not surprising that the question posed by the Task Force, namely, how best to contribute to human well-being in poor countries in the years to come, received very intense discussion all last year.

It was agreed that historically the Foundation has focused mainly on science and technology as they contribute to the development process—accomplishments in the agricultural and health sciences cited above are examples.

But the Task Force review recognized that many factors other than the technological are at work in the complicated process of development, factors that often overshadow questions of technological progress, particularly in the short run. At the moment, the acute problem of Third World indebtedness is one such; the threat of surging protectionism in national economic policies is another; the vast overinvestment in unproductive military hardware by developed and undeveloped nations alike is a third; and the widespread lack of effective and uncorrupted public administration in the Third World is yet a fourth.

The Task Force looked at the Foundation's historic commitment to technology and asked itself whether we should change this. Should we shift into efforts to deal directly with such things as political obstacles or

mass illiteracy or lack of trained management personnel? We concluded that science and technology born of scientific advance remain tremendously important and that progress in these areas is indeed a necessary, although not a sufficient, condition of improved living standards in poor countries. We concluded also that in the search for that elusive prize, "comparative advantage," ours lay in continued work in these fields. We therefore did not need to address the question, probably unanswerable in any case, "Will technology be the *most* important element in development during the closing decade-and-a-half of the 20th century?"

The deliberations of the Task Force, therefore, came to bear on a simple but all-important premise: it is the equitable distribution of benefits to the end-users which fulfills the promise of science and technology in the development process. This is the standard against which the Foundation's efforts are to be measured—not food production, but fewer hungry and malnourished people; not powerful vaccines, but control and elimination of diseases; not improved contraceptives, but reduction in population growth through safe, humane family planning.

If the Foundation is to emphasize science and technology for development, while encouraging equity outcomes, it will have to deepen its understanding of how new technologies are likely to affect the development process. Which technologies are biased in favor of the better-off (high technology urban hospitals), which in favor of the poor (oral rehydration therapy for infant diarrheas), and which are neutral but substantially affected by the system that puts them in place (contraception technologies)? The Task Force did not assume this understanding would be quickly or easily acquired. But it does not underestimate the significance of what can be achieved if the Rockefeller Foundation can demonstrate in the years ahead the contribution that science and technology can make to equity goals in the development process.

Over the seven decades that they have worked in fields, laboratories, and classrooms of the developing world, generations of Foundation field staff have created a reservoir of trust and goodwill that is still in evidence today, even with the world greatly changed. The Foundation can therefore assume with some confidence that the learning process itself, as well as its outcomes in terms of strategies and investments, will be a two-way street shared with Third-World scientists, scholars, and officials.

As matters stand now, the poorer countries will not acquire for decades the human resource base and institutional structures needed to master and apply modern science. Indeed, these countries—most of them in sub-Saharan Africa and South Asia—have difficulty making effective use of the stock of technology already available. Other countries in the developing world, such as Brazil, China, India, Mexico, and Thailand, do have maturing scientific communities and are organizing themselves to take advantage of contemporary developments in science and technology. But even for these relatively more prepared nations, the pace of scientific advance in the developed world can easily run ahead of their human and

institutional capacity to adapt and apply development-enhancing technologies.

Within the Foundation, we shall need to keep track of areas of technological advance in which we are not presently working, but perhaps ought to be, and areas that are or could become complementary to ours—the “delivery strategies” which could speed up the application and development of advances in agriculture, health, and population. We need to fight against the tendency toward compartmentalizing our work and to multiply the possibilities for collaboration amongst ourselves; and we must find ways to keep the end-user perspective firmly and clearly in mind at all times.

Even as the Trustee Task Force was deliberating, much of our work in 1985 pointed in these same directions. Health Sciences, while continuing its central role in the development of new and improved vaccines for diseases of the Third World, involved itself in the *application* of vaccines through the campaign to inoculate all the world’s children, which was launched by the newly formed Task Force for Child Survival.

Agricultural Sciences, while pursuing, mainly in Western laboratories, the development of genetic engineering applied to cereal crops paramount in Third-World countries, also funded studies in Africa of the potential socio-economic and environmental impacts of vaccines soon to be available against major tropical diseases of cattle. The Foundation also began an exploration of household food production in East Africa that will look for ways to increase output using existing technologies.

In Population Sciences, a \$1 million appropriation launched another African initiative, aimed at increasing indigenous expertise on both the technical and demographic sides of family planning. Effective strategies for advancing family planning are more likely to emerge under conditions in which a government can call upon its own people for advice and direction than under those in which the exercise must be carried out entirely by importation, of both technologies and expertise. Again, what concerns us here is the establishment of linkages whereby the benefits of scientific and technical advance reach people who might otherwise be left out.

A start has been made, even though overall the Task Force’s prescription for a greater effectiveness vis-à-vis the continuing problems of Third World poverty is easier to articulate than to carry out. Yet the Foundation has certain advantages, more particularly, an opportunity to convert its limitations into benefits.

The comparatively small resources of the Foundation can constitute, paradoxically, an emboldening advantage. We can initiate what may become global ventures, even when our own resources alone are manifestly inadequate to sustain the initiative. We are small enough to avoid compartmentalization if sufficiently determined. Our independence and transnational perspective could offer, as they have in the past, opportunities to bring about partnerships on behalf of undertakings requiring the cooperation of many organizations.

As we enter the year 1986, the Vice President for Program, Dr. Kenneth Prewitt, who joined the Foundation in September 1985, is hard at work, in collaboration with our program officers, devising ways of inaugurating the needed changes in our methods of operation. The goal is clear: to help developing countries to use modern technology effectively in improving the lives of their people, and to do so in a manner calculated to reduce the inequality among and within nations.

Richard W. Lyman

INTRODUCTION

INTRODUCTION

The Rockefeller Foundation is a philanthropic organization, endowed by John D. Rockefeller and chartered in 1913 "to promote the well-being of mankind throughout the world." From the beginning, the Foundation's work has been directed toward identifying and attacking at their source underlying causes of human suffering and need. During its early years, the Foundation was active chiefly in public health and medical education. Its program was later expanded to include the agricultural, natural, and social sciences and the arts and humanities. Today, the Foundation is carrying out its work within six fields: the agricultural sciences, the arts and humanities, equal opportunity for minority groups, the health sciences, international relations, and the population sciences.

GOVERNANCE

The Foundation is administered by its president through corporate officers and program officers drawn from scholarly and scientific disciplines.

Program guidelines and financial policy are set and appropriations approved by an independent Board of Trustees, which meets four times a year—in April, June, September, and December.

METHODS OF OPERATION

The programs of the Foundation are carried out through the awarding of grants to institutions and individuals and fellowships to individuals.

GRANTS

The Foundation receives each year about 6,500 proposals for funding; with limited funds, it can act favorably on only a relatively small number of these. The criteria for evaluation are: relevance of the project to the Foundation's program objectives and potential for contributing significantly to the well-being of mankind; extent of the applicant's effort to secure additional and subsequent funding from other sources; and the applicant's record of achievement.

Foundation officers travel extensively to visit Foundation-supported projects and to observe ongoing programs of potential interest. Consultants are used to supplement the officers' experience in assessing the proposals they receive. When the nature and quality of a project meet program guidelines, the proposal is considered in relation to other proposals, and a recommendation may be made for support in the form of a grant. In some cases, program officers will solicit proposals in areas of special interest.

FELLOWSHIPS

The Foundation supports two categories of fellowships: those that are training related and those aimed at assisting the individual to produce a piece of work.

General Fellowships, a long-standing program to help prepare outstanding younger scholars and scientists, mainly from the developing world, to make significant contributions to research and training or to public service, are listed in the *Fellowships* section of this report.

Special Fellowships awarded through the Foundation's programs on an annual basis (for example, in the Arts and Humanities) will be found in the sections dealing with those programs and with Special Interests and Explorations. For details, please write directly to the program for whose fellowships you feel qualified or to the assistant secretary of the Foundation.

PROGRAMS OF THE ROCKEFELLER FOUNDATION

The Foundation largely concentrates its efforts on selected programs with well-defined goals. It tries to keep its overall program flexible and dynamic through periodic reappraisals and changes in the light of new needs and opportunities. At present, Foundation programs are:

- Agricultural Sciences (see page 11)
- Arts and Humanities (see page 23)
- Equal Opportunity (see page 39)
- Health Sciences (see page 51)
- International Relations (see page 67)
- Population Sciences (see page 81)

In addition, the Foundation has a Special Interests and Explorations fund (see page 94), which allows it to examine proposals that are not covered precisely by other program categories or to supply additional funds, enabling programs to act favorably on proposals of exceptional merit that would otherwise go unsupported.

LIMITATIONS

To accomplish lasting results with finite resources, the Foundation must necessarily concentrate its support on projects that fall within defined program areas. In addition, the Foundation does not, on principle, undertake to: give or lend money for personal aid to individuals; appraise or subsidize cures or inventions; contribute to the establishment of local hospitals, churches, schools, libraries, or welfare agencies, or to their building and operating funds; finance altruistic movements involving private profit; support propaganda or attempts to influence legislation; or invest in securities on a philanthropic basis.

The Rockefeller Foundation does not normally provide general institutional support or endowment. Occasional exceptions are made in the case of organizations or institutions in the creation of which the Foundation has played an important role, and organizations that serve and support organized philanthropy in the United States. While general or core support is seldom given, efforts are made to ensure that the full direct costs of a project are taken into account in the calculation of grants budgets.

APPLICATIONS

No special form is required in making a request for Foundation aid. An application should be addressed to the assistant secretary of the Foundation or to the director for program in which the proposal would seem to fall. It should include:

- A description of the project, with clearly stated plans and objectives;
- A comprehensive plan for the total funding of the project during and, where applicable, after the proposed grant period;
- A listing of the applicant's qualifications and accomplishments.

**AGRICULTURAL
SCIENCES**



The agricultural programs of the Rockefeller Foundation, formally begun in 1943 in Mexico, have played a major role in dramatically increasing yields of food crops vital in the daily life of poor and still largely rural countries.

This was accomplished over four decades by means of three closely interwoven efforts. The Foundation supported research to develop higher-yielding varieties of food plants together with appropriate agronomic practices. Hundreds of young scientists from the developing world were given advanced training, first abroad, later in greatly strengthened indigenous institutions. And, importantly, the Foundation deployed a highly specialized field staff to work closely with local scientists with the end objective of getting improved varieties into the farmers' fields.

At first a country-by-country effort, the work was rapidly internationalized so that today an international agricultural research system exists (see below) that is capable of providing the developing world with improved varieties of major food crops through plant breeding.

The use of science and technology to produce improved crop varieties has proven to be an effective means of increasing food production and stimulating economic growth in the developing world. Now recent advances in cellular and molecular biology offer the possibility of dramatically increasing the efficiency, precision, and productivity of classical plant breeding. The combining of conventional breeding and new genetic engineering techniques may open the way not only to significant improvements in crop yields, but also to the development of varieties that allow for broader and more equitable distribution of benefits.

In 1984, after consultations with scientists throughout the world and visits to their institutions, the Foundation launched a new research program to enlist the powerful new tools of plant genetic engineering for the improvement of crops that are important in the poorer countries. The Foundation is particularly concerned that as new techniques and materials are developed, they are effectively transferred to the applied agricultural research programs of international centers and national agencies in developing countries.

Even as these research and transfer processes are being funded, the Foundation is encouraging social scientists and other scholars to anticipate and prepare for socioeconomic and environmental impacts that may be associated with successful applications of genetic engineering in international agriculture.

In addition to its support of new approaches to plant breeding, the Foundation continued in 1985 to explore a program of strengthening food and agricultural systems in sub-Saharan Africa, the region that currently faces the most acute food shortages. A third thrust of the program is the promotion of studies and meetings on critical issues affecting international agriculture.

Rice is the most important of all staple food crops and is primarily produced in developing countries. Approximately 30 percent of the food energy and 25 percent of the protein consumed in these countries is derived from rice, and its production generates income and employment for millions of small-scale farmers. Of the 145 million hectares of rice grown worldwide, more than 140 million are located in developing countries and account for over 97 percent of the total world output. During the 1970s, rice production increased 30 percent in Asia, with most of the gain resulting from increased yield in irrigated areas or under favorable rainfed conditions. Several countries that once suffered chronic food deficits are now reaching the point of self-sufficiency in rice production.

Much has been achieved, but much more remains to be done. To meet projected population demands, rice production will need to be increased 60 percent by the end of the century. In Asia, where the potential for agricultural expansion is limited, most of the increase must come from still-higher yields per crop or from extra crops grown each year. Despite considerable efforts, the difficult problems of growing rice on nonirrigated land have not been effectively addressed.

As mentioned above, recent advances in cellular and molecular biology are providing technologies for the genetic manipulation of plants that have the potential to revolutionize crop breeding. But because rice is not an important crop in Western countries, very limited sources of support are available for research aimed at rice improvement. The objective of the Foundation's program is to assure that the powerful new tools constituting genetic engineering are developed for use with rice and that they are effectively transferred to and used by rice improvement programs in developing countries.

Since December 1984, when the genetic engineering program concentrating on cereals was launched, the Trustees have authorized almost \$7 million in grants—\$3.1 million in 1984 and \$3.8 million in 1985. For the years ahead, the program will continue to focus on rice, emphasizing these areas of research:

- In developing countries, grants will be made to support research and training on development and use of tissue culture techniques, wide-cross hybridization, genetics, cytogenetics, and chromosome mapping in rice breeding programs.

- At advanced laboratories, the RF will support the development of effective tools for genetic engineering of rice. It will support research that will permit regeneration of plants from cells and protoplasts to facilitate gene transfer and control of gene expression, and to explore the biochemistry, physiology, and molecular genetics of important agronomic traits.

- The Foundation will support research on potential socioeconomic and environmental impact of genetically engineered rice varieties. Grants, fellowships, and operations will reflect the recognition that hunger and malnutrition must be addressed through a partnership of the biological and social sciences concerned with food and agricultural development.

The geographical scope of the new program reflects the internationalization of science in an interdependent world. Grants have been made to a number of U.S. institutions, but also to laboratories in Belgium, China, Korea, the Netherlands, the United Kingdom, West Germany, Colombia, and the Philippines.

The RF's rice genetic engineering program is a long-term, costly, and high-risk venture. The research supported is experimental; there is no way of predicting accurately the time and effort required to attain success. The Foundation will manage the process closely, using consultants for in-depth evaluation of specific research projects, and convening annual meetings at which laboratories receiving Foundation support will present results and review progress. Eventually, emphasis will shift from the development of new technologies to the use of these technologies for rice improvement.

GRANTS

- INTERNATIONAL CENTER OF TROPICAL AGRICULTURE, *Cali, Colombia, toward improving their laboratory facilities for use of rice anther culture technology.*
\$40,300
- CHINA NATIONAL RICE RESEARCH INSTITUTE, *Hangzhou, People's Republic of China, for use in developing and improving rice tissue culture techniques in cooperation with a rice varietal improvement program.*
\$200,000
- COLD SPRING HARBOR LABORATORY, *New York, New York, toward the costs of fellowships for scientists from developing countries taking CSHL summer courses in plant molecular biology, molecular cloning, or advanced cloning.*
\$16,000
- COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANIZATION, *Canberra, Australia, for use by the Division of Plant Industry for research on the molecular mechanisms responsible for heritable changes that occur when plants are regenerated from tissue culture.*
\$90,000
- CORNELL UNIVERSITY, *Ithaca, New York, for use by its Section of Biochemistry, Molecular and Cell Biology for research on the cloning, characterization, and transfer of genes in rice.*
\$403,000
- FUDAN UNIVERSITY, *Shanghai, China, to send a representative to participate in the First International Congress of Plant Molecular Biology.*
\$2,500
- HARVARD UNIVERSITY, *Cambridge, Massachusetts, for research on the genetic engineering of the photosynthetic apparatus of rice.*
\$105,000
- INTERNATIONAL MAIZE AND WHEAT IMPROVEMENT CENTER, *Texcoco, Mexico, toward establishing a consortium of donors to strengthen CIMMYT's wide-cross program on wheat.*
\$50,000

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| INTERNATIONAL RICE RESEARCH INSTITUTE, <i>Los Baños, Philippines:</i> <i>Toward costs of publishing and distributing proceedings of the First International Rice Genetics Symposium.</i> | \$36,853 |
| <i>Toward the development of somatic cell culture techniques useful in selecting stress tolerant rice lines and for mass-producing plantlets.</i> | \$15,000 |
| INTERNATIONAL SOCIETY FOR PLANT MOLECULAR BIOLOGY, <i>Athens, Georgia, toward the costs of the First International Congress of Plant Molecular Biology.</i> | \$15,000 |
| KANSAS STATE UNIVERSITY, <i>Manhattan, Kansas, research on the molecular biology of rice storage protein.</i> | \$38,000 |
| LOUISIANA STATE UNIVERSITY, <i>Baton Rouge, Louisiana, for research on the genetics of callus formation and plant regeneration in rice.</i> | \$48,000 |
| MAX PLANCK INSTITUTE FOR PLANT BREEDING, <i>Cologne, West Germany:</i> <i>Research on the cell and protoplast culture of rice.</i> | \$180,000 |
| <i>Research on electric field-mediated DNA transfer into cells of crop plants.</i> | \$48,000 |
| OFFICE OF RURAL DEVELOPMENT, <i>Suwon, Republic of Korea, in support of research on rice tissue culture and its application to rice varietal improvement at the Suwon, Honan, and Yeongnam experiment stations.</i> | \$62,500 |
| OHIO STATE UNIVERSITY RESEARCH FOUNDATION, <i>Columbus, Ohio, for research on gene expression during pollen development and pollen callus formation in rice.</i> | \$29,000 |
| PURDUE RESEARCH FOUNDATION, <i>West Lafayette, Indiana:</i> <i>Toward the costs of research on rice regeneration from callus, cells, and protoplasts.</i> | \$180,000 |
| <i>Toward the costs of research on rice regeneration from callus, cells, and protoplasts.</i> | \$175,200* |
| ROCKEFELLER UNIVERSITY, <i>New York, New York, for use by its Laboratory of Plant Molecular Biology for research on gene regulation in rice.</i> | \$773,000* |
| SALK INSTITUTE FOR BIOLOGICAL STUDIES, <i>San Diego, California, toward costs of research on the molecular characterization of rice plasma membranes.</i> | \$63,000 |
| STANFORD UNIVERSITY, <i>Stanford, California:</i> <i>Research on the genetic engineering of rice.</i> | \$131,250 |
| <i>Research on the genetic engineering of rice.</i> | \$131,250* |

*Appropriations voted by Board in 1981.

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| STATE UNIVERSITY OF GHENT, <i>Ghent, Belgium, for use by its Laboratory of Genetics for research on the genetic transformation of rice.</i> | \$617,000* |
| STATE UNIVERSITY OF LEIDEN, <i>Leiden, Netherlands, for its Department of Plant Molecular Biology, toward the costs of research on the genetic manipulation of rice.</i> | \$480,000* |
| UNIVERSITY OF CALIFORNIA, <i>Davis, California, for research on the development of apomixis and transposable genetic elements in rice.</i> | \$50,000 |
| UNIVERSITY OF FLORIDA, <i>Gainesville, Florida, for developing in vitro cellular methods for peanut improvement.</i> | \$28,100 |
| UNIVERSITY OF GEORGIA RESEARCH FOUNDATION, <i>Athens, Georgia, toward the costs of research on the molecular characterization of rice genes.</i> | \$49,815 |
| UNIVERSITY OF NOTTINGHAM, <i>Nottingham, United Kingdom, for research on the culture of rice protoplasts.</i> | \$40,000 |
| WASHINGTON STATE UNIVERSITY, <i>Pullman, Washington:</i> | |
| <i>Research on the molecular genetics of rice.</i> | \$80,000 |
| <i>Research on the molecular genetics of rice.</i> | \$80,000* |

**INCREASING
FOOD
PRODUCTION BY
STRENGTHENING
THE
INTERNATIONAL
AGRICULTURAL
RESEARCH
DEVELOPMENT
SYSTEM**

Based on the success of the Foundation's programs in Mexico, Colombia, India and elsewhere, the Rockefeller and Ford foundations established the International Rice Research Institute in 1961 and the International Maize and Wheat Improvement Center in 1963. The high-yielding rice and wheat varieties developed by these centers spread rapidly and the resulting "green revolution" led to substantial increases in food production in many developing countries. The two foundations also established the International Institute of Tropical Agriculture in Nigeria and the International Center of Tropical Agriculture in Colombia. The Consultative Group on International Agricultural Research (CGIAR) was established as a direct result of a 1969 Bellagio conference, convened by the foundations and attended by leaders of major international and national assistance agencies interested in aiding less-developed countries to improve their food production.

The CGIAR accepted responsibility for funding the initial four centers in 1972, and the system expanded rapidly as most of the original 15 donors increased their contributions and new donors joined. Today the Consultative Group is an association of 38 governments, international agencies, developmental organizations, and foundations that, in 1985, contributed \$181 million to 13 international agricultural research centers making up

*Appropriation voted by Board in 1984.

the CGIAR system. At these centers, more than 7,000 staff members, including some 600 senior scientists from 40 countries, work on the crops, livestock, and farming systems that yield three-quarters of the developing countries' total food supply. Their purpose is to improve the quantity and quality of food production and the standard of living in developing nations with substantial rural populations.

The Foundation's core support to the centers in the CGIAR system now totals \$45.5 million. In 1985, the Foundation made what it considers to be its final contributions for general support of selected centers: grants totaling \$600,000 were made to five centers primarily for activities pertinent to African food production. In the years ahead, the RF plans to support projects at the centers that bear directly on the interests of its Agricultural Sciences program, and at a level that allows it to maintain its membership in the Consultative Group.

The preservation and use of germplasm of major plants is of critical importance to plant breeders. Over several years, the Foundation has worked closely with the Chinese Academy of Agricultural Sciences in establishing a national center in Beijing to preserve domestic and imported crop germplasm, making available consultants from its staff as well as financial support totaling over \$1 million. In 1985, a final appropriation was made toward equipping the center and to initiate short-term training abroad for those who will form the cadre to operate the gene bank. When completed, the center will be a key component in a China-wide crop germplasm conservation and use system, one that will tend to minimize losses of irreplaceable genetic resources, and allow China to participate in international germplasm exchange.

The Foundation made a substantial contribution in 1985 to facilitate the merger of three outstanding private agencies—the International Agricultural Development Service, the Winrock International Livestock Research and Training Center, and the Agricultural Development Council—to form the Winrock International Institute for Agricultural Development.

IADS was founded in 1975 by the Foundation to assist *national* agricultural programs to develop and utilize appropriate agricultural technology and to achieve a more equitable balance of the benefits that can come from greater productivity.

The Agricultural Development Council was founded by John D. Rockefeller 3rd in 1953 to strengthen professional capacities to deal with the economic and human problems of agricultural and rural development, particularly in Asia. The primary focus of the Winrock organization, founded by Governor Winthrop Rockefeller, is to advance animal agriculture worldwide so as to improve human nutrition and responsible use of natural resources. The merger of these three organizations will create a premier, nongovernmental, nonprofit U.S. agency with the experience, knowledge, and skill to make significant contributions to agricultural development in the Third World.

CHINESE ACADEMY OF AGRICULTURAL SCIENCES, *Beijing, People's Republic of China, toward establishing a national plant genetic resources center.*

\$80,000

INTERNATIONAL CENTER FOR LIVING AQUATIC RESOURCES MANAGEMENT, *Manila, Philippines, toward the costs of its fund-raising program.*

\$50,000

INTERNATIONAL CROPS RESEARCH INSTITUTE FOR THE SEMI-ARID TROPICS, *Hyderabad, India, toward restricted core support for activities pertinent to African food production.*

\$100,000

INTERNATIONAL FERTILIZER DEVELOPMENT CENTER, *Muscle Shoals, Alabama, toward the costs of a project, "Direct Measurement of Denitrification Losses from Soil-Plant Systems."*

\$20,000

INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE, *Washington, D.C., toward restricted core support for activities pertinent to African food production.*

\$100,000

INTERNATIONAL INSTITUTE OF TROPICAL AGRICULTURE, *Ibadan, Nigeria, toward restricted core support for research on root and tuber crops.*

\$200,000

INTERNATIONAL MAIZE AND WHEAT IMPROVEMENT CENTER, *Texcoco, Mexico, toward restricted core support for activities pertinent to African food production.*

\$100,000

INTERNATIONAL RICE RESEARCH INSTITUTE, *Los Baños, Philippines, toward restricted core support for operations and training at the rice germplasm facility, particularly in reference to assisting the Chinese Academy of Agricultural Sciences with establishment of a new germplasm facility.*

\$100,000

INTERNATIONAL TRYPANOTOLERANCE CENTRE, *Serekunda, The Gambia:*

Toward a study of the natural immunity to trypanosomes in cattle in Africa.

\$4,500

In support of fund-raising for research.

\$35,000

PENNSYLVANIA STATE UNIVERSITY, *University Park, Pennsylvania, toward costs of research on vector-specific transmission of barley yellow dwarf virus.*

\$33,000

WINROCK INTERNATIONAL INSTITUTE FOR AGRICULTURAL DEVELOPMENT, *Morrilton, Arkansas, to facilitate the merger of three existing agencies—the International Agricultural Development Service, the Winrock International Livestock Research and Training Center, and the Agricultural Development Council—to form the Winrock International Institute for Agricultural Development, devoted to agricultural development in the Third World.*

\$2,000,000

**STRENGTHENING
AFRICAN FOOD
AND
AGRICULTURAL
SYSTEMS**

The sub-Saharan countries of Africa form the region that currently faces the most acute food shortages. The continuing agricultural crisis in Africa is of such deep concern to countries, institutions, and individuals that foreign assistance is running far ahead of what we know of its causes and solutions.

What we do know is that Africa's poor agricultural performance is caused by a number of deep-rooted and interacting political, social, technical, and structural problems rather than by any single factor, such as ecology, or adverse terms of trade. In 1985, the Foundation, which has a long history in Africa, continued to explore how it could contribute significantly to African agricultural and rural development—given the large number of assistance agencies already focusing on Africa.

The Joint Committee on African Studies, established by the American Council of Learned Societies and the Social Science Research Council, has developed a framework for U.S. and African investigators with varying perspectives to develop new concepts and methods for analyzing the social and historical processes that affect the performance of African agriculture. There is, however, an organizing principle to this interdisciplinary approach: the focus is on farm households whose members, men and women, make the final decisions on the allocation of resources and the assignment of work. Data from these households will be placed in the context of broader economic, social, and political realities. In making a grant to the Social Science Research Council, the Foundation hopes that this relatively new approach will complement and link advances within existing research traditions.

The West Africa Rice Development Association (WARDA), a CGIAR-funded Center, was established in 1971 by a number of West African countries with the goal of gaining self-sufficiency in rice production. Progress has remained disappointingly slow in large part because of management, organizational, and financial difficulties. WARDA has now restructured both its research program and administration. A senior RF staff member serves as interim director for research and development. Acting on its conviction that WARDA still has potential value as an indigenous regional effort to deal with African food problems, the Foundation in 1985 continued to contribute to its research and development activities.

A 1985 grant of unusual interest because it enlists social scientists in ongoing laboratory work is an appropriation voted this year for the International Laboratory for Research on Animal Diseases (ILRAD) in Nairobi to assess the social, economic, and environmental consequences

potentially inherent in the development of vaccines for African livestock diseases.

Because of Africa's great diversity, such assessments are difficult to make. ILRAD plans to begin by examining in detail the experiences of a number of African countries with an existing vaccine against rinderpest in order to obtain predictive models for the potential impact of new vaccines under development at ILRAD. This should help in designing optimal methods for their distribution and application when available.

GRANTS

ENTOMOLOGICAL SOCIETY OF AMERICA, *Washington, D.C., toward publication costs of a book, Ixodid Ticks of Eastern Africa.*

\$12,412

INTERNATIONAL CENTRE OF INSECT PHYSIOLOGY AND ECOLOGY, *Nairobi, Kenya:*

For a social scientist to be assigned to the Rusinga Island Livestock Ticks Research Programme.

\$22,000

For providing office space and related services to a Foundation field staff member.

\$15,000

INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE, *Washington, D.C., for research on changes in coarse grain production in West Africa.*

\$6,000

INTERNATIONAL IRRIGATION MANAGEMENT INSTITUTE, *Kandy, Sri Lanka, toward core support for exploratory missions to Africa.*

\$50,000

INTERNATIONAL LABORATORY FOR RESEARCH ON ANIMAL DISEASES, *Nairobi, Kenya, toward costs of initiating a project to assess the socioeconomic and environmental factors relevant to the development and application of vaccines for livestock diseases in Africa.*

\$502,600

INTERNATIONAL SERVICE FOR NATIONAL AGRICULTURAL RESEARCH, *The Hague, Netherlands, toward the costs of consultants to develop strategy for better cooperation and integration of research activities by CGIAR institutes in support of African agriculture.*

\$5,000

SOCIAL SCIENCE RESEARCH COUNCIL, *New York, New York:*

Toward costs of a research and training project on the African agricultural crisis.

\$150,000

For exploratory activities designed to strengthen its project on African agriculture.

\$50,000

WEST AFRICA RICE DEVELOPMENT ASSOCIATION, *Monrovia, Liberia, for assignment of a Foundation staff member as director of its Research and Development Department.*

\$250,000

WINROCK INTERNATIONAL INSTITUTE FOR AGRICULTURAL DEVELOPMENT, *Morrilton, Arkansas, to appoint a sociologist to a team evaluating the potential for dual-purpose goats in western Kenya.*

\$35,000

CRITICAL ISSUES

The successes of the laboratory and experimental plot cannot be translated into higher yields on the holdings of farm families without close collaboration between agricultural scientists and social scientists. But such collaborative work is no easier to bring about in the agricultural sciences than it is in any other systematic scientific endeavor the final aim of which is to improve the lives of millions of individuals living in widely varying circumstances.

In 1974, the Foundation launched a postdoctoral fellowship program aimed at forging closer bonds between young North American social scientists and institutions with international agricultural programs. The program was prompted by concern over the lack of a future generation of well-prepared social science scholars with field experience in international agriculture.

To date, 43 individual awards have been made at a cost of \$2.4 million. Of the 30 fellows who have completed their overseas assignments, 27 are currently employed in international development work. An outside evaluation of their work shows that these young men and women have earned widespread recognition for furthering the application of technology, and, in particular, in strengthening the often fragile linkages between research centers and country efforts. To put it another way, they have succeeded remarkably well in translating their own social perspectives into practical biological terms.

Because the demand for their services far outstrips the number of fellowships available, the RF in 1985 appropriated funds for an expanded program, one that also incorporates regional conferences and seminars to allow the fellows to share their experiences. (See *Fellowships* section for 1985 awards.)

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GRANTS

KOSCIUSZKO FOUNDATION, *New York, New York, for subscription costs to Western agricultural scientific journals for use by the Central Agricultural Library, Warsaw, Poland.*

\$13,580

OREGON STATE UNIVERSITY, *Corvallis, Oregon, toward travel costs of Third World participants in the Sixth International Symposium on Nitrogen Fixation.*

\$5,240

PHILADELPHIA SOCIETY FOR PROMOTING AGRICULTURE,
*Philadelphia, Pennsylvania, for bringing two representatives of the Chinese
Academy of Agricultural Sciences to speak at the Bicentennial Forum.*

\$6,000

UNIVERSITY OF FLORIDA, *Gainesville, Florida, for a conference organized
by the Women in Agriculture program entitled "Gender Issues in Farming Systems
Research and Extension."*

\$8,000

UNIVERSITY OF GEORGIA RESEARCH FOUNDATION, *Athens,
Georgia, to enable members of the university's School of Forest Resources to travel to
Surinam to present the results of their wildlife management research study.*

\$2,400

UNIVERSITY OF MINNESOTA, *St. Paul, Minnesota, for use by its
Department of Agricultural and Applied Economics in a study of the Cuban
agricultural research system.*

\$12,900



The fundamental purposes of the Arts and Humanities program are to foster creative work by artists, scholars, and teachers, and to channel that work into the broader society. Toward the first purpose, the Arts and Humanities program places emphasis on the identification and encouragement of individuals of talent, often through awards and fellowships. Today, such programs of support are provided for humanists from many disciplines, for high school teachers, and for artists in dance, theater, music, and the visual arts. Simultaneously, the program seeks to strengthen institutions that help make new work possible and accessible: institutions that disseminate research, present performances, display and interpret artistic and scholarly work, or aim in other concrete ways to promote understanding through the arts and humanities.

Interpretations and ideas offered by the best artists and scholars are the basis for a culture's vitality. Their work is central to an understanding of history and society, an understanding that can inform and carry forward the work of policymakers, scientists, and educators.

Toward these ends, the Foundation has defined grantmaking in the arts and humanities in four often interrelated components:

- Support for the creative person;
- Strengthening secondary school education through the arts and humanities;
- Enhancing the American public's understanding of international affairs through the arts and humanities;
- Forging connections between artists, humanists, and society.

**SUPPORT FOR
THE CREATIVE
PERSON**

The history of the Foundation's activity in the arts is in major respects a history of support to individual writers, composers, choreographers, and to media and visual artists. Although funding for the arts has grown enormously over the last 20 years, many funding agencies tend to focus on institutions and institutional problems and not on stimulating new work by individual artists. The Foundation has therefore developed a number of national programs, often administered by outside organizations, to address the needs of artists. Most of these programs enable individuals to pursue creative work through residencies, or similar arrangements, with presenting institutions that can assure audiences for works created. All of the programs are administered with the aid of national panels of experts who assist in the selection of the awards.

Several such programs of support for individual artists have been developed over the years. The Awards in the Visual Arts (AVA) program, sponsored by the Southeastern Center for Contemporary Art in Winston-Salem, brings jury-selected regional artists national recognition through touring exhibitions of their work. In 1985, the fourth competition honored 10 artists, who were exhibited at the Albright-Knox Gallery in Buffalo and

the Institute of Contemporary Art in Philadelphia, as well as in Winston-Salem. The Foundation's Fellowships for American Playwrights program marked its 15th anniversary this year by celebrating the 107 writers who have received awards since 1970. The program provides stipends and residence at nonprofit theaters to eight mid-career playwrights, as well as making smaller awards to regional theaters for work with regional playwrights. The International American Music Competition at Carnegie Hall continues to focus international attention on works by American composers through awards, concerts, and career promotion for outstanding performers. Competitions, judged by an international panel, are held in rotation for pianists, singers, and violinists.

Another 1985 grant helped OPERA America maintain momentum in its new program to enable American artists to develop works for the operatic stage. Another allowed the National Choreography Project, begun on a pilot basis in 1983 with funding from the Foundation, the National Endowment for the Arts, and the Exxon Corporation, to provide awards to 11 talented choreographers for residencies in dance companies across the country. The project is creating fresh connections between companies and choreographers, and enriching the dance repertory for both ballet and modern dance companies.

Collaboration among artists has become an important aspect of contemporary creativity; in 1985, the Foundation initiated a pilot program for interdisciplinary artists designed to help regional arts organizations foster such partnerships. The Interdisciplinary Artists Program has been undertaken in collaboration with the National Endowment for the Arts.

Smaller grants to Stanford University's Center for Computer Research in Music and Acoustics, California Institute of the Arts, the Exploratorium, and MIT's Center for Advanced Visual Studies are supporting artist-in-residence programs that allow artists and composers to explore the creative opportunities afforded by recent advances in technology. Young filmmakers were given opportunities to gain on-the-job experience through Foundation support for an internship program at Learning-in-Focus, an organization devoted to developing feature-length films for television.

The Foundation's central mechanism for supporting humanities scholars in many disciplines continues to be its Humanities Fellowship program, inaugurated in 1974. These awards have always encouraged the study of social and cultural issues affecting contemporary society, and have been instrumental in legitimizing such new areas of inquiry as labor history, ethnic and women's studies, popular culture, biomedical ethics, and human rights. In 1983, to help promote the incorporation of these specialities into established scholarly institutions, the Foundation began an experimental program offering half of its fellowship funds—previously all reserved for individual awards—to selected institutions so that they could themselves choose scholars for periods of research and residency. This residency concept, permitting fellows of different disciplines to work together and carry ideas across conventional boundaries, has proved highly successful. Now, under a 1985 grant, all Humanities Fellowships are being

awarded through the residency model. Among the 15 institutions currently receiving grants are the Schomburg Center for Research in Black Culture, the Institute for Research on Women at Rutgers University, and the Theatre Communications Group.

Funding was also provided to the National Humanities Center, the country's leading institution devoted exclusively to research in the humanities, in support of Rockefeller Foundation Humanities Fellowships for Junior Scholars.

**AWARDS
AND
FELLOWSHIPS
FOR ARTISTS
AND SCHOLARS**

CARNEGIE HALL SOCIETY, *New York, New York*, to continue its *International American Music Competition aimed at creating greater awareness of the music of American composers. Winners of the 1985 competition for pianists were Marc-Andre Hamelin, Steven Mayer, and Alan Graville.*

\$300,000*

DANCE WORKS, *New York, New York*, to continue its *National Choreography Project under which in 1985 these companies chose the following choreographers: Boston Ballet (Mark Morris); CoDanceCo, New York (Eiko and Koma); Dance Theatre of Harlem (Garth Fagan); Dayton Contemporary Dance Company (Ulysses Dove); Hartford Ballet (Robby Barnett and Jonathan Wolken); North Carolina Dance Theatre (Charles Moulton); Ohio Ballet (Molissa Fenley); Philadanco, Pennsylvania (Milton Myers), and Pittsburgh Dance Theatre (Ohad Naharin).*

\$150,000*

MEET THE COMPOSER, *New York, New York*, for its program to place composers in residence with symphony orchestras. In 1985, these composers worked with the musical directors of the following orchestras: Stephen Albert (*Seattle Symphony*); Jacob Druckman (*New York Philharmonic*); John Harbison (*Los Angeles Philharmonic*); Elizabeth Larsen and Stephen Paulus (*Minnesota Orchestra*); Tobias Picker (*Houston Symphony*); Christopher Rouse (*Indianapolis Symphony*); Alvin Singleton (*Atlanta Symphony*); Joan Tower (*St. Louis Symphony*); Charles Wuorinen (*San Francisco Symphony*).

\$350,000*

OPERA AMERICA, *Washington, D.C.*, to continue to develop its innovative program to bring together American artists to collaborate on new works for the operatic stage. During the past year, opera companies such as the *Four Corners Opera (Durango, Colorado)*, *Houston Grand Opera*, *Lyric Opera of Chicago*, *Minnesota Opera*, *Opera de Camera (San Juan)*, *Pennsylvania Opera Theater*, and the *Texas Opera Theater* have brought together composers, librettists, visual artists, playwrights, and other creative people to discuss joint development of operatic works.

\$200,000

*Funded under appropriations voted by the Board of Trustees in 1983 and/or 1984.

THE ROCKEFELLER FOUNDATION, New York, New York:

To allow seven host institutions to select for residencies Rockefeller Foundation Fellows in the Humanities, men and women whose research promotes understanding of contemporary social and cultural issues. In 1985, the following institutions participated in the program: the Afro-American Studies Program/ Rites and Reason, Brown University; the Francis C. Wood Institute for the History of Medicine, College of Physicians of Philadelphia; Women's Studies in Religion Program, Harvard Divinity School; Program in Atlantic History, Culture and Society, the Johns Hopkins University;* the Schomburg Center for Research in Black Culture, New York Public Library; D'Arcy McNickle Center for the History of the American Indian, the Newberry Library; the Poetry Center, 92nd Street Young Men's and Young Women's Hebrew Association, New York City;* Institute for Research on Women, the University of New Jersey-Rutgers; the National Museum of African Art and the Center for Asian Art, the Smithsonian Institution;* Theatre Communications Group, New York City; Center for Philosophy and Public Policy, University of Maryland;* Wisconsin Center for Film and Theater Research, University of Wisconsin-Madison; Walker Art Center, Minneapolis;* Walter P. Reuther Library of Labor and Urban Affairs, Wayne State University;* and the Woodrow Wilson International Center for Scholars, Washington, D.C.*

\$1,200,000

For a new Interdisciplinary Artists Program aimed at encouraging regional artists to undertake collaborative projects of an interdisciplinary nature. In 1985, the following organizations were chosen to identify artists in their regions and facilitate their collaboration: the Contemporary Arts Center (New Orleans); Diverse Works (Houston); 80 Langton Street (San Francisco); Los Angeles Contemporary Exhibitions; Painted Bride Art Center (Philadelphia); Real Art Ways (Hartford), and The Center for Contemporary Art of Santa Fe.

\$110,000

For continuation of a program of Fellowships for American Playwrights. Awards are made to mid-career playwrights who then select theaters for residencies, and to regional theaters to select for residencies regional playwrights. The 1985 fellows were: Neal Bell, Lee Breuer, Rosalyn Drexler, Donald Freed, Paul Carter Harrison, Romulus Linney, Terrence McNally, and Wakako Yamauchi. Regional theaters receiving awards were the Crossroads Theatre Company (New Brunswick, New Jersey); Denver Center Theatre Company; the Ensemble Studio Theatre (New York City); Pan Asian Repertory Theatre (New York City); Portland Stage Company (Portland, Maine); Philadelphia Festival Theatre for New Plays; South Coast Repertory (Costa Mesa, California), and Victory Gardens Theater (Chicago).

\$194,000

*Funded under appropriations voted by the Board of Trustees in 1983 and/or 1984.

SOUTHEASTERN CENTER FOR CONTEMPORARY ART, *Winston-Salem, North Carolina*, for its Awards in the Visual Arts program, through which nominators in all 50 states nominate regional artists who are brought to national attention through prizes, purchase awards, and touring exhibitions of their works. Artists recognized in 1985 were: Bert Brouwer (Indiana); John Buck (Montana); JoAnne Carson (Illinois); Peter Charles (Washington, D.C.); Don Cooper (Georgia); James Croak (California); Sidney Goodman (Pennsylvania); Jon Imber (Massachusetts); Luis Jiminez (New Mexico), and Ana Mendieta (New York).

\$300,000

In 1985, the Foundation modified the mechanism for awarding its Humanities Fellowships, through which the Foundation over the past decade has awarded more than \$8 million to some 370 scholars. Now fellows are selected by host institutions under the residency program described above. But during 1985, the following scholars held Humanities Fellowships granted in 1984 under the program for individuals: Deirdre Bair, University of Pennsylvania; Allan M. Brandt, Harvard Medical School; Allan F. Gibbard, University of Michigan; Martin Gilbert, Oxford University; Michael Wesley Harris, University of Tennessee; Robert L. Herbert, Yale University; Penelope D. Johnson, New York University; Evelyn Fox Keller, Northeastern University; Steven E.G. Kemper, Bates College; Thomas Kessner, Graduate Center of the City University of New York; Linda O. McMurray, North Carolina State University; Phyllis Mack, Rutgers University; Judith Marcus, New School for Social Research; Nancy K. Miller, Barnard College; Lion Murard and Patrick Zylberman, editors, *URBI*, a journal of arts, history, and ethnology of towns, Paris, France; Karen Offen, Center for Research on Women, Stanford University; Donald K. Swearer, Swarthmore College; Margaret Susan Thompson, Syracuse University; Judith Tick, Conservatory of Music, Brooklyn College; Judith R. Walkowitz, Rutgers University.

GRANTS

CALIFORNIA INSTITUTE OF THE ARTS, *Valencia, California*, toward the costs of a technologically based art piece entitled *HUNGER(S)*.

\$25,000

EXPLORATORIUM, *San Francisco, California*, toward the costs of an artists-in-residence program.

\$25,000

LEARNING IN FOCUS, *New York, New York*, to develop a series of feature-length films for television and to incorporate training opportunities for younger artists at the film sites.

\$250,000

L.A. THEATRE WORKS, *Los Angeles, California, toward the Padua Hills Writers' Workshop.*

\$7,500

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, *Cambridge, Massachusetts, for a program of artist-in-residence fellowships at its Center for Advanced Visual Studies.*

\$25,000

NATIONAL HUMANITIES CENTER, *Research Triangle Park, North Carolina, in support of Rockefeller Foundation Humanities Fellowships for Junior Scholars.*

\$1,000,000

PAINTED BRIDE ART CENTER, *Philadelphia, Pennsylvania, for costs associated with the development and presentation of a new work by the Terry Beck Troupe.*

\$10,000

PEN AMERICAN CENTER, *New York, New York, for use by the Folger Shakespeare Library toward the costs of the PEN/Faulkner Award for Fiction.*

\$15,000

STANFORD UNIVERSITY, *Stanford, California, for an artists-in-residence program at its Center for Computer Research in Music and Acoustics.*

\$36,000

UNIVERSITY OF CALIFORNIA, *Irvine, California, toward the costs of its Objective Drama program.*

\$50,000

**STRENGTHENING
SECONDARY
SCHOOL
EDUCATION
THROUGH THE
ARTS AND
HUMANITIES**

Not since the Sputnik era has the urgency of school reform been as widely accepted as it is today. In the wake of numerous reports on the state of the nation's schools, a majority of states and many institutions have implemented proposals for improving educational programs. Sharing the national sense of urgency and opportunity, the Foundation has funded programs focused very particularly on teachers as creative individuals who directly can effect improvement not only in their classrooms, but also in their systems and in their disciplines. All of the schools programs funded are intended to further the status, the professional expertise, and the pride of high school teachers in the arts and humanities.

The Foundation's major strategy in addressing the needs of the schools is the creation of collaborative, community-wide programs in a set of American cities to help teachers of literature, language, social studies, and the arts. Present plans call for 14 school systems to be incorporated into this informal network of collaborative programs by 1989, each of them receiving at the outset annual Foundation support for three years. During that time, they are expected to develop activities with teachers, find local leadership, and raise additional funds. By 1990, it is hoped that the programs will have influenced their communities to sustain such activity without Foundation involvement. The programs differ from city to city

and from system to system, depending on the needs, the demographics, and the structure at each location. But all of the programs share three essential goals: (1) to feature arts and humanities as essential priorities of the school improvement movement, parallel in importance to science, mathematics, and technology; (2) to mobilize private support for the public schools; and (3) to focus directly on teachers as primary agents for school improvement, by providing them with professional training, opportunities for classroom experimentation, and other incentives.

The first and, to date, the most embracing of the secondary school humanities programs is in Philadelphia. Since 1983, PATHS (the Philadelphia Alliance for Teaching Humanities in the Schools) has mounted a set of successful projects across the Philadelphia school system, aided by the President's Committee on the Arts and Humanities and nearby universities, funded by corporations and foundations, supported by the teachers' union, and led by the superintendent of schools. Central among these initiatives are a systemwide effort to strengthen writing across the curriculum, intensive summer institutes offering teachers advanced study in a variety of humanities disciplines, minigrants awarded to teachers for innovative classroom projects, and colloquia through which teachers and university faculty members explore together special problems in the humanities.

Over the past two years, the Foundation has generated and joined similar efforts in six other cities:

In Pittsburgh, where a sophisticated education program, under the rubric of "Critical Thinking," focuses on teacher training and on enrichment of subject areas in the arts and humanities.

In Atlanta, where programs coordinated by the National Humanities Faculty (based at Emory University) are adding not only a dimension of professionalism for humanities public school teachers and providing them with incentives for individual achievement and imagination, but are also stimulating community and corporate financial support.

In Seattle, where Foundation funding enables school district teachers to restructure the system's ninth- and tenth-grade world history course, and to strengthen the international component of arts, English, and foreign language courses.

In St. Louis, where, under the aegis of the local International Education Consortium, substantial progress is being made toward improving the international and intercultural teaching of high school courses in literature, art, history, philosophy, drama, and language.

In St. Paul, where the school district has initiated a comprehensive teacher-training program to upgrade writing instruction in the high schools in cooperation with COMPAS, an organization widely recognized for its work in placing practicing writers in short-term residencies in elementary and secondary schools.

In Los Angeles, where the Los Angeles Educational Partnership has joined

forces with school district officials in a program concentrated on improving arts and humanities teaching in the high schools, better use of community and university resources, and the development of resource centers for arts and humanities teachers.

In all these instances, teachers would be in a position to devise more effective instructional strategies if new methods were available for identifying arts and humanities ability in their students, and for measuring how students change as they learn. The development and field-testing of such techniques is the specific aim of a recent Foundation grant supporting collaboration between an education research organization, Project Zero at Harvard University, and the country's leading producer of educational testing programs, the Educational Testing Service.

The Foundation has also sought to encourage outreach to high school teachers by scholarly societies and research centers such as the Organization of American Historians, the Center for Renaissance and Baroque Studies at the University of Maryland, and the National Humanities Center. And because its reporting has contributed to the school reform movement by providing information to educators and policymakers nationwide, the Foundation provided a grant to help the publication *Education Week* achieve financial stability.

GRANTS

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| ATLANTA PARTNERSHIP FOR BUSINESS AND EDUCATION, <i>Atlanta, Georgia, for a program of in-service teacher-training activities in the city's secondary schools.</i> | \$125,000 |
| COMPAS, <i>St. Paul, Minnesota, to initiate a program to improve writing instruction in the secondary schools.</i> | \$64,000 |
| EDITORIAL PROJECTS IN EDUCATION, <i>Washington, D.C., in support of its publication Education Week (jointly sponsored by Equal Opportunity and Special Interests and Explorations for a total of \$100,000).</i> | \$25,000 |
| FIVE COLLEGES, <i>Amherst, Massachusetts, toward a school-college network in the humanities.</i> | \$15,000 |
| HARVARD UNIVERSITY, <i>Cambridge, Massachusetts, for use by its Project Zero, and to the EDUCATIONAL TESTING SERVICE, Princeton, New Jersey, toward the costs of collaboratively developing a research plan permitting field-testing of new techniques for assessing learning in the arts and humanities.</i> | \$150,000 |
| JAZZMOBILE, <i>New York, New York, toward the costs of an artists-in-residence program and workshops for high school teachers at historically black colleges.</i> | \$43,400 |

LOS ANGELES EDUCATIONAL PARTNERSHIP, *Los Angeles, California, to foster renewal of teachers through interdisciplinary activity in the arts and humanities.*

\$150,000

NATIONAL HUMANITIES CENTER, *Research Triangle Park, North Carolina, toward the costs of two institutes for teachers of history and literature.*

\$30,000

NEW ENGLAND ASSOCIATION OF SCHOOLS AND COLLEGES, *Winchester, Massachusetts, toward a symposium, "Education and the Welfare of the Republic."*

\$10,000

NEW YORK UNIVERSITY, *New York, New York, to further development of a program of resource sharing in the humanities with a group of New York City high schools.*

\$25,000

ORGANIZATION OF AMERICAN HISTORIANS, *Bloomington, Indiana, toward production of a magazine for secondary school history and social studies teachers.*

\$42,500

PHILADELPHIA ALLIANCE FOR TEACHING HUMANITIES IN THE SCHOOLS, *Philadelphia, Pennsylvania:*

Toward the cost of its educational programs.

\$150,000

For a meeting on urban humanities programs in the schools.

\$30,000

PITTSBURGH PUBLIC SCHOOL DISTRICT, *Pittsburgh, Pennsylvania, in support of a program of teacher training in the arts and humanities.*

\$125,000

UNIVERSITY OF MARYLAND, *College Park, Maryland, to help support an institute on Shakespeare for secondary school English teachers.*

\$25,000

UNIVERSITY OF SOUTH CAROLINA, *Columbia, South Carolina, for the costs of teacher training workshops and national distribution associated with the telecourse "The American South Comes of Age."*

\$30,000

ENHANCING THE
AMERICAN
PUBLIC'S
UNDERSTANDING
OF INTER-
NATIONAL
AFFAIRS
THROUGH THE
ARTS AND
HUMANITIES

In a world increasingly characterized by pluralism, interdependence, and rapid change, Americans cannot afford to be uninformed about societies beyond their own borders, or about ethnic cultures substantially influencing mainstream America. The arts and humanities have an important role to play in improving our awareness of nations other than our own, and in promoting mutual comprehension and respect across the cultures of the world. The Foundation has chosen to focus its efforts in this important area on teachers of foreign language and international studies at the precollegiate level, and on the presentation by arts and cultural organizations of creative work that is aimed at cross-cultural understanding.

A major initiative launched in 1984 to focus attention on and to reward traditionally undervalued foreign language teachers was continued this year. The Rockefeller Foundation Fellowships for Foreign Language Teachers in the High Schools are awarded to 100 high school teachers annually through a national, competitive program administered by the Academic Alliances project at the University of Pennsylvania. As Rockefeller fellows, the teachers are funded to spend a summer of study or travel abroad. The awards allow them to pursue professional development, and to increase their service to their schools and communities.

Several of the collaborative, community-wide programs undertaken to improve secondary education, for example in Seattle and St. Louis, are specifically designed to better prepare teachers for the international curricula that are beginning to be mandated by state and city school systems, as well as to promote better understanding of the cross-cultural forces within American society. The Foundation expects that an increasing number of the schools initiatives funded over the next several years will be international and cross-cultural in focus. In addition to these major projects, the Foundation has provided modest support to scholarly and cultural organizations concerned with cross-cultural programming, such as the Association for Asian Studies, and the Children's Museum in Boston, for their work with teachers.

Artistic productions and performances can be a window to another culture's distinctive ways of seeing and thinking, and an exchange of ideas across cultures can be a great stimulus to creativity. The Foundation has therefore sought both to support cultural organizations that present the art forms of another culture to the American public and to encourage the exchange of works by artists in this country and abroad. In June 1985, a meeting was convened at the Foundation's conference center in Bellagio, Italy, to discuss the support and presentation of contemporary performing arts in Europe and the United States. Participants recognized that over the past 20 years, an exciting period of creative experimentation in the arts has been taking place in this country and abroad, but that much of this work has not toured widely enough to enable it to reach both national and international audiences. One of the recommendations of the conference was that the Foundation seek ways to encourage international exchange of works by contemporary artists. Promising initiatives to facilitate such cultural exchange that have been funded include Dance Theater Workshop's "Suitcase Fund" and the International Touring Network being established by the 55th Street Dance Theatre Foundation.

Other 1985 grants helped writers from developing countries participate in the 48th congress of the international writers' organization PEN (held in New York), and enabled the American Council of Learned Societies to set

up a data base on foreign scholars, writers, and artists visiting the United States—for the benefit of both the visitors and academic groups seeking contact with them. In concert with the Ford Foundation and several other American and European foundations, the Foundation helped establish a program of support for publishing and translating the writings of Central European émigrés. This program will support translation between the Central European languages and from those languages into English and Western European languages, making accessible works of literary interest and educational value and fostering a healthy exchange of ideas. More modest funding has helped Readers International in 1985 to translate into English and distribute works of contemporary non-Western literature.

Initiating an important opportunity to promote cross-cultural understanding within the United States, the Foundation this year made a substantial grant to the Houston Museum of Fine Arts, which is organizing the first national exhibition of contemporary Hispanic-American art. More than 40 Hispanic-American artists—primarily first- and second-generation immigrants from Puerto Rico, Cuba, Mexico, and Central and South America—will be represented through 320 paintings, prints, and sculptures. Following its opening in Houston in May 1987, the show is scheduled to travel nationally to other major cities, including Washington, D.C., and San Francisco. This undertaking should not only acquaint a broad public with the cultural expressions of Hispanic Americans but also remedy the long neglect of these artists by the U.S. art establishment.

Other efforts to broaden international awareness through the arts in 1985 included support for the Festival Latino of the New York Shakespeare Festival, and a program at the University of New Mexico to commission, exhibit, and interpret a series of lithographs by prominent Mexican artists.

GRANTS

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| AMERICAN COUNCIL OF LEARNED SOCIETIES, <i>New York, New York, to help establish a Visiting Scholars Data Base.</i> | \$26,000 |
| AMERICAN PUBLIC RADIO, <i>St. Paul, Minnesota, for its activities designed to heighten awareness of music by non-U.S. composers in this country and by American composers abroad.</i> | \$19,250 |
| ARTS INTERNATIONAL, <i>Washington, D.C., to provide technical assistance to artists and arts organizations for international cultural exchange.</i> | \$25,000 |
| ASSOCIATION FOR ASIAN STUDIES, <i>Ann Arbor, Michigan, toward the costs of an institute on Asia for secondary school teachers.</i> | \$17,500 |

CHILDREN'S MUSEUM, *Boston, Massachusetts, toward a task force on cross-cultural programming.*

\$15,000

DANCE THEATER WORKSHOP, *New York, New York, toward the establishment of the Suitcase Fund to promote international exchange of artists.*

\$25,000

EUROPEAN COOPERATION FUND, *Brussels, Belgium, toward the costs of establishing a program of support for publishing and translating Central European writing (jointly sponsored with International Relations and Special Interests and Explorations for a total of \$200,000).*

\$25,000

55th STREET DANCE THEATER FOUNDATION, *New York, New York, toward the establishment of the International Touring Network to promote international exchange of artists.*

\$30,000

GLOBAL PERSPECTIVES IN EDUCATION, *New York, New York, toward a project entitled "Conceptualizing Global Education: Tools and Strategies for American Elementary and Secondary Schools."*

\$25,000

HARVARD UNIVERSITY, *Cambridge, Massachusetts, for a conference entitled "Conflicting Images: India and America in the 1980's" (jointly sponsored with the International Relations program for a total of \$25,000).*

\$15,000

INTERNATIONAL EDUCATION CONSORTIUM, *St. Louis, Missouri, in support of a program of teacher training to strengthen international education in the St. Louis secondary schools.*

\$85,000

LONG BOW GROUP, *Philadelphia, Pennsylvania, toward the costs of a documentary film on health care in rural China (jointly sponsored with Special Interests and Explorations for a total of \$25,000).*

\$15,000

MUSEUM OF FINE ARTS, *Houston, Texas, toward the costs of organizing the first national exhibition of contemporary Hispanic-American art.*

\$150,000

NEW YORK SHAKESPEARE FESTIVAL, *New York, New York, to help support the costs of the fifth Festival Latino.*

\$35,000

PEN AMERICAN CENTER, *New York, New York, to enable writers from developing countries to participate in the 48th International Congress of PEN, in New York.*

\$25,000

READERS INTERNATIONAL, *New York, New York, toward the costs of translating into English and expanding the distribution of selected contemporary non-Western literature.*

\$10,000

SEATTLE SCHOOL DISTRICT NO. 1, *Seattle, Washington, to continue a program of teacher training and curriculum revision in world history and cultures.*

\$100,000

UNIVERSITY OF NEW MEXICO, *Albuquerque, New Mexico, for use by the Tamarind Institute and the Latin American Studies Institute, toward the costs of a lithography project and exhibition by nine Mexican artists.*

\$17,500

UNIVERSITY OF PENNSYLVANIA, *Philadelphia, Pennsylvania, in support of a program of Rockefeller Foundation Fellowships for High School Foreign Language Teachers, to be administered by the university's Academic Alliances Project.*

\$500,000

FORGING
CONNECTIONS
BETWEEN
ARTISTS,
HUMANISTS,
AND SOCIETY

The work of artists and humanists can reveal, challenge, fortify, or change a society's values. But that work of discovery and definition is hampered when creators and thinkers are isolated from other societal sources of thought and action. A goal of all the Foundation's grantmaking in the arts and humanities is to strengthen the connections between individual artists or humanists and the institutions that may influence and be influenced by their work. Projects funded under this particular component of the Foundation's program often take several forms: strengthening arts organizations through linkages with business systems and expertise such as budgeting and planning; channeling creative work to new and wider audiences; and encouraging humanists to apply their scholarship to public outreach and to problems confronting contemporary society.

Of concern to the Foundation are the changing uses of technology by humanities scholars, and the growing need they have for information about technology. The increasing ease of storing, recovering, and manipulating data may well be altering the nature of scholarship itself. A current grant continues support for the Office of Scholarly Communication and Technology that the American Council of Learned Societies has established to help scholars use technology creatively.

New York City's Lincoln Center for the Performing Arts has yet to develop a sustained theatrical presence. Because of the importance of presenting drama along with music and dance in this central and symbolic national space, the Foundation has made substantial funding available for the new Lincoln Center Theater. This funding continues the Foundation's long history of support for Lincoln Center, as a major public resource in the arts. The funding also acknowledges the commitment the Lincoln Center Theater will make to American theater, and to living American writers, in this premier presenting site.

One of this country's leading cultural institutions, the Brooklyn Academy of Music (BAM), New York, has created the Next Wave Production and Touring Fund to enable major U.S. artists to create large-scale music, theater, and dance pieces in New York and to tour the works in association with presenting organizations nation-wide. The Foundation has been a

member of the Next Wave's consortium of donors from the outset. Its further grant this year, as in the past, makes special provision for developing educational materials and activities that help new audiences understand the works in their historical context.

U.S. arts organizations in general suffer from a lack of financial sophistication; only a few have the capability to plan their financial future and to build strong fund-raising capacities. A grant to the National Arts Stabilization Fund helps it address this situation by working with business and community leaders and arts organizations in selected cities and regions. The fund helps arts organizations develop sound financial management systems, leverage local donor contributions, and achieve long-range stability and independence. The Foundation's contribution this year completed its pledge of \$1.5 million to the fund's national leveraging pool.

GRANTS

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| AMERICAN COUNCIL OF LEARNED SOCIETIES, <i>New York, New York, toward the costs of its Office of Scholarly Communication and Technology.</i> | \$100,000 |
| ASSOCIATION OF AMERICAN COLLEGES, <i>Washington, D.C., for planning and initiation of public outreach projects for its Council of Liberal Learning.</i> | \$30,000 |
| BROOKLYN ACADEMY OF MUSIC, <i>Brooklyn, New York, in support of its Next Wave Production and Touring Fund.</i> | \$250,000 |
| DAVID LOWRY BURGESS, <i>Cambridge, Massachusetts, for documentation and planning of public events for a conceptual art project entitled "The Quiet Axis."</i> | \$15,000 |
| CARTER FAMILY MEMORIAL MUSIC CENTER, <i>Hilton's, Virginia, toward a program of workshops and concerts for the preservation of traditional American music.</i> | \$15,000 |
| DADE COUNTY COUNCIL OF ARTS AND SCIENCES, <i>Miami, Florida, to initiate a state-wide planning process for cultural development in Florida.</i> | \$13,000 |
| GEORGE WASHINGTON UNIVERSITY, <i>Washington, D.C., toward its 1985 colloquium on the humanities and public policy.</i> | \$5,000 |
| HISTORY OF SCIENCE SOCIETY, <i>New York, New York, toward the costs of a program of recognition and support for independent scholars in the humanities.</i> | \$17,000 |
| INSTITUTE FOR RESEARCH IN HISTORY, <i>New York, New York, toward the costs of a project to encourage historical research on the issue of comparable worth.</i> | \$9,300 |

JOHNS HOPKINS UNIVERSITY, *Baltimore, Maryland, in support of a conference, "Medical Education and the Humanities" (jointly sponsored with the Health Sciences program for a total of \$6,000).*
\$3,000

JOYCE THEATER FOUNDATION, *New York, New York, toward the costs of the first season of its Regional Theater Festival bringing new plays to wider audiences.*
\$50,000

NATIONAL ARTS STABILIZATION FUND, *New York, New York, to enable it to address the long-term financial and artistic health of selected U.S. cultural institutions.*
\$500,000

NATIONAL JAZZ SERVICE ORGANIZATION, *Washington, D.C., to help establish technical assistance programs for the jazz music field.*
\$15,000

ROCKEFELLER FOUNDATION, *New York, New York, for a feasibility study and business plan for a venture to distribute and sell high-quality children's books in the mass market (jointly sponsored with the Equal Opportunity division for a total of \$50,000).*
\$25,000

SMITH COLLEGE, *Northampton, Massachusetts, toward the costs of a conference on gender, technology, and education.*
\$10,000

SOUTHEAST BANKING CORPORATION FOUNDATION, *Miami, Florida, toward a national conference on media and the arts.*
\$10,000

SYMPHONY SPACE, *New York, New York, toward the costs of national radio broadcasts of its literary programs.*
\$10,000

VIVIAN BEAUMONT THEATER, *New York, New York, toward the costs of presenting American drama in the two houses, the Vivian Beaumont and the Mitzi Newhouse, that together constitute the Lincoln Center Theater.*
\$600,000

EQUAL
OPPORTUNITY



EQUAL OPPORTUNITY

For more than 20 years the Foundation has given sustained support to bring about full participation of minority-group Americans in the life of this country. As successes have become apparent so has the dichotomy that has developed in the minority, and especially black, community in recent years. The increase in accessibility to qualified students of the best colleges and universities, the influx of minority individuals into various professions, effective affirmative action hiring and promotion policies in the corporate and higher education worlds, and especially in government—these have brought dramatic changes for a fortunate fraction of minority youth and adults.

At the same time, for large numbers of minority people there has been no change, or change for the worse. The problems of intractable poverty, family disintegration, the drug and crime culture, teen-age pregnancy, and widespread illiteracy remain untouched and apparently untouchable by the legal and other mechanisms that have helped others to rise into the middle class.

During the past two years, Trustees and officers, aided by outside consultants, have reviewed the Foundation's efforts. The conclusion reached is to focus even more sharply upon the problems surrounding hard-core poverty, the problems of those left behind by the civil rights revolution. How this institution can continue to be helpful and effective in reaching this goal will be determined in large part by the new director of the program, whose fresh perspective will be a valuable addition to experiences gained over the past years.

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In 1985, the program's main emphases fell on efforts to:

- Identify and assist in the adoption of effective strategies for improving employment and income opportunities of minorities.
- Secure and promote basic rights of all citizens.

EXPANDING ECONOMIC OPPORTUNITIES

In recent years, Foundation grants have given priority to employment of minority-group female heads of households, to minority-group youth aged 16-24, and to occupational upgrading for minorities.

Nearly 40 percent of all U.S. families headed by women are living in poverty. Among black and Hispanic female householders with children, the poverty rate is nearly 60 percent. These families largely depend for basic necessities on subsidies from various government transfer programs, but it is regular, stable, and well-paying jobs for the mothers of this group, with appropriate support for their children, that represent the long-term solution. The barriers, however, are formidable: lack of good basic skills,

labor market experience, and the need to find and maintain child-care arrangements that are both financially bearable and psychologically satisfactory make employment difficult to achieve.

In 1985, the Rockefeller Foundation appropriated \$2,121,000 to renew its support to five community-based organizations who were selected in 1982 to develop and carry out special programs of assistance for minority-group, female, single parents. The women who apply to the local programs are helped to overcome the barriers to their economic independence, such as lack of job experience or education, resolving family problems, finding suitable child-care for their children. The agencies offer services such as counseling, education, job training and placement in the private sector, and assistance with child care. The demonstration programs will be evaluated partly by information obtained through a random assignment of applicants to participant and control groups.

Many of the program participants are unable to pass the tests required by employers and job training providers. Yet the women's immediate goals are employment, not schooling, in the traditional educational setting. However, literacy-enhancing activities can be made part of the preparations for a job, part of understanding how to resolve a family problem, or part of one's communications with a child.

Toward this goal, a grant was made last year for a team of specialists from the Institute of Literacy Studies at New York City's Herbert H. Lehman College to test and to expand creative and acceptable approaches to literacy that, woven into employment training, may stimulate the development of basic skills of the women participating in the five community organizations. A further objective is to explore how these new approaches, if successful, might be introduced in other settings where specialists in training and education of disadvantaged groups work with men and women who have lost or never gained essential skills needed in today's economy.

Another grant made in 1985 addressed this widespread problem from another direction. The Foundation made available funds to Bank Street College of Education toward the development of a computer software program that can improve the literacy skills, report preparation, and job prospects of minority youth in urban schools. The role of computers in schools is a somewhat controversial one. Computers have been blamed for widening the gap between haves and have-nots, and for being rote-learning machines that are a poor substitute for creative teaching. Bank Street, known for its best-selling *Bank Street Writer*, plans to design and produce a new generation of teacher-oriented computer software that urban school-teachers will find supportive of their curriculum and that go beyond drill and practice to more stimulating, student-directed activities. Part of the development work is formative testing in real urban classrooms with teachers and students.

Use of computer data bases to help alleviate poverty led the Foundation to renew a grant to the National Urban Coalition to expand its computerized Community Information Exchange. Reduced government support for

poverty programs has led to a resurgence of interest in private-sector initiatives that stimulate jobs, business, and community improvements in poor neighborhoods. Many well-intentioned efforts flounder, however, owing to lack of technical know-how or experience.

Needed are interactive mechanisms for transferring, from the experienced to the less-experienced, knowledge about replicable models and workable strategies—in depth, technical step-by-step descriptions. Two years ago, with partial support from the Foundation, the National Urban Coalition created such a mechanism, now known as the Community Information Exchange. This a carefully tailored, computerized information base of strategies and financing opportunities that is directed at the people and institutions who are leading economic renewal in poor and minority neighborhoods. The Exchange is the first outreach that attempts to enable communities to seize the new power of electronic communication to share ideas and expertise.

Of great concern to the Foundation as it is to many others is the very high unemployment rates, often exceeding 60 percent, of youngsters from low-income families who have dropped out of school. The Manpower Demonstration Research Corporation has developed a program model, called JOBSTART, to reach and help dropouts—one that incorporates the best training and remedial education features of the highly rated Job Corps residential program, but is placed in a lower-cost, nonresidential setting. The model is being tested in schools, community organizations, and colleges; the data collected will be carefully evaluated to provide a full assessment of JOBSTART's impact on its participants.

During the 1970s, it was commonly supposed that, just as racial disparities in this country could be reduced through equal opportunity policies, so the economic disparities between men and women could be reduced by assuring women equal access to education and jobs. Laws prohibiting employers from categorizing jobs by race or sex were then enacted and upheld in the courts. But today, ten years later, there continue to be marked labor market disparities between men and women of all racial groups. Although, in the interval, women have joined the workforce in greatly increased numbers, they are still largely concentrated in occupations where, on the average, their wage rates are below those paid men holding other jobs that require less education and training. A national debate focused on why this is the case and what should be done about it has increasingly become a debate over the issue of comparable worth or pay equity.

The complexities of the question of comparable worth are admitted by both sides, as is the fact that neither side yet has sufficient empirical evidence to fully support its position.

A grant made this year to the National Academy of Sciences will allow its Panel on Pay Equity Research to support a number of small-scale empirically based research studies on two fundamental topics—the wage determination process, particularly whether and how occupational wage rates are affected by gender, and the implementation and consequences of comparable worth strategies—with the purpose of clarifying the ongoing debate.

GRANTS

EMPLOYABILITY DEVELOPMENT PROGRAMS FOR MINORITY- GROUP, FEMALE, SINGLE PARENTS

ATLANTA URBAN LEAGUE, *Atlanta, Georgia, toward the costs of an employability development program for minority-group female single parents.* \$350,000

CENTER FOR EMPLOYMENT TRAINING, *San Jose, California, toward the cost of an employability development program for minority-group female single parents.* \$450,000

NATIONAL CONGRESS OF NEIGHBORHOOD WOMEN, *Brooklyn, New York, toward the costs of an employability development program for minority-group female single parents.* \$200,000

OPPORTUNITIES INDUSTRIALIZATION CENTER OF RHODE ISLAND, *Providence, Rhode Island, toward the costs of an employability development program for minority-group female single parents.* \$450,000

RESEARCH FOUNDATION OF THE CITY UNIVERSITY OF NEW YORK, *New York, New York, in connection with a program at Herbert H. Lehman College, for a program of literacy education for the staff of the five community-based organizations participating in the Foundation's minority-group female single-parent program.* \$49,970

WIDER OPPORTUNITIES FOR WOMEN, *Washington, D.C.:*
Toward the costs of an employability development program for minority-group female single parents. \$450,000
Toward the costs of a short-term remediation/literacy project. \$7,500

OTHER ECONOMIC- OPPORTUNITY GRANTS

BANK STREET COLLEGE OF EDUCATION, *New York, New York, toward the development of four computer software programs for inner-city schools.* \$290,000

BAYLOR COLLEGE OF MEDICINE, *Houston, Texas, toward the costs of a conference on high school mathematics and science improvement programs.* \$16,500

CITY COLLEGE OF NEW YORK, *New York, New York, toward its Bridge to Graduate Study in Science program.*

\$16,928

CLARK COLLEGE, *Atlanta, Georgia:*

An orderly termination of support for its Southern Center for Studies in Public Policy.

\$100,000

For research on economic inequality in labor markets and in family income.

\$50,000

CORNELL UNIVERSITY, *Ithaca, New York, toward the costs of publishing the papers delivered at the National Conference on Economic Dislocation and Job Loss (jointly sponsored with the International Relations program for a total of \$3,000).*

\$1,500

EDITORIAL PROJECTS IN EDUCATION, *Washington, D.C., in support of its publication Education Week (jointly sponsored with Arts and Humanities and Special Interests and Explorations for a total of \$100,000).*

\$25,000

EXPLORATORIUM, *San Francisco, California, for a survey to examine the career paths of alumni and alumnae of its Explainer program.*

\$23,280

MANPOWER DEMONSTRATION RESEARCH CORPORATION, *New York, New York, toward the costs of a national demonstration test of exemplary JOBSTART programs for school dropouts.*

\$500,000

MEXICAN-AMERICAN CULTURAL CENTER, *San Antonio, Texas, toward a study of Mexican-American Catholics in American society.*

\$45,000

NATIONAL ACADEMY OF SCIENCES, *Washington, D.C., toward the costs of its Panel on Pay Equity Research.*

\$150,000

NATIONAL BUREAU OF ECONOMIC RESEARCH, *Cambridge, Massachusetts, for a study, "The Impact of the Civil Rights Act of 1964 on Minority and Female Employment."*

\$39,831

NATIONAL URBAN COALITION, *Washington, D.C., toward the costs of the Community Information Exchange.*

\$349,886

RESEARCH FOUNDATION OF THE CITY UNIVERSITY OF NEW YORK, *for use by Herbert H. Lehman College, CUNY, toward the costs of a literacy project conducted by its Institute for Literacy Studies.*

\$178,812

URBAN INSTITUTE, *Washington, D.C., for its Child Care and Self-Sufficiency for Welfare Mothers Project.*

\$50,000

**SECURING AND
PROMOTING
BASIC RIGHTS**

The slow, often erratic, but nevertheless continued progress made in the U.S. over the past 30 years to secure and extend the basic rights of minority Americans is due in no small part to the persistent efforts of broadly based and well-established civil rights organizations. These organizations are generally national in scope and committed to advocacy on behalf of a specific client group. In 1985, the Foundation made substantial grants to four such organizations.

The National Urban League was founded in 1910 to cope with the problems encountered by black Americans who had migrated from the rural South to northern cities. Today, with four regional offices and 113 semiautonomous local affiliates across the U.S., the League has an outstanding record of accomplishments in meeting the needs and voicing the aspirations of black America. To maintain over the years ahead its goal of helping to achieve an open, integrated, pluralistic society in which race is no longer a barrier to equality, the National Urban League seeks to establish a \$50 million permanent development fund to which the Foundation has made a special contribution of \$1 million.

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The National Council of La Raza, now in its eighteenth year, exists to improve life for Americans of Hispanic descent. In 1980, the Council set up its own public policy analysis division to provide timely and reliable information to policymakers on issues of major importance to Hispanic Americans. The Foundation continues to support the work of this division, which has gained a national reputation for accuracy and informed judgment.

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MALDEF—the Mexican American Legal Defense and Educational Fund—was formed in 1968 as an advocate for the millions of Mexican-Americans and other Hispanic citizens in the United States. In addition to its civil rights activities, MALDEF has achieved an impressive record of opening up new employment opportunities for Hispanics, and establishing fellowships and internship programs for Chicano law students. A major grant in 1985 for MALDEF's equal employment opportunity program brought the Foundation's support for this outstanding organization to a total of well over \$2 million since its inception.

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Also last year, the Foundation renewed its support for the Voting Rights Project of the American Civil Liberties Union. The ACLU was founded in 1920, and today has some 350 chapters with over 250,000 members in all

50 states. ACLU exists to protect the rights of all Americans to freedom of inquiry and expression, privacy, due process of law, and equality before the law. Many of the constitutional rights and liberties which we today take for granted have been secured through its efforts.

The Voting Rights Project is committed to the elimination of race discrimination as a barrier to black voter participation. For the past 20 years, it has been a leader in private voting rights enforcement—a matter of even greater importance today than in the past now that the Justice Department has become a persistent foe to the concept of a strong federal role in eliminating racial barriers to the ballot.

In 1978, A. Leon Higginbotham, Jr., a judge of the U.S. Court of Appeals and a distinguished legal scholar, published to considerable acclaim the first volume of *In the Matter of Color: Race and the American Legal Process—The Colonial Period*. Since then he has completed research for a second volume, covering the antebellum and Civil War period, 1776-1865, now being prepared for publication. In 1985, the Foundation renewed its support to Judge Higginbotham for successor volumes to bring his study to the present day. The Foundation's contributions have enabled Judge Higginbotham to involve as research fellows young lawyers (more than 30 so far) who are considering public service or academic life. Over the past years, many of them have established themselves in positions of importance.

GRANTS

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| AMERICAN CIVIL LIBERTIES UNION FOUNDATION, <i>New York, New York, toward the costs of its Voting Rights Project.</i> | \$300,000 |
| CAMBRIDGE COLLEGE, <i>Cambridge, Massachusetts, for developing a new outreach program for its bachelor degree program to serve the needs of mid-life minority-group students.</i> | \$27,500 |
| CONGRESSIONAL BLACK CAUCUS FOUNDATION, <i>Washington, D.C., toward the costs of a conference, "The Economic Status of Black Women."</i> | \$10,000 |
| FLORIDA JUSTICE INSTITUTE, <i>Miami, Florida, toward the costs of the National Interest on Lawyers' Trust Accounts Clearinghouse.</i> | \$25,000 |
| INSTITUTE FOR PUERTO RICAN POLICY, <i>New York, New York, toward the preparation of reports on Hispanic voter registration trends in New York City.</i> | \$31,875 |
| INUIT CIRCUMPOLAR CONFERENCE, <i>Anchorage, Alaska, for use by the Alaska Native Review Commission, toward the costs of its study of the Alaska Native Claims Settlement Act of 1971.</i> | \$25,000 |

JOINT CENTER FOR POLITICAL STUDIES, *Washington, D.C., toward the costs of a conference of black scholars.*

\$43,700

LEAGUE OF WOMEN VOTERS EDUCATION FUND, *Washington, D.C., for a project on resource materials for citizen monitoring and enforcement of the Voting Rights Act.*

\$50,000

MEXICAN AMERICAN LEGAL DEFENSE AND EDUCATIONAL FUND, *San Francisco, California, toward the costs of its equal employment opportunity program.*

\$200,000

MINORITY RIGHTS GROUP, *New York, New York, toward the costs of a study and report on American Indians.*

\$12,000

MISSISSIPPI ACTION FOR COMMUNITY EDUCATION, *Greenville, Mississippi, toward the costs of its Citizen Empowerment Project.*

\$25,000

NATIONAL COUNCIL OF LA RAZA, *Washington, D.C., toward the costs of its public policy analysis division.*

\$400,000

NATIONAL URBAN LEAGUE, *New York, New York, as a contribution toward its Permanent Development Fund Campaign.*

\$1,000,000

NEW YORK URBAN LEAGUE, *New York, New York, for costs of its direct mail membership campaign.*

\$20,000

ROCKEFELLER FOUNDATION, *New York, New York, for a feasibility study and business plan for a venture to distribute and sell high-quality children's books in the mass market (jointly sponsored with the Arts and Humanities program for a total of \$50,000).*

\$25,000

SOUTHERN EDUCATION FOUNDATION, *Atlanta, Georgia, toward the costs of the continuing conference on public policy and education.*

\$47,250

TULANE UNIVERSITY, *New Orleans, Louisiana, toward the costs of a conference on voting rights and the democratic process.*

\$12,000

UNIVERSITY OF MICHIGAN, *Ann Arbor, Michigan, for its National Black Election Study: 1984.*

\$25,000

UNIVERSITY OF PENNSYLVANIA, *Philadelphia, Pennsylvania, toward the costs of historical research on race and the American legal process.*

\$300,000

UNIVERSITY OF WISCONSIN, *Madison, Wisconsin, for use by its Institute for Research on Poverty toward the costs of a conference, "Minority Groups and Poverty."*

\$35,000

VOTER EDUCATION PROJECT, *Atlanta, Georgia, toward the costs of a Special Committee of the Board to review project activities.*

\$15,000

RESEARCH
FELLOWSHIP
PROGRAM FOR
MINORITY-
GROUP
SCHOLARS

The purpose of the Foundation's program of research fellowships for minority-group scholars is to enable outstanding men and women to undertake social science or humanistic research on issues of high priority affecting minority citizens. In 1985, with the guidance of an Advisory Panel of scholars and policy experts, and an appropriation of \$400,000, fellowships were awarded to:

THADIOUS M. DAVIS, *Professor of English, University of North Carolina at Chapel Hill—"Race and Reputation: A Comparative Study of Richard Wright and William Faulkner."*

MICHAEL DORRIS, *Associate Professor, Native American Studies and Anthropology, Dartmouth College, Hanover, New Hampshire—"The Effects of Fetal Alcohol Syndrome on American Indian Communities."*

LILLIE J. EDWARDS, *Assistant Professor of History, University of North Carolina at Chapel Hill—"From Alabama to Angola: A Biography of Henry Curtis McDowell, Afro-American Missionary."*

ROBERTO M. FERNANDEZ, *Assistant Professor of Sociology, University of Arizona, Tucson, Arizona—"School-to-Work Transitions of Hispanic Youth."*

L. BARTHOLOMEW LANDRY, *Associate Professor of Sociology and Afro-American Studies, University of Maryland, College Park—"Mobility and Changing Opportunities Among Black Males."*

MICHELENE R. MALSON, *Assistant Professor of Black Studies, University of Massachusetts at Boston; and Program Director, Center for Research on Women, Wellesley College, Wellesley, Massachusetts—"The Strengths of Black Single Parent Families Identifying Coping Strategies for Self-Reliance."*

ALFREDO M. MIRANDE, *Professor of Sociology and Chicano Studies, University of California at Berkeley—"Emergent Male Roles in the Chicano Family: Response and Adaptation."*

SHARON NELSON-LE GALL, *Associate Professor of Psychology, University of Pittsburgh, Pennsylvania—"Cognitive-Motivational Influences on Black Children's Academic Help Seeking."*

HUEY L. PERRY, *Associate Professor of Political Science, Southern University, Baton Rouge, Louisiana*—“*The Social and Economic Impact of Black Politics in the South.*”

SONJA PETERSON-LEWIS, *Postdoctoral Fellow, University of Utah, Salt Lake City, Utah*—“*Why Women Return to Abusive Marital Relationships: An Analysis of Three Ethnic Minority Groups.*”

MITCHELL F. RICE, *Associate Professor, Public Administration Institute, Louisiana State University, Baton Rouge, Louisiana*—“*Public Policy Enforcement/ Compliance Issues and Black American Health.*”

GAIL E. THOMAS, *National Research Council, Washington, D.C.*—“*Participation and Success of Blacks in Graduate and Professional Education.*”

RONALD W. WALTERS, *Professor of Political Science, Howard University, Washington, D.C.*—“*Black Political Mobilization in National Elections: The Jackson Campaign of 1984.*”

ALEX W. WILLINGHAM, *Senior Associate, Southern Regional Council, Atlanta, Georgia*—“*Voting Rights and the Politics of Southern Reapportionment, 1979-1984.*”



The overall aim of the Health Sciences program is to improve the health of mankind, with a particular emphasis on the developing world. The Foundation's current program, initiated in 1977, consists of three interactive components.

Within the *Great Neglected Diseases of Mankind* component, the Foundation supports biomedical research to develop new and better drugs and vaccines. *The Health of Populations* component focuses on training clinical epidemiologists to do trials of new therapeutic and preventive methods, and to develop cost-effective means of disease treatment and control. The third component—*Coping with Biomedical and Health Information*—deals with the provision of efficient means of gaining relevant information on biomedical and epidemiological initiatives.

○ *The Great Neglected Diseases of Mankind.* Diseases such as malaria, schistosomiasis, hookworm, and the recurrent diarrheas of children are "great" in that they afflict hundreds of millions of people, largely in the developing world, and are "neglected" in that they have received relatively little attention from the global biomedical research community. The Foundation's goal is to improve the knowledge, the means of treatment, and the control of these diseases by attracting outstanding scientists to study them. The mechanism is long-term support of an international network of investigative units, each engaged in laboratory research and in collaborative clinical and field investigation in endemic areas. The results of this research will be applied quickly via operational studies in the developing countries.

○ *The Health of Populations.* Maldistribution of expensive manpower, equipment, and facilities is common throughout the world. This has resulted in small numbers of individuals receiving costly, high-technology, curative care, while the vast majority lack even inexpensive, preventive, primary health care. One cause of this problem is a dearth of population-based perspectives in health education, research, and management, areas that are essential for setting priorities, allocating resources, selecting cost-effective means of intervention, and evaluating their impact on the health of populations served. The Foundation is fostering research and training in clinical epidemiology—the study of the health of populations—primarily through support for major training centers in Canada, the U.S., and Australia, and the introduction of clinical epidemiology units into the medical schools of the developing world. The centers and units have been gathered into an interactive organization called INCLIN, the International Clinical Epidemiology Network.

○ *Coping with Biomedical and Health Information.* The exponential growth of biomedical, behavioral, and health services data makes it increasingly difficult to utilize efficiently that small portion of the information that is either of current or enduring value. Under this component, the Foundation encourages research on the development of improved health sciences and statistical information systems.

The Great Neglected Diseases biomedical research network was established in December 1977. Its primary goal is to mobilize scientific power on a global scale, to provide new and better means of improving the health of the people of the developing world.

The network now includes 14 units, each headed by an outstanding scientist. Seven clinical units are located in Boston (two), Charlottesville, Cleveland, London, Seattle, and Oxford; four immunology units in Boston, Stockholm, Tel Aviv, and Melbourne, and three biochemistry/pharmacology units in New York City, Mexico City, and Bangkok. After careful consideration of the evolution of the program, two of the original units were replaced; two new units have been added: the Department of Tropical Medicine of the London School of Hygiene and Tropical Medicine, under Dr. Keith McAdam, which devotes itself to the immunology of chronic infectious diseases such as leprosy, and the Division of Infectious Diseases of the Children's Medical Center of the Harvard Medical School, which under Drs. Alice S. Huang and Kenneth McIntosh is developing vaccines for viral respiratory infections.

Within the network, 123 scientists, under whom work 162 trainees, are bringing to bear highly sophisticated techniques on some of the hitherto intractable diseases of the non-Western world. Collaborative programs are maintained in some 30 different countries in Latin America, Africa, and Asia. During the past year, 248 scientific papers were published, bringing the total of network publications to over 1,500.

The fruits of the research network and their field application are becoming more apparent each year. Particularly noteworthy during the 1985 annual meeting of the GND network were reports of two initiatives, one moving rapidly toward a vaccine for malaria, the other to the production at reduced cost of a highly effective drug for schistosomiasis.

Scientists from the units in Stockholm and Melbourne, using different approaches, have isolated from the bloodstream stages of the malaria parasite an identical protein antigen (a putative vaccine). The work is progressing rapidly in each laboratory, opening the way to the most advanced of all approaches—in Stockholm, a synthetic vaccine, and in Melbourne, the piggybacking of the genetic material of the malaria antigen on smallpox vaccine.

The control of schistosomiasis, a parasite-caused debilitating disease afflicting some 200 million people in the developing world, has been transformed by the development and marketing of praziquantel, a single dose oral drug that is highly effective and has minimal side effects. Its greatest drawback is its high cost, related to a laborious high-technology production process that is potentially toxic. The GND unit at Rockefeller University has now patented a simpler and safer process that could make the drug available to the developing world at sharply reduced cost.

These and many other research developments seem to corroborate the conclusions reached by two distinguished outside reviewers of the \$13

million program that "a network of investigators of the highest quality has been brought together and research has been stimulated into important questions that concern the GND, as originally envisioned by the Trustees of the Rockefeller Foundation. As a result of the valuable contacts created between the units by the GND program, an international family of research workers has been built up with interests that range from the molecule to the community."

The Scripps Clinic and Research Foundation is one of the outstanding centers in the U.S. for the study of disease mechanisms. A recent emphasis on molecular biology and synthetic vaccines has led to its involvement in means of disease prevention and control. Under earlier small grants from the Foundation, Scripps worked with the malaria vaccine group at New York University, and on the diarrhea-inducing toxin of *E. coli* bacteria. With a more substantial grant made last year, Scripps will initiate molecular studies of two major protozoan infections, South American trypanosomiasis (Chagas' disease) and amebiasis.

In Chagas' disease, untreatable at present, the parasite destroys over many years the nerve conduction system of the heart, resulting in death. The main goal of Scripps will be to identify genes and gene products expressed uniquely on the surface of the parasite, eventually leading, it is hoped, to substances that have the capacity to kill the parasites.

Diarrhea and dysentery caused by the parasite *Entamoeba histolytica* are significant problems in many tropical communities. The Scripps group plans to examine the genetic structure of the parasite with the eventual goal of a specific vaccine.

Few undertakings of the magnitude of the Great Neglected Diseases program can succeed without systematic efforts to create public and professional awareness of the problems involved and progress made. The year 1985 was noteworthy in that major steps were taken toward widespread and effective information and dissemination efforts.

A series of five television programs, "Quest for the Killers," produced by June Goodfield, were shown in 1985 on the PBS Network (with Boston's WGBH the lead station) as well as abroad. The programs were based on Dr. Goodfield's book, published simultaneously with the broadcast, which was supported in 1984 by the Foundation's Arts and Humanities and Health Sciences divisions. A larger grant made last year to International Health and Biomedicine, Ltd., will allow Dr. Goodfield to proceed with a book and three films for television aimed at enhancing public awareness of current and future work in vaccine development at the basic research and applied levels.

The publication *Protecting the World's Children: Vaccines and Immunization within Primary Health Care*, which resulted from a 1984 Bellagio conference of WHO, UNICEF, World Bank, UNDP, and RF senior officials, received

very wide distribution. A 1985 follow-up conference of world leaders in health care in Cartagena, Colombia, demonstrated dramatic progress made since Bellagio. In Bellagio it was estimated that universal immunization would cost upwards of \$1.5 billion a year, and require \$200 million to \$300 million from sources outside the countries involved. At the time, the chances of raising such additional sums seemed slim. But world response to the "Children's Revolution" was as dramatic as it was unexpected.

Rotary International, the U.S. service organization, has pledged \$120 million for polio vaccine over the next two decades. The government of Italy made an extraordinary contribution of \$100 million to help support immunization programs by African countries. The U.S. Agency for International Development increased its assistance. Canada announced a major contribution at a recent Commonwealth ministers meeting. The Inter-American Development Bank is considering a \$5.5 million request for polio eradication in Latin America by the Pan American Health Organization.

At its meeting in Budapest, International Physicians for the Prevention of Nuclear War, subsequently named the winner of the 1985 Nobel Peace Prize, accepted global immunization as a goal—the first goal added to that explicit in its name. Private industry is becoming involved, and two private foundations—the Medical Trust, one of the Pew Charitable Trusts, and the Rockefeller Foundation—have made a \$4 million joint gift to WHO's vaccine development program to spur vaccine research.

Political will—the *sine qua non* of mass immunization programs—has been mobilized to a remarkable extent in a number of Asian, African, and Latin American countries. The result is that immunization programs to protect all children against their most common killers and cripples are now underway or planned in a large number of developing nations. If the current momentum can be maintained, the majority of the world's children will be immunized by 1990.

As do other Foundation divisions, Health Sciences places considerable importance on smaller grants and on individual fellowships that expand GND-related research geographically. In 1985, such actions enabled a Brazilian living in France to work on *Leishmania* in Bahia, a scientist from India to work on malaria in Bethesda, a Ugandan to work on the molecular biology of filariasis in New York and Berkeley, another Ugandan to work on the molecular biology of African sleeping sickness in Baltimore, and a Nigerian to work on the epidemiology of hookworm in London. Support has also been provided for investigations at the village level in Thailand on intestinal worms and in Zimbabwe on the treatment of schistosomiasis. In the developing world, sophisticated investigations are being conducted in Oslo on tuberculosis and on the molecular biology of malaria at a major cancer center in New York. A Rome/New York team is examining malaria transmission in Burkina Faso using techniques provided by biotechnology, preparatory to field trials of a malaria vaccine.

**GND NETWORK
GRANTS**

BRIGHAM AND WOMEN'S HOSPITAL, Boston, Massachusetts, for use by its Robert B. Brigham Division to support an Immunoparasitology Division in the Department of Medicine.

\$50,000

CENTER FOR RESEARCH AND ADVANCED STUDIES, NATIONAL POLYTECHNIC INSTITUTE, Mexico City, Mexico, for the study of the pathogenesis of invasive amebiasis, onchocerciasis, and American trypanosomiasis.

\$50,000

WALTER AND ELIZA HALL INSTITUTE OF MEDICAL RESEARCH, Melbourne, Australia, for support of an Immunoparasitology Research Unit.

\$50,000

LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE, London, England:

Toward support of the Department of Clinical Tropical Medicine. \$50,000

Toward the travel costs of three Latin American participants to attend a meeting on Leishmania, held in Worcestershire, England. \$3,000

MAHIDOL UNIVERSITY, Bangkok, Thailand, for quantitative studies of infection and morbidity of helminth parasites in villages in Thailand.

\$35,000

ROCKEFELLER FOUNDATION, New York, New York, toward the costs of the annual meeting of the Biomedical Research Network of the Great Neglected Diseases of Mankind.

\$100,000

ROCKEFELLER UNIVERSITY, New York, New York:

For support of a Pharmacoparasitology Research Unit in the Laboratory of Medical Biochemistry. \$50,000

In support of research on a new procedure for producing praziquantel, a drug to treat schistosomiasis. \$25,000

TUFTS UNIVERSITY, Boston, Massachusetts, in support of its Division of Geographic Medicine.

\$100,000

UNIVERSITY OF OXFORD, Oxford, England:

In support of a Tropical Medicine Research Unit in its Nuffield Department of Clinical Medicine. \$50,000

In support of a comparative study of inherited blood disorders, particularly thalassemia, in Pacific Islanders. \$5,500

UNIVERSITY OF STOCKHOLM, Stockholm, Sweden, in support of its joint research unit on immune regulation of parasitism with Uppsala University.

\$150,000

UNIVERSITY OF VIRGINIA, *Charlottesville, Virginia:*
In support of a Division of Geographic Medicine in its Department of Medicine.
 \$125,000
For research on the pharmacologic alteration of enterotoxin-induced secretion.
 \$26,700

UNIVERSITY OF WASHINGTON, *Seattle, Washington, for support of a*
Geographic Medicine Unit in its Department of Medicine.
 \$150,000

GND-RELATED
GRANTS

AUSTRALIAN NATIONAL UNIVERSITY, *Canberra, Australia, for a*
research project on cell-mediated immunity in flavivirus infections.
 \$25,000

EMORY UNIVERSITY, *Atlanta, Georgia, to undertake a research project to*
develop a rabies vaccine using the canine hepatitis virus vaccine.
 \$18,665

GORDON RESEARCH CONFERENCES, *Kingston, Rhode Island, toward*
support of the Gordon Research Conference on Parasitism, held in Plymouth, New
Hampshire.
 \$6,000

HARVARD UNIVERSITY, *Cambridge, Massachusetts:*
In support of a Geographic Medicine Center for Virology and Pediatrics.
 \$150,000
To assess and disseminate data on the geographic distribution and frequency of
mental illness around the world, including the psychosocial consequences of
parasitic diseases.
 \$7,500

INTERNATIONAL HEALTH AND BIOMEDICINE, *Oklahoma City,*
Oklahoma, in support of research and development of a book and three films for
television on medical problems in the developing world, with a focus on vaccine
development and plans to immunize the world's children.
 \$82,000

INTERNATIONAL PHYSICIANS FOR THE PREVENTION OF
 NUCLEAR WAR, *Boston, Massachusetts, toward costs of a symposium on*
international medical cooperation, held in Budapest, Hungary (jointly sponsored
with the International Relations program for a total of \$17,000).
 \$8,500

INTERNATIONAL UNION OF IMMUNOLOGICAL SOCIETIES,
Bethesda, Maryland, in support of a symposium on the regulation of tolerance and
immunity, held in São Paulo, Brazil.
 \$4,500

JOHNS HOPKINS UNIVERSITY, *Baltimore, Maryland:*

Toward the costs of a study, in Peru, on the pathogenesis of measles and its attendant immune deregulation. \$10,914

In support of a conference, "Medical Education and the Humanities" (jointly sponsored with the Arts and Humanities program for a total of \$6,000). \$3,000

ROLLIN B. JOHNSON, *University of Cambridge, Cambridge, England, for a study on parasitic diseases and the biochemical basis for food selection and rejection in a troop of baboons.* \$2,000

ALTAF A. LAL, *New Delhi, India, to undertake a research project on the structure of genes encoding the circumsporozoite protein of P. berghei and P. vivax and the effect of immune pressure on their structure.* \$27,000

MEMORIAL SLOAN-KETTERING CANCER CENTER, *New York, New York, for research on the characterization of P. falciparum genes implicated in merozoite invasion and erythrocyte sequestration.* \$30,000

MINISTRY OF HEALTH, *Harare, Zimbabwe, for research on the treatment of schistosomiasis with praziquantel to be conducted by the Blair Research Laboratory, Harare.* \$2,700

NATIONAL FOUNDATION FOR INFECTIOUS DISEASES, *Richmond, Virginia, toward the costs of a fellowship for a minority-group physician to conduct research in tropical medicine.* \$20,000

NEW YORK UNIVERSITY, *New York, New York:*
In support of the U.S.-Japan Fund of the United States-Japan Cooperative Medical Science Program. \$2,000
For use by its School of Medicine in support of malaria serological and entomological studies in hyperendemic areas of Africa. \$30,000

NORWEGIAN RADIUM HOSPITAL, *Oslo, Norway, in support of a research project on immunization against tuberculosis.* \$35,000

PRINCETON UNIVERSITY, *Princeton, New Jersey, for research on the dynamics of infection and the evaluation of vaccination and other control programs.* \$22,000

QUEENSLAND INSTITUTE OF MEDICAL RESEARCH, *Brisbane, Australia, in support of a research project on the identification and production of peptides/polypeptides useful for diagnosis and prevention of flavivirus infections.* \$30,000

ROCKEFELLER FOUNDATION, New York, New York:

Biotechnology Career Fellowships for scientists from developing countries (jointly sponsored with the Agricultural Sciences and Population Sciences programs for a total of \$200,000). \$66,667

For a workshop on U.S. collaboration with developing countries on infectious diseases in the tropics, held in Cairo, Egypt. \$12,000

FERRUCIO SANTORO, Institut Pasteur, Lille, France, for a collaborative study aimed at developing an effective vaccine against leishmaniasis. \$21,000

SCRIPPS CLINIC AND RESEARCH FOUNDATION, La Jolla, California:
For research on the conformation of the human heat-stable E. coli enterotoxin. \$28,000

For molecular studies of two major protozoan infections, South American trypanosomiasis and amebiasis. \$142,000

UNIVERSITY HOSPITALS, Cleveland, Ohio, for a research project to elucidate differences in Onchocera volvulus strains from major geographic foci that may relate to variations in disease. \$13,149

UNIVERSITY OF CALIFORNIA, Los Angeles, California, for support of a UCLA symposium, "Molecular Strategies of Parasitic Invasion," held in Park City, Utah. \$2,000

UNIVERSITY OF VICTORIA, Victoria, British Columbia, Canada, for its Department of Biochemistry and Microbiology toward the costs of molecular studies on African trypanosomes. \$24,300

WORLD HEALTH ORGANIZATION, Geneva, Switzerland:
For its new special Programme on Vaccine Development (jointly sponsored with Special Interests and Explorations for a total of \$250,000). \$175,000

For its Regional Office for Africa, toward the costs of a meeting on intersectoral cooperation for health, held in Brazzaville, People's Republic of the Congo. \$15,000

YUAN HONG-CHANG, Shanghai First Medical College, Shanghai, China, to study advanced techniques of electron microscopy at the Harvard University School of Public Health. \$1,500

ROCKEFELLER
FOUNDATION
CAREER
DEVELOPMENT
FELLOWSHIPS IN
GEOGRAPHIC
MEDICINE

- ALAIN DESSEIN, *Centre d'Immunologie, Marseille, France, to develop an effective vaccine against S. mansoni and to determine the role of IgE antibodies in immunity against S. mansoni and T. spiralis infections.* \$50,000
- JAMES W. KAZURA, *Department of Medicine, University Hospitals, Cleveland, Ohio, for research on immunity and induction of resistance in filariasis.* \$50,000
- HENRY WILKE MURRAY, *Division of International Medicine, Cornell University, Ithaca, New York, for research on mechanisms of Leishmania killing by mononuclear phagocytes (white blood cells).* \$50,000

THE HEALTH OF
POPULATIONS

The education of physicians should encompass three perspectives. Two of these, basic science and clinical medicine dealing with individual patients, are well represented in the curriculum of most medical schools. Still gravely neglected is the third perspective, clinical epidemiology, which is necessary for appraising health and disease in populations or communities, for measuring the outcomes of health research in terms of cost and effectiveness, and for planning appropriate interventions. Since its inception in 1979, the Foundation has appropriated approximately \$4.7 million for this international program.

With Foundation support, Clinical Epidemiology Resource and Training Centers (CERTCs) have been established at the University of Pennsylvania, McMaster University in Canada, and the University of Newcastle in Australia to train young faculty members from developing-world medical schools that endorse the concepts and goals of clinical epidemiology. On return from their one- to two-year training, these young clinicians become the nuclei of new Clinical Epidemiology Units (CEUs), each located within the home institution's clinical department. As planned, a CEU will consist of approximately six trained faculty members, plus a statistician and a health economist. To assist these developmental steps, the Foundation awards start-up research stipends to returning fellows, encourages frequent visits by CERTC faculty to the fellows' home institutions, helps fellows find other sources of research funding, provides core support for CEUs, and sponsors annual research meetings. A formal organization, the International Clinical Epidemiology Network (INCLEN), has been created as a mechanism for assuring programmatic quality and enhancing communication. The Foundation has sponsored training for 67 young clinicians, and 10 more have been funded by other agencies: the Australian Development Assistance Board, the Canadian International Development Research Centre, the Swedish Agency for Research Cooperation with Developing Countries, the University of Ibadan, the World Bank, and the World Health Organization.

Over the past year, several important steps were taken to strengthen INCLEN. Fourteen returning fellows were given awards to help them initiate thesis research projects. Four CEUs were helped with administrative and research costs. INCLEN's executive committee approved network affiliation for four additional institutions: Escola Paulista, São Paulo, Brazil; Javeriana University Faculty of Medicine, Bogotá, Colombia; the University of Chile Faculty of Medicine, Santiago; and the General Hospital, Autonomous National University of Mexico, Mexico City. It was also agreed that fellowships could be offered on a space-available basis to medical faculty at the Universidad de la Frontera, Temuco, Chile, and the University of Rio de Janeiro.

A major move undertaken in 1985 was to support additional training in health economics for INCLEN fellows in residence at the three U.S., Canadian, and Australian training and resource centers. Four levels of study, the final two oriented to a graduate degree, should further the application of economic principles to research activities and clinical decision-making for staff members of clinical epidemiology units in Asia and Latin America.

The network is likely to continue to expand over the years ahead. Meetings last year of senior representatives from 16 Indian medical colleges signaled the introduction of a cooperative program between the United States Agency for International Development, the Indian government, and the Rockefeller Foundation to develop clinical epidemiological units in India. It is hoped that three or four units will be established in selected medical schools following visits by CERTC faculty and RF staff.

The role of the University of Pennsylvania as a resource and training center within INCLEN has been described. Last year, the university received a grant of \$180,000 to create within its Department of Medicine a clinical unit similar to those of the Great Neglected Diseases program. The objective for this unit (often called Geographic Medicine Programs) is twofold: to work on the neglected diseases of poor countries and to help the university's epidemiologically oriented resource and training center focus attention on diseases of the developing world. The result should be synergistic for both programs—clinical research and population-based health training. A high priority will be the development of international collaborative efforts, particularly in Nigeria and Zimbabwe.

The third annual meeting of INCLEN took place in the Philippines, and was attended by 42 fellows. Special emphasis was placed on teaching and training activities, the health economic implications of research, completion and publication of research results, and the development of international collaborative research activities. This year, more than half of the papers were directed at health problems in open (nonhospitalized) populations. Examples were a study of occupational pesticide exposure

among Filipino farmers, a study of protein energy malnutrition in preschool children of Bangkok slums, and a research paper examining the effectiveness of chemoprophylaxis against malaria in migrant workers in eastern Thailand.

In its five years of operation, the network has become something of a model of intricate international cooperation aimed at specific development goals. The major risk is that clinical epidemiology will not become established in the selected institutions. This might happen if research funds do not become available or if pressing personal needs do not allow fellows sufficient time for research. Although loss of fellows from the program may be a risk in the future, so far only one fellow has failed to return home after training. The others are assigned to positions for which they were trained.

Until last year, the Foundation concentrated in its Health of Populations program almost exclusively on the continuing development of the International Clinical Epidemiological Network and the training centers and clinical units that are its underpinnings. In 1985, however, the Foundation initiated an additional thrust: it began a long-term effort to assist developing countries to develop, test, and produce their own vaccines against certain widespread, lethal viral diseases. A fundamental objective here is to transfer an essential technology from North to South, in this case tissue culture techniques—a manufacturing system that underlies all modern viral vaccine production. Mastery of such techniques for one vaccine permits the manufacture of a wide range of other human and animal vaccines; the same production process is likely to be used for future genetically engineered vaccines.

The viral diseases in question are dengue hemorrhagic fever, Japanese encephalitis, and rabies—diseases for which no specific treatment is available. The only direct intervention for humans is a preventive vaccine. First-of-their-kind experimental dengue and Japanese encephalitis vaccines have been developed recently in the Third World. It now remains for Third World scientists to acquire the appropriate facilities and training needed to test the safety and efficacy of these new vaccines prior to their large-scale production. As a first step toward this goal, the Foundation appropriated \$300,000 for a dengue biosafety testing facility in Thailand, and in China for training in, and equipment for, safety testing for Japanese encephalitis vaccines. In addition, \$200,000 was allocated for research and start-up costs in connection with the transfer of rabies vaccine production technology.

GRANTS

ROY M. ACHESON, *University of Cambridge, Cambridge, England, toward support of research for a book on the origins and development of the curriculum in epidemiology and public health at the Rockefeller Archives.*

\$-1,400

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| ADDIS ABABA UNIVERSITY, <i>Addis Ababa, Ethiopia, for support of research in clinical epidemiology.</i> | \$5,000 |
| AMERICAN SOCIETY OF TROPICAL MEDICINE AND HYGIENE, <i>San Antonio, Texas, toward the publication costs of the 1985 edition of the International Catalog of Arboviruses.</i> | \$15,000 |
| CHANPEN CHOPRAPAWAN, <i>Ministry of Public Health, Bangkok, Thailand, to enable her to pursue studies in mental health epidemiology at the Harvard Medical School and the National Institute of Mental Health, Bethesda.</i> | \$3,087 |
| CHEN PEI-YUAN, <i>Beijing Medical College, Beijing, China, for a study on the substance of health economics, planning, and management while at the Harvard School of Public Health.</i> | \$6,000 |
| CHULALONGKORN UNIVERSITY, <i>Bangkok, Thailand:</i> | |
| <i>In support of research in clinical epidemiology.</i> | \$20,000 |
| <i>In support of its Clinical Epidemiology Unit.</i> | \$25,000 |
| ESCOLA PAULISTA DE MEDICINA, <i>São Paulo, Brazil:</i> | |
| <i>In support of its Clinical Epidemiology Unit.</i> | \$25,000 |
| <i>For research in clinical epidemiology.</i> | \$15,000 |
| INSTITUTO NACIONAL DE LA NUTRICION, <i>Mexico City, Mexico, in support of research in clinical epidemiology.</i> | \$5,000 |
| INTERNATIONAL CLINICAL EPIDEMIOLOGY NETWORK (INCLEN): | |
| <i>Toward costs of clinical epidemiology fellows' travel to international meetings.</i> | \$10,000 |
| <i>For third annual meeting of the International Clinical Epidemiology Network, Cavite, Philippines.</i> | \$5,000 |
| <i>Toward interchange activities between centers and units.</i> | \$70,000 |
| INTERNATIONAL CONGRESS FOR INFECTIOUS DISEASES, <i>Boston, Massachusetts, for a colloquium on strategies for control of infectious diseases in developing countries.</i> | \$25,000 |
| INTERNATIONAL EPIDEMIOLOGICAL ASSOCIATION, <i>Silver Spring, Maryland, toward the costs of participants at the regional meeting of the association in Brazil in 1985, and toward distribution costs of A Dictionary of Epidemiology.</i> | \$20,000 |

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| <i>KHON KAEN UNIVERSITY, Khon Kaen, Thailand, in support of research in clinical epidemiology.</i> | \$10,000 |
| MAHIDOL UNIVERSITY, Bangkok, Thailand: | |
| <i>To construct and equip a neurosafety primate testing facility.</i> | \$170,000 |
| <i>In support of the Clinical Epidemiology Unit at Siriraj Medical School.</i> | \$25,000 |
| <i>In support of research in clinical epidemiology.</i> | \$10,000 |
| LEONARDO MATA, University of Costa Rica, Costa Rica, for the analysis of his study of the factors contributing to the good health of the poor rural population of the Puriscal region in Costa Rica, to be administered by Harvard University. | \$30,000 |
| McMASTER UNIVERSITY, Hamilton, Ontario, Canada, for a health economics training program for International Clinical Epidemiology Network fellows. | \$30,000 |
| NETWORK OF COMMUNITY-ORIENTED EDUCATIONAL INSTITUTIONS FOR HEALTH SCIENCES, Maastricht, Netherlands: | |
| <i>For a conference, "Priority Health Problems in Curriculum Development," held at the Bellagio Study and Conference Center, Italy.</i> | \$30,000 |
| <i>In support of its Task Force on priority health problems in curriculum development.</i> | \$33,300 |
| RIJKSINSTITUUT VOOR VOLKSGEZONDHEID EN MILIEU-HYGIENE, Bilthoven, Netherlands, for rabies vaccine seed production and technical preparation for vaccine production transfer. | \$100,000 |
| ROCHESTER GENERAL HOSPITAL, Rochester, New York, in support of research on the use of a nonstructural glycoprotein as a dengue vaccine. | \$29,563 |
| ROCKEFELLER FOUNDATION, New York, New York: | |
| <i>For a conference, "Good Health at Low Cost," held at the Bellagio Study and Conference Center, Italy.</i> | \$40,650 |
| <i>Consultative meetings to assess viral vaccine production technology transfer to developing countries.</i> | \$15,000 |
| <i>For costs of country assessment visits and committee meetings in connection with the rabies vaccine component.</i> | \$20,000 |
| SHANGHAI MEDICAL UNIVERSITY, Shanghai, China, in support of research in clinical epidemiology at its Hua Shan Hospital. | \$20,000 |

- SICHUAN MEDICAL COLLEGE, *Sichuan, People's Republic of China, for research in clinical epidemiology.*
\$15,000
- UNIVERSITY OF CALIFORNIA, *Berkeley, California, for preparing a reference book tentatively entitled Organized Health Services in China.*
\$27,215
- UNIVERSITY OF NEWCASTLE, *Newcastle, New South Wales, Australia, for use by its Asian and Pacific Centre for Clinical Epidemiology toward the costs of a health economics training program for International Clinical Epidemiology Network fellows.*
\$30,000
- UNIVERSITY OF PENNSYLVANIA, *Philadelphia, Pennsylvania:*
For use by its School of Medicine in establishing a Geographic Medicine Program that would collaborate with its Clinical Epidemiology Resource and Training Center. \$180,000
For a health economics training program for International Clinical Epidemiology Network fellows. \$40,000
Toward the costs of training candidates from developing countries in clinical epidemiology. \$795,000
Toward the costs of stipends and health insurance for two married fellows in the clinical epidemiology program. \$8,000
- UNIVERSITY OF THE PHILIPPINES, *Manila, Philippines, for continuing support of its Clinical Epidemiology Unit.*
\$25,000
- UNIVERSITY OF WISCONSIN, *Madison, Wisconsin, for translating into Lao a primary health care curriculum and resource modules for use in the Lao People's Republic.*
\$10,000
- WEST CHINA UNIVERSITY OF MEDICAL SCIENCES, *Chengdu, China, for research in clinical epidemiology.*
\$5,000
- YU YONGXIN, *National Institute for the Control of Pharmaceutical and Biological Products, Ministry of Health, Beijing, China, to undertake a research project on a Japanese encephalitis vaccine at the Walter Reed Army Institute of Research.*
\$10,000

**COPING WITH
BIOMEDICAL
AND HEALTH
INFORMATION**

For several years, the Foundation has explored through research awards, conferences, and publications how today's scientist could make the most productive use of biomedical literature that is expanding so rapidly that unaided no individual can hope to keep abreast. At the same time, much thought has been given to an obverse problem: the unavailability of

complete and up-to-date journal collections to many Third World biomedical investigators and practitioners.

In 1985, the Foundation began an experiment that could have far-reaching consequences. In brief, the Foundation is now making available to the libraries of four medical schools in Colombia, Egypt, Indonesia, and Mexico microfiche collections of more than 90 journals in the international biomedical and health literature—journals that were selected by using an algorithm based on citation patterns.

Based on studies done in other libraries, this journal collection should contain 80 percent of the relevant material for any medical specialty in a given year. With the journal collections, the four libraries selected will receive guides to the collection, together with microfiche readers and a high-quality printer that uses ordinary paper.

The experiment will be carefully monitored and evaluated to determine the use and usefulness of the Selective Medical Library on Microfiche approach.

GRANTS

INTERNATIONAL FEDERATION OF SCIENTIFIC EDITORS' ASSOCIATIONS, *London, England, for travel costs of six Asian participants in the International Symposium on Scholarly Publishing and Development in Nairobi, Kenya.*

\$6,000

ROCKEFELLER FOUNDATION, *New York, New York, toward the costs of providing medical schools and research units in the developing world with microform libraries and evaluating their effectiveness.*

\$350,000

**INTERNATIONAL
RELATIONS**



The increasing inability of governments to control the scope and velocity of their nations' foreign relations creates dangerous uncertainty but also strong incentives for international cooperation. To reduce that uncertainty, and to expand the range of foreign policy options, national leaders are turning to independent international relations centers, at home and abroad, for fresh ideas and well-trained staff.

Within democracies, independent international relations centers can contribute to promoting domestic consensus and national constancy; under authoritarian regimes, they can promote freer debate of vital foreign policy issues and the national resilience to adhere to long-term policy objectives. Centers engaging in such activity are helping to create new regional and global networks of international relations specialists dedicated to the search for practical approaches to improve cooperation and reduce the risk of conflict. Recent advances in communications and information technologies facilitate this process. Responding to these opportunities, the International Relations program aims to strengthen the positive contribution of independent research and training to the behavior of national governments in the areas of international security and economic cooperation.

Although the capacity, priorities, and role of international relations research and training vary greatly among countries and regions, the most accomplished programs share the following attributes: First, they clarify the changing nature of their country's vital national interests so as to inform domestic and foreign opinion. For many of the world's 150 countries, sovereignty has preceded nationhood, and competing religious, ethnic, ideological, and economic loyalties continue to undermine efforts by state authorities to define legitimate rights of self-determination. Even well-established nations are discovering that foreign governments and non-state actors are able to influence the behavior of powerful domestic groups and thereby alter the conceptions of the national interest in new and perplexing ways.

Second, when the interests of two or more countries conflict, informal channels of communication among international relations specialists can contribute to reducing the danger of a serious miscalculation by gauging each other's capabilities and resolve. More positively, independent international relations centers can jointly and creatively consider new ways to develop and strengthen multilateral, economic, and cultural means for addressing functional problems in such fields as agriculture, health, and education, while highlighting common interests and thereby producing constructive political side effects.

Finally, in an era when adversaries are able to amass huge nuclear stockpiles and highly destructive arms, the notion that more weapons will bring greater security is losing salience. Other traditional instruments of state craft—economic pressures, diplomacy, and propaganda— are also failing to meet current policy needs. Independent international relations centers can look

beyond the rush of daily events that preoccupy governments, and consider deeper issues of how whole societies interact, thereby creating new constraints and leverage for national leaders as they conduct foreign relations.

In light of this changing situation, the International Relations program sets for itself the following goals:

- Within the United States, to strengthen the contribution of nongovernmental international relations research to U.S. foreign policy;
- In countries other than the United States, to strengthen the analytical capacity of international relations research institutions that can operate substantially without government constraint and have the potential to increase the intellectual underpinnings of these countries' foreign policies;
- To provide more effective opportunities for public and private experts from different countries to analyze problems jointly and develop practical solutions that can command wide public support.

INTERNATIONAL SECURITY

Within the field of international security studies, the Foundation pays special attention to regional conflicts. The reasons for this concentration are the following:

Peace within and among developing countries is a precondition for other Foundation initiatives in such fields as agriculture, health, and population.

Although nuclear deterrence may have prevented a direct conflict between the two superpowers or their principal allies, approximately 150 wars have caused death and deprivation for millions of people in the developing world since World War II. The frequency and intensity of such conflicts can be dangerously exacerbated by the importation of technologically advanced conventional weapons from the United States and other industrialized countries.

Regional conflicts have become the primary arenas in which the Soviet Union and the United States test each other in their struggle for world leadership, while within the United States the perceived effectiveness of the West's response to such conflicts has become a principal measure of presidential leadership and therefore potentially a divisive domestic issue.

Increasingly, governments in conflict-ridden regions are showing concern about the risks of escalation and a willingness to participate more actively in regional coalitions that seek to contain and mediate these conflicts and to set rules of engagement for external powers. Gradually, regional coalitions could become the building blocks of a more viable, less polarized world order. This difficult process of building mutual confidence and political will to resolve local disputes without the threat or use of force will take different forms according to each region's particular politics, economics, and culture. These processes need to be better understood and,

if possible, encouraged by privately funded research into the feasibility of new forms of international cooperation to meet regional economic and social scientific/technological needs.

As the polemics and grand designs of the postcolonial era yield to the realities of interdependence, the quest for more pragmatic policies is becoming evident and the utility of international relations research and training, locally and in cooperation with foreign institutes, is gaining recognition.

Recent experience has shown the limits of United States and Soviet Union control over local forces for change in the Third World. The realities of self-determination, the persistent mistrust between Moscow and Washington, and the impossibility of achieving "parity involvement" in every regional conflict suggest that if the two superpowers are to peacefully co-exist in an increasingly pluralistic international environment, they will have to learn jointly new techniques of multilateral negotiations and come to accept more readily the judgments of third parties regarding the appropriateness or inappropriateness of different roles in specific circumstances.

In 1985, the Foundation's International Relations program took several important steps to implement its strategy of capacity-building abroad, fostering international collaboration—among developing countries, between Soviet and American analysts, and across the North-South divide—and broadening foreign policy debate in the United States.

Early in the year, the International Institute for Strategic Studies (IISS) in London received major support for its regional security studies program, which was created with Foundation assistance in 1979. Building on its extensive case studies of Third World security problems, the IISS plans to work more directly with the new centers of international security studies in developing countries so as to deepen its understanding and intercultural standards of analytic excellence. Over the next three years, these efforts should produce a creative division of labor; researchers in London, including visiting Third World fellows, will concentrate on the linkages between regional crises and the central balance in East/West relations, while scholars at cooperating regional institutions in Mexico, Jordan, Zimbabwe, and Singapore would provide analyses of local forces for change, as well as indigenous regional perspectives on the impact of foreign involvement and obstacles to the peaceful resolution of these conflicts.

The International Peace Academy, under an RF grant, is adopting a more operational approach as it continues to work directly with such regional organizations as the Association of Southeast Asian Nations, the Organization of African Unity, the Contadora Group in Latin America, the Gulf Cooperation Council, and the new South Asian Regional Council. Its aim is to explore through a series of workshops and seminars in these regions practical steps for improving multilateral arrangements for conflict avoidance, mediation, and peacekeeping.

Until 1985, the Foundation gave little attention to building analytic capacity in other countries on Soviet international behavior, especially in the Third World. Nor had support been given to internationalizing research at U.S. centers on Soviet international behavior, which since 1983 have received major support from the Foundation. Yet our understanding of how Soviet capabilities and intentions are viewed from other national and regional perspectives requires trained personnel able to track Soviet statements and behavior regarding the indigenous and external military, political, economic, and religious factors in regional conflicts. Outside of North America, Japan, and parts of Europe, expertise on Soviet international behavior generally does not extend beyond a handful of diplomats who have had practical experience but very little training as Sovietologists. With a grant of \$900,000, the Social Science Research Council will, over the next four years, launch an experimental international competition offering early- to mid-career fellowships of one or two years at leading American centers on Soviet international behavior. It is hoped that an initial cohort of 15 foreign fellows will give significant impetus to building capacity in Soviet foreign policy studies abroad, particularly in regions of high international tensions, while also broadening the study of Soviet foreign policy at major U.S. centers, and establishing a network for future international collaboration in this field.

Meetings between influential and knowledgeable American and Soviet citizens regarding international security and economic issues were assisted by a grant to the United Nations Association (UNA) of the United States of America's Parallel Studies Program with the Soviet UNA; a \$25,000 grant to the Charles F. Kettering Foundation will enable them to organize another round of U.S.-Soviet discussions of regional conflicts through the Dartmouth conference series; and \$35,000 covered the costs of a meeting, which the Foundation jointly sponsored with the USSR Academy of Sciences, of American and Soviet Africanists on recent developments in southern Africa.

Following the pattern of recent years, a particular region was singled out in 1985 for concerted attention. Grants were made for capacity-building in Latin America, while others sought to facilitate communication between U.S. and Latin American international relations specialists, and to broaden domestic U.S. participation in the debate over U.S. policy toward that region. Following the return to civilian rule in Argentina, assistance was provided to help launch an international relations program at the Facultad Latinoamericana de Ciencias Sociales (FLACSO) in Buenos Aires. At a higher level, \$250,000 was appropriated for the Inter-American Dialogue so that influential Latins and North Americans could jointly consider vital hemispheric political and economic problems. And within the United States, a three-year grant of \$160,000 was made to the League of United Latin American Citizens Foundation for a program to educate Hispanic Americans in the United States about the economic and political problems of Latin America and to encourage them to contribute more fully and positively to improving inter-American communication and understanding.

U.S.-Mexican relations were given special consideration through a cluster of three appropriations. A three-year commitment to Stanford University will enable U.S. scholars and professionals to participate in a series of binational workshops and conferences primarily to explore the interaction of U.S. and Mexican macroeconomic policy. The Mexican Ministry of Finance covers the costs of Mexican participation in the workshops and conferences, which deal with such topics as trade and financial relations, agriculture and rural development, and the interdependence of the U.S. and Mexican labor markets.

A second grant, which is also available over three years, has been provided to the Center for U.S.-Mexican Studies at the University of California at San Diego to enable it to organize binational projects on the results and broader implications of the 1985 elections in Mexico, an assessment on the shifting balance of power in Mexico between the public and private sectors, public policy options available to Mexico over the next decade in the areas of rural development, urban food supply systems, employment, and export-oriented industrialization, and a project on the consequences for the United States of development in Mexico, including high inflation, rapid labor force expansion, and U.S. national security interests.

A third grant assists an interdisciplinary group of Mexican scholars, in Mexico City, to analyze how changing domestic forces in the United States and Mexico influence key foreign policy decisions affecting their bilateral relations. As a first step, the project will produce Mexico's first casebook of U.S. foreign policy decision-making on issues of interest to Mexico, which will be followed by a monograph series analyzing how domestic considerations confronting the U.S. and Mexican governments affect their policies toward the Central American crisis, trade policy issues, debt management, the international traffic of drugs, international energy policy, and immigration.

In the realm of public education, several grants were made for projects aimed at informing national and international opinion about security issues. The largest of these, a three-year grant of \$150,000, will enable Ruth Sivard to continue updating her widely acclaimed annual publication, *World Military and Social Expenditures*. Her carefully documented reports on trends in world military outlays, which now exceed \$700 billion annually, also show the opportunity costs of military spending when compared with the alternatives of improved education, medical care, and other humane endeavors. The survey will be published in eight languages and is distributed worldwide.

Examples of public education grants include: the League of Women Voters Education Fund for a program to explain changing U.S. relations with developing countries; Citizens for Ocean Law to keep the public abreast of progress under the UN Law of the Sea Treaty, which the U.S. has failed to ratify; the American Assembly for a program on East/West tensions and

Third World conflicts; the Center for a New Democracy for a young political leaders' program on developments in Asia; and to Georgetown University's Center for Strategic and International Studies for its projects on Angolan and Mozambican relations with the United States and two others on regional organization in Africa.

GRANTS

AMERICAN ASSEMBLY, *New York, New York, for its joint program with the W. Averell Harriman Institute for Advanced Study of the Soviet Union entitled "Easing East-West Tensions in the Third World."*

\$25,000

ASPEN INSTITUTE FOR HUMANISTIC STUDIES, *New York, New York, for the costs of its Inter-American Dialogue.*

\$250,000

ATLANTIC INSTITUTE FOR INTERNATIONAL AFFAIRS, *Paris, France, toward the costs of the preparation and dissemination of the annual International Public Opinion Poll.*

\$40,000

CALIFORNIA INSTITUTE OF TECHNOLOGY, *Pasadena, California, toward costs of collaborative research on security and foreign policy issues by its California Seminar on International Security and Foreign Policy and the University of California's Institute for Global Conflict and Cooperation.*

\$48,000

CATHOLIC UNIVERSITY OF LEUVEN, *Leuven, Belgium, toward the costs of an international colloquium entitled "The Future of European Security: Research Planning and Perspectives."*

\$10,000

CENTER FOR A NEW DEMOCRACY, *Washington, D.C., for a meeting entitled "Transitions in the Pacific Rim: Leadership for the Next Twenty Years."*

\$20,000

CITIZENS FOR OCEAN LAW, *Washington, D.C., toward the costs of its program development activities.*

\$50,000

COLUMBIA UNIVERSITY, *New York, New York, for use by its Southern Asian Institute, toward the costs of a South Asian regional security project.*

\$5,000

COUNCIL ON FOREIGN RELATIONS, *New York, New York, to establish an annual African lecturer series in which each invited speaker would be identified as a "David Rockefeller lecturer."*

\$50,000

EMORY UNIVERSITY, *Atlanta, Georgia, to analyze and compare Soviet and American national television reports of world news.*

\$37,065

FACULTAD LATINOAMERICANA DE CIENCIAS SOCIALES, *Buenos Aires, Argentina, to develop a new program of research, training, and publications in international relations.*

\$48,600

GEORGETOWN UNIVERSITY, *Washington, D.C.:*

For use by its Center for Strategic and International Studies, toward the costs of its defense organization project.

\$50,000

For use by its Center for Strategic and International Studies, toward the costs of the African Studies Program.

\$50,000

GRADUATE SCHOOL AND UNIVERSITY CENTER OF THE CITY UNIVERSITY OF NEW YORK, *New York, New York, for use by its Ralph Bunche Institute on the United Nations, toward the costs of the South African Visitors Project.*

\$46,460

HARVARD UNIVERSITY, *Cambridge, Massachusetts:*

For a conference entitled "Conflicting Images: India and America in the 1980s" (jointly sponsored with the Arts and Humanities program for a total of \$25,000).

\$10,000

Toward the costs of a peer review conference and editing of draft articles in the volume Securing Europe's Future: New Perspectives on Changing Elements of European Security.

\$11,200

INSTITUT FRANÇAIS DES RELATIONS INTERNATIONALES, *Paris, France, toward the costs of an international symposium on the future of Lebanon.*

\$23,000

INTERNATIONAL INSTITUTE FOR STRATEGIC STUDIES, *London, England, toward the costs of its regional security studies program.*

\$500,000

INTERNATIONAL PEACE ACADEMY, *New York, New York, toward the costs of its regional peacekeeping training programs and seminars.*

\$200,000

INTERNATIONAL PHYSICIANS FOR THE PREVENTION OF NUCLEAR WAR, *Boston, Massachusetts, toward the costs of a symposium on international medical cooperation, held in Budapest, Hungary (jointly sponsored with the Health Sciences program for a total of \$17,000).*

\$8,500

JOHNS HOPKINS UNIVERSITY, *Baltimore, Maryland, toward the costs of an international colloquium entitled "Science, Technology, and Public Policy," held in Bologna, Italy.*

\$15,000

CHARLES F. KETTERING FOUNDATION, *Dayton, Ohio, for task force meetings between U.S. and Soviet citizens on topics related to arms control and regional conflicts.*

\$25,000

ROMAN LABA, *Cambridge, Massachusetts, in support of his research on the Solidarity movement in Poland.*

\$8,000

LEAGUE OF WOMEN VOTERS EDUCATION FUND, *Washington, D.C., toward the costs of its project entitled "U.S. Relations with Developing Countries: A Matter of National Security."*

\$50,000

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, *Cambridge, Massachusetts:*

Toward costs of a joint MIT-Harvard University project entitled "The Social and Political Implications of Science and Technology in the USSR." \$35,000

For use by its Center for International Studies, toward the costs of an experimental course on political and societal change. \$25,000

WILLIAM C. POTTER, *Los Angeles, California, in support of the development of educational materials for simulating arms control negotiations.*

\$11,000

ROCKEFELLER FOUNDATION, *New York, New York:*

For use by an interdisciplinary group of Mexican scholars, toward the costs of a project that would analyze the domestic determinants of U.S.-Mexican relations. \$150,000

For the costs of U.S. and Soviet participation in a meeting on southern Africa and U.S.-Soviet interests in that region. \$35,000

STANFORD UNIVERSITY, *Stanford, California, for use by its Political Economy of the Americas Program, toward the costs of a binational project on U.S.-Mexican relations.*

\$250,000

UNITED NATIONS ASSOCIATION OF THE UNITED STATES OF AMERICA, *New York, New York, toward the costs of its Soviet-American Parallel Studies Program.*

\$150,000

UNIVERSITY OF CALIFORNIA, *San Diego, California, for use by its Center for U.S.-Mexican Studies, toward the costs of its program of research, discussion, and publications.*

\$154,350

UNIVERSITY OF PITTSBURGH, *Pittsburgh, Pennsylvania, for use by its International Security Studies Program, for a project entitled "Security Outside NATO: The Atlantic Alliance and the Middle East."*

\$15,000

UNIVERSITY OF SOUTHERN CALIFORNIA, *Los Angeles, California, for editing and publishing the papers emanating from an international conference entitled "The United States and Central America: A Five Year Assessment, 1980-1985."*

\$10,000

WESTERN AUSTRALIAN INSTITUTE OF TECHNOLOGY, *Bentley, Australia, for preparing a volume entitled Perspectives on International Relations in the Indian Ocean Region.*

\$2,806

WOODROW WILSON INTERNATIONAL CENTER FOR SCHOLARS, *Washington, D.C.:*

For use by the Kennan Institute for Advanced Russian Studies, toward the costs of its project on Soviet policy toward the Balkans.

\$25,000

For use by its European Institute toward the costs of its program associate of the West European program.

\$25,000

WORLD PEACE FOUNDATION, *Boston, Massachusetts, toward costs of the Inter-American Collective Security Project.*

\$35,000

YALE UNIVERSITY, *New Haven, Connecticut, for use by the Yale Center for International and Area Studies, toward the costs of a project entitled "Investigation of Conflict Resolution in Cyprus."*

\$7,500

ECONOMIC COOPERATION

International economic relations over the past decade have been marked by extraordinary turbulence. The framework of rules and procedures that have guided international economic policies and cooperative arrangements for 40 years are breaking down, compelling governments to undertake major adjustments. These adjustment efforts are highly politicized because their distributional consequences loom large both within and among countries. As a result, the lines between issues of national security and international economics have become blurred. Yet, along with all the turbulence and acrimony, we have seen a continuing integration of the international economy, one which creates new mutual interests and gives impetus for closer cooperation.

While private foundations can do very little directly to shore up the precarious world economy, they can assist efforts to diagnose better the scope of these problems and the ways to improve macroeconomic policies

and their coordination among key countries. The inadequacy of traditional tools of economic analysis, a relatively well-developed field of social science for comprehending the implications of current international economic trends, has become acutely evident. International economists, however technically accomplished, seem isolated from the new political realities that shape macroeconomic policy.

With the above conditions in mind, in 1985 the International Relations program pursued a strategy in international economics under three headings: the international economics of development; adjustment to structural change in the world economy; and reform of international economic institutions. The three are interrelated and encompass efforts at building capacity for international economic research and analysis abroad, particularly in developing countries; the creating and strengthening of unofficial networks of cooperation among scholars of several disciplines with an interest in international economic policy issues within and across the major regions of the world; and the promotion of bipartisanship and national consensus on international economic issues in the United States.

In 1985, the major commitments under international economics were to three institutions in the United States. Two of these were in the field of trade policy. The Institute for International Economics, Washington, D.C., received a grant for a project to analyze and compare trade policy alternatives in three problem sectors—textiles, steel, and automobiles. The author of the sector analyses will be William R. Cline, who will have the benefit of advice from three sector study groups comprising industry officials from the relevant developing countries and from the United States. A second grant was made to the Council on Foreign Relations, New York, toward a major project on the future of the world trading system aimed at building domestic consensus for U.S. trade policy on the eve of a new round of multilateral negotiations. The project, which is directed by Dr. C. Michael Aho, will organize several study groups on such issues as the impact of national agricultural policy on international economic relations, the export of high technology, trade, and services, and the changing role of developing countries in the world trading system. Priority will be given to those issues that (1) emerge as central to the congressional debate over renewal of the president's negotiating authority; (2) could become obstacles to an effective U.S. role in new multilateral trade rounds; (3) could frustrate efforts to reach consensus in the round; and (4) are of obvious long-term importance even though left out of multilateral negotiations.

A third project at the Brookings Institution, Washington, D.C., will analyze how divergent macroeconomic policies in Western Europe and the United States are threatening the prospects for economic growth of both developed and developing countries. A team of leading American economists, led by Charles L. Schultz and Robert Z. Lawrence, will conduct a series of case studies analyzing how national leaders in four countries—Great Britain, France, the Federal Republic of Germany, and

Sweden—define the domestic and international impediments to economic recovery and macroeconomic policies for dealing with these impediments. While the principal authors are Americans, Europeans would be involved at every stage in designing and reviewing the case studies.

Two smaller grants were made in 1985 as first steps in the Foundation's growing interest in the future of international financial institutions. A founding grant was provided to the Bretton Woods Committee, which seeks to draw public attention and bipartisan political support for the World Bank and the International Monetary Fund. The Overseas Development Council, Washington, D.C., received support for a study of ways to improve the organization of the World Bank.

In exploring opportunities under the heading international economics development, the Foundation is giving special attention to Africa's international economic problems and ways to develop research and training capabilities in that continent. Fifty thousand dollars has been given to Georgetown University's African Studies Program for a major international conference on Africa's debt problems, which will be sponsored jointly with the Institute for International Economics in Washington, D.C., in February 1986. A smaller grant was given to Dr. Henry Akuoko-Frimpong to conduct a survey of international economic training and teaching capabilities in 11 African countries.

GRANTS

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| HENRY AKUOKO-FRIMPONG, <i>London, England, to enable him to assess advanced research and training capabilities in international economics at African universities and other institutions.</i> | \$17,000 |
| ASPEN INSTITUTE FOR HUMANISTIC STUDIES, <i>New York, New York, toward the costs of its project on governance in a world economy.</i> | \$20,000 |
| BRETTON WOODS COMMITTEE, <i>Washington, D.C., toward its operating costs.</i> | \$25,000 |
| BROOKINGS INSTITUTION, <i>Washington, D.C., toward the costs of a project on impediments to European economic growth.</i> | \$200,000 |
| CORNELL UNIVERSITY, <i>Ithaca, New York, toward the costs of publishing the papers delivered at the National Conference on Economic Dislocation and Job Loss (jointly sponsored with the Equal Opportunity program for a total of \$3,000).</i> | \$1,500 |
| COUNCIL ON FOREIGN RELATIONS, INC., <i>New York, New York, toward the costs of a project on the future of the world trading system.</i> | \$250,000 |

DUKE UNIVERSITY, *Durham, North Carolina, toward the costs of a conference on East-West multinational co-ventures.*

\$10,000

GEORGETOWN UNIVERSITY, *Washington, D.C., toward the costs of a joint Georgetown University-Institute for International Economics conference entitled "African Debt and Financing."*

\$50,000

GLOBAL INTERDEPENDENCE CENTER, *Philadelphia, Pennsylvania, toward the costs of the seventh International Monetary and Trade Conference.*

\$10,000

INSTITUTE FOR INTERNATIONAL ECONOMICS, *Washington, D.C., in support of its project on trade policy for textiles, steel, and automobiles.*

\$275,000

INTERNATIONAL ECONOMIC ASSOCIATION, *Paris, France, toward the costs of a conference entitled "Peace, Defense, and Economic Analysis."*

\$10,000

OVERSEAS DEVELOPMENT COUNCIL, *Washington, D.C., for a special volume of its U.S.-Third World Policy Perspectives on future directions for the World Bank.*

\$48,600

ROCKEFELLER FOUNDATION, *New York, New York, for planning an international conference on Polish agriculture.*

\$50,000

UNITED NATIONS ASSOCIATION OF THE UNITED STATES OF AMERICA, *New York, New York, for use by its Economic Policy Council toward the costs of its study on U.S. policy toward the emerging industrial countries.*

\$23,000

PUBLIC
EDUCATION
GRANTS

LEAGUE OF UNITED LATIN AMERICAN CITIZENS FOUNDATION, *Washington, D.C., toward the costs of a foreign policy education project of the League of United Latin American Citizens.*

\$160,000

WORLD PRIORITIES, *Washington, D.C., toward the costs of expanding its research and publications program.*

\$150,000

TRAINING AND
RESEARCH
GRANTS

GERMAINE A. HOSTON, *Department of Political Science, The Johns Hopkins University, Baltimore, Maryland, to undertake research entitled "Comparative Perspectives on Marxism and Nationalism in China and Japan."*

\$60,400

INSTITUTE OF INTERNATIONAL EDUCATION, *New York, New York, toward the costs of a program for developing international relations expertise in China.*

\$100,000

MILES KAHLER, *Department of Political Science, Yale University, New Haven, Connecticut, to undertake research on the political effects of export-oriented industrialization in Asia.*

\$56,453

ROCKEFELLER FOUNDATION, *New York, New York, for a foreign scholars' fellowship program on Soviet international behavior; this sum to be administered by the Social Science Research Council, New York.*

\$900,000



POPULATION SCIENCES

Through its program in Population Sciences the Foundation attempts to understand the causes and effects of rapid population growth in developing countries, to train developing-country scholars in this field, and to provide information drawn from the biomedical and social sciences to policymakers in the developing world as they endeavor to formulate or improve population policies and programs. These efforts to advance knowledge and increase the number of skilled professionals are concentrated in three areas:

- Research in reproductive biology—strengthening basic research related to fertility regulation, with emphasis on the application of molecular biology and the expansion of scientific and technical capacity in developing countries.
- Research on contraceptive technology—application of basic research results to contraception research and technology; development of new contraceptive methods, including testing for acceptability; and exploration of health and safety issues relating to existing and new methods.
- Policy studies—improving the understanding of fertility determinants, with emphasis on the status and role of women, and of determinants and consequences of population growth in developing countries.

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These three components are reflected in a major 1985 initiative, a decision to appropriate \$1 million to improve the understanding of population issues within sub-Saharan countries, and to enhance the level of indigenous expertise needed for the establishment of sound and effective national population policies. Under this initiative, the RF will consider proposals focusing on sub-Saharan Africa under all three components of the Population Sciences program in an effort to enable African scholars to carry out biomedical and policy research, and to enhance the capability of selected African institutions to provide training in the population sciences.

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A series of awards renewed in 1985 offers the opportunity of start-up research support for population scientists from the developing world who are returning to a position at home after graduate-level training abroad either in the biomedical or social sciences. This program enables the institution with which the young scientist is affiliated to purchase equipment and supplies necessary to permit the returning scholar to continue work in which she or he has been trained. Awards for 1985 are listed below:

GRANTS

CATHOLIC UNIVERSITY OF CHILE, *Santiago, Chile*, for research on circulating steroid binding globulins and m-RNA characterizations.

\$25,000

CHINESE ACADEMY OF SCIENCES, *Beijing, People's Republic of China, pharmacokinetic studies of new antifertility agents and the synthesis of derivatives at the Shanghai Institute of Materia Medica.*

\$27,500

CHULALONGKORN UNIVERSITY, *Bangkok, Thailand, toward the costs of two demographic research projects.*

\$19,000

INSTITUTO DE BIOLOGIA Y MEDICINA, *Buenos Aires, Argentina, for research on an immunological approach to male contraception.*

\$25,000

UNIVERSITY OF CHILE, *Santiago, Chile, for research on metabolic and membrane transport strategies to male contraception: a study of Sertoli and germinal cells.*

\$25,000

ZHEJIANG ACADEMY OF MEDICINE, *Zhejiang, People's Republic of China, for three research projects in reproductive biology at its Department of Reproductive Pharmacology.*

\$25,000

A new program aimed at promoting research and training is the Biotechnology Career Fellowship competition. Established in 1984 as a collaborative effort by the Foundation's three science-based programs, this competition provides outstanding young Third-World scientists with opportunities to participate in collaborative investigations that involve spending approximately three months each year, for at least three consecutive years, at premier research institutions. An appropriation of \$200,000 was made to continue this effort (\$66,666 from Population Sciences and \$66,667 from both Agricultural Sciences and Health Sciences in 1985, see *Fellowships*).

REPRODUCTIVE BIOLOGY

The Foundation supports basic research in the biology of reproduction since it is only through knowledge of human physiology that new methods of contraception can be developed. An important factor in the Foundation's grantmaking in this field is the emphasis given to research undertaken in the countries of the developing world, where the need for better understanding of fertility and how it might be regulated is great.

In 1979, shortly after normalization of relations between the United States and China, the Chinese Academy of Sciences asked the Foundation for assistance with modernizing the work of the Institute of Zoology's program in reproductive endocrinology. As a first step, two staff members of the institute were awarded fellowships for advanced study in the United States. Subsequently, the Foundation awarded grants to establish units for their research on the molecular biology of hormone action and *in vitro* culture of cell types from the reproductive system. During 1985, the Foundation provided funds to the Chinese Academy of Sciences for the purchase of scientific equipment and supplies, and for the training of young staff

members at the Institute of Zoology, so as to link modern endocrinological research with applied research in an effort to find new approaches to fertility regulation.

On the other side of the world, in Brazil, a program of research and training in reproductive biology at the Federal University of Bahia's maternity hospital received renewal support of \$250,000 in 1985 to continue work in the fields of uterine physiology, infertility, and fertility regulation.

GRANTS

CATHOLIC UNIVERSITY OF CHILE, *Santiago, Chile, toward the costs of a meeting of Latin American scientists engaged in research on human reproduction.*
\$10,000

CENTRO DE PESQUISAS E CONTROLE DAS DOENCAS
MATERNO-INFANTIS DE CAMPINAS, *Campinas, Brazil, for studies on the number of menstrual ovulatory cycles and use of oral contraceptives as risk factors of breast cancer.*
\$20,100

CHINESE ACADEMY OF SCIENCES, *Beijing, People's Republic of China, toward the costs of research on the biology of reproduction at its Institute of Zoology.*
\$167,000

CORNELL UNIVERSITY, *Ithaca, New York:*
Toward the cost of research at its Medical College on the role of calcium and phosphoinositides in oocyte activation. \$23,960
For studies to be conducted at its Medical College on immunological consequences of sperm antibody formation. \$25,000

FEDERAL UNIVERSITY OF BAHIA, *Salvador, Brazil:*
To enable a young physician from its maternity hospital to study for the master's degree in public health at Johns Hopkins University. \$29,750
For a program of research and training in reproductive biology at its maternity hospital. \$250,000

GEORGETOWN UNIVERSITY, *Washington, D.C., for use by its School of Medicine toward the costs of generating and testing monoclonal antibodies against epididymal epithelial cell basolateral membranes.*
\$21,300

KYOTO UNIVERSITY, *Kyoto, Japan, for further research on factors regulating mammalian oocyte maturation at its College of Agriculture.*
\$25,000

POPULATION COUNCIL, *New York, New York, for a research project entitled "Gametogenesis Regulating Factors: Oocyte Maturation Preventing Factor."*
\$25,000

ROCKEFELLER UNIVERSITY, *New York, New York:*

For studies on the mechanism of progestin action in reproductive function.

\$35,000

For research on the control of reproduction by catechol estrogens.

\$27,066

UNIVERSITY OF CALIFORNIA, *Davis, California, for research on the immunological inhibition of human sperm fertility in vitro at its School of Medicine.*

\$29,020

UNIVERSITY OF CHILE, *Santiago, Chile, for research on the regulation of human corpus luteum function.*

\$25,000

UNIVERSITY OF MASSACHUSETTS, *Boston, Massachusetts, for research at its Medical Center on the ontogeny of progesterone metabolic capability in mouse and hamster preimplantation embryos.*

\$24,970

UNIVERSITY OF TAMPERE, *Tampere, Finland, for research on the regulation of avidin gene expression.*

\$25,000

CONTRACEPTIVE
TECHNOLOGY

Knowledge gained in reproductive biology research is put to direct use through the development and testing of new contraceptive methods. The Foundation has been instrumental in supporting research and field trials in connection with an especially promising method, NORPLANT, an implant that releases the steroid levonorgestrel from capsules placed beneath a woman's skin. Trials of NORPLANT's acceptability have been conducted under Foundation support in Indonesia, Egypt, China, and Thailand. In 1985, the Foundation awarded funds for a field trial and evaluation in Korea, to be conducted under the auspices of Yonsei University in Seoul. This trial, which will take place over a two-year period, involves a comparison between the effectiveness of NORPLANT and other contraceptives now in use in Korean clinics.

Another long-term interest of the Foundation has been gossypol, a compound that has been shown to have an antifertility effect in men. By the end of 1985, the Foundation had made grants totaling approximately \$1.6 million in an effort to support and stimulate scientific investigations on the safety and efficacy of gossypol.

GRANTS FOR
GOSSYPOL
RESEARCH

HARVARD UNIVERSITY, *Cambridge, Massachusetts, for biochemical studies on the antispermatogetic effects of gossypol at Beth Israel Hospital.*

\$18,780

MARINE BIOLOGICAL LABORATORY, *Woods Hole, Massachusetts, toward the costs of research on the effects of gossypol on echinoderm sperm motility and cell division.*

\$1,500

NATIONAL UNIVERSITY OF CORDOBA, *Cordoba, Argentina, for studies on the effects of gossypol on Chagas' disease at its Electron Microscope Center.*
\$14,000

NORTH CAROLINA STATE UNIVERSITY, *Raleigh, North Carolina, toward the costs of a research project entitled "Effect of Gossypol on Nuclear Protein Synthesis and Histone Replacement in Rat Testes."*
\$23,565

ROCKEFELLER FOUNDATION, *New York, New York, for the purchase of gossypol for distribution to investigators performing research on the compound's antifertility properties.*
\$22,200

ROCKEFELLER UNIVERSITY, *New York, New York, for research on the interaction of gossypol with proteins from Spisula and bull sperm.*
\$25,000

UNIVERSITY COLLEGE LONDON, *London, England, for a study of the mitochondrial role in the inhibition of spermatogenesis by gossypol.*
\$26,000

UNIVERSITY OF NORTH CAROLINA, *Chapel Hill, North Carolina, for research on the effect of gossypol on spermatogenesis in vitro.*
\$25,000

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Another promising approach in the search for new methods of contraception is that of developing a vaccine to control fertility. During 1985, the Foundation made a grant to the National Institute of Immunology in New Delhi, India, to help the institute continue its work in this field. Such studies have been supported by the Foundation in India since 1980, and under the new grant two vaccine preparations will reach the clinical trial stage.

GRANTS

FRANK ALVAREZ-SANCHEZ, *Director of the Department of Obstetrics and Gynecology at the Hospital Dr. Francisco E. Moscoso Puello, Santo Domingo, Dominican Republic, to determine the endocrine profiles of subjects using NORPLANT implants.*
\$19,434

CENTERS FOR DISEASE CONTROL, *Atlanta, Georgia, toward the cost of support services for a joint international training program in family planning evaluation and epidemiology.*
\$19,752

GAO ER-SHENG, *Shanghai First Medical College, Shanghai, China, for training in family planning evaluation and epidemiology at the Centers for Disease Control, Atlanta.*
\$4,150

INTERNATIONAL WOMEN'S HEALTH COALITION, *New York, New York, to enable developing-country scholars to participate in an international symposium on the prevention and treatment of contraceptive failure, held in Berlin.*

\$35,000

NATIONAL INSTITUTE OF IMMUNOLOGY, *New Delhi, India, for studies on immunological methods of fertility regulation.*

\$300,000

NATIONAL TAIWAN UNIVERSITY, *Taipei, Republic of China, toward the costs of a NORPLANT contraceptive implant acceptability study carried out by its University Hospital.*

\$25,000

POPULATION COUNCIL, *New York, New York, to enable scientists from the developing world to attend a symposium on immunologic approaches to contraception and promotion of fertility.*

\$10,000

ROCKEFELLER UNIVERSITY, *New York, New York, for research on the reproductive endocrinology of progestin and antiprogestin compounds.*

\$29,160

SOMSAK SUTHUTVORAVUT, *Mahidol University, Bangkok, Thailand, for training in family planning evaluation and epidemiology at the Centers for Disease Control, Atlanta.*

\$22,975

UNIVERSITY OF CONNECTICUT, *Farmington, Connecticut, for research to purify guinea pig sperm antigens and investigate their use as contraceptive vaccine.*

\$24,940

UNIVERSITY OF NAIROBI, *Nairobi, Kenya, to enable 50 African scientists outside of Kenya to receive subscriptions to the Journal of Obstetrics and Gynecology of Eastern and Central Africa.*

\$2,500

YONSEI UNIVERSITY, *Seoul, Korea, for a field trial of the NORPLANT contraception system.*

\$111,000

POLICY STUDIES

In 1985, the Foundation made a grant to the International Planned Parenthood Federation, an organization based in London, England, that provides financial or technical assistance to private family planning associations in 118 countries. The Foundation's grant (\$250,000 from Population Sciences and \$500,000 from Special Interests and Explorations) was made to help this organization, the largest nongovernmental provider of health services in the world, to maintain the integrity of its family planning programs over the short term while it makes operational and fund-raising adjustments that would allow it to operate without U.S. government assistance.

The Global Committee of Parliamentarians on Population and Development was awarded a grant to expand and strengthen its publication and communications activities. This international organization, based in New York City, is an association of world parliamentary leaders, former heads of government, and experts from different development sectors that works cooperatively with national and regional parliamentary groups and with international donor assistance agencies. Its objective is to stimulate world opinion leaders to study population and development issues and to serve as a forum for the exchange of ideas and information.

During 1985, the Foundation continued to support the strengthening of graduate-level training and research programs in social science aspects of population studies in developing countries, particularly through a grant to El Colegio de México in Mexico City. El Colegio's Center for Demographic and Urban Development, initiated in the 1960s (with Foundation assistance), is the first graduate training and research program in population studies in Latin America. The new grant will be used toward the establishment of a doctoral program in population and development for Latin American students. The center, with its focus on the interrelations between population, development, and social change processes, prepares analysts for government and university positions.

Another major training award was made to further the Population Council's training, research, and technical assistance projects. The Population Council is a nongovernmental organization, based in New York City. It is concerned with both the biomedical and social science aspects of population issues in attempting to achieve a better understanding of problems related to rapid population growth. The 1985 grant will enable the Council to continue to offer fellowships through a global competition open to scholars in the social sciences, and will help support population policy research and technical assistance in sub-Saharan Africa, as well as research on fertility determinants. While the Foundation has been a major supporter of the Council's research and fellowship programs in the past, this year for the first time provisions were made for funding of specific research projects and technical assistance efforts in sub-Saharan Africa, complementing the Foundation's own initiative in that area of the world.

Also in the area of policy studies, the Foundation in 1985 set aside the sum of \$500,000 to be used for research on the evaluation of family planning programs in developing countries. The aims of this undertaking are to identify the key elements of success and failure of family planning programs in selected developing countries and to assist in structuring of management information systems to monitor and improve program performance. The Foundation expects that this program will generate empirical data on the relative effectiveness of different strategies used by family planning programs, such as community-based distribution of contraceptive supplies and services, social marketing programs, postpartum family planning services, and the use of the mass media. To begin this effort, in 1985 these specific actions were taken:

GRANTS

EL COLEGIO DE MEXICO, *Mexico City, Mexico:*

For a doctoral program on population and development at its Center for Demographic and Urban Development. \$300,000

In support of planning efforts for a Latin American regional population and development program. \$7,000

GLOBAL COMMITTEE OF PARLIAMENTARIANS ON POPULATION AND DEVELOPMENT, *New York, New York, for its publication and communications program.*

\$150,000

INTERNATIONAL PLANNED PARENTHOOD FEDERATION, *London, England, for its family planning program in the developing world (jointly sponsored with Special Interests and Explorations for a total of \$750,000).*

\$250,000

POPULATION COUNCIL, *New York, New York, for training, research, and technical assistance projects.*

\$890,000

Another program of research, this one specifically geared to understanding the relationship between fertility and the status of women in relation to men in developing countries, received renewed support by the Foundation in 1985. Research to date has shown that the woman's level of education and her position within the family have major importance for her fertility. Women with primary or secondary schooling, for example, are more likely to postpone marriage, are more likely than are less-educated women to use contraception, and their children are less likely to die young. Women who are allowed independent economic activity outside the home and who have access to other social support networks also have lower fertility rates. This research program was initiated in 1982. Grants are awarded through an international competition; in 1985 support was provided for these projects:

ACADEMIA SINICA, *Taipei, Taiwan, toward the costs of a study at its Institute of Ethnology on fertility and the status of women in two Chinese communities.*

\$22,505

LIN LEAN LIM, *University of Malaya, Kuala Lumpur, Malaysia, to undertake research on women's status, development, and ethnic differentials in fertility in peninsular Malaysia.*

\$28,630

A. K. OMIDEYI, *University of Ife, Ile-Ife, Nigeria, for research on women's status and fertility among the Yoruba in Nigeria.*

\$30,000

ROCKEFELLER FOUNDATION, *New York, New York, to hold a workshop on women's status and fertility.*

\$40,000

ZEBA A. SATHAR and SHAHNAZ KAZI, *Pakistan Institute of Developmental Economics, Islamabad, Pakistan*, and NIGEL CROOK and CHRISTINE CALLUM, *University of London, England*, for a study of women's status and fertility in Pakistan.

\$27,780

OTHER GRANTS

AMERICAN ASSEMBLY, *New York, New York*, toward the costs of a meeting, resulting in published reports on international population policy and the issues and choices facing the United States.

\$35,000

AUSTRALIAN NATIONAL UNIVERSITY, *Canberra, Australia*, for research on the demographic transition in Sri Lanka and Kerala.

\$25,000

EL COLEGIO DE MEXICO, *Mexico City, Mexico*, in support of planning efforts for a Latin American regional population and development program.

\$7,000

EAST-WEST CENTER, *Honolulu, Hawaii*, for a cooperative program of the State Family Planning Commission of the People's Republic of China and the East-West Population Institute for demographic research and training in China.

\$50,000

INTERNATIONAL UNION FOR THE SCIENTIFIC STUDY OF POPULATION, *Liège, Belgium*, to enable developing-country scholars to participate in the Union's 20th general conference.

\$25,000

MELKIZEDICK T. LESHABARI, *University of Dar es Salaam, Dar es Salaam, Tanzania*, to undertake research on pregnancy among schoolgirls in Dar es Salaam and the need for formal sex education in Tanzania.

\$11,000

NATIONAL ACADEMY OF SCIENCES, *Washington, D.C.*, for studies on the consequences of population growth and the effectiveness of family planning programs.

\$35,000

POPULATION REFERENCE BUREAU, *Washington, D.C.*, for its project to build population education into the Model United Nations program (jointly sponsored with Special Interests and Explorations for a total of \$25,000).

\$15,000

LUIS ROSERO B., *University of Costa Rica*, to analyze the proximate determinants of fertility in Costa Rica at the Centers for Disease Control in Atlanta, Georgia.

\$6,300

UNIVERSITY OF THE PHILIPPINES, *Quezon City, Philippines*, toward a study entitled "Mechanized Technologies, Secondary Education, and Fertility Transition."

\$50,000

VIRGINIA COMMONWEALTH UNIVERSITY, *Richmond, Virginia, for a study of the effects of Singapore's new population policies designed to increase fertility selectively.*

\$5,000

**SPECIAL
INTERESTS
AND
EXPLORATIONS**

SPECIAL INTERESTS AND EXPLORATIONS

As should be evident from the preceding sections, the Foundation operates within closely defined areas of interest so that its limited funds will advance major goals. This means that the Foundation has to make strategic, long-term commitments: several of its programs go back more than 20 years. At the same time, it must remain open to change as times change, and maintain flexibility in its approaches to current goals.

Special Interests and Explorations is the funding mechanism that allows the RF to examine new opportunities, to support activities of importance not covered by existing programs, and to fund on a short-term basis collaboration between two or more of its programs—undertakings that could not otherwise have come about because of financial constraints within individual programs.

Such joint ventures are described in more detail in the program sections of this report. In 1985, they included a grant of \$100,000 made jointly with the Arts and Humanities program and the Equal Opportunity program to enable the school-oriented publication *Education Week* to broaden its base of support, and a grant of \$1 million made with the Health Sciences program to create a mechanism to expedite the production of new vaccines within the World Health Organization. International Planned Parenthood Federation received assistance totaling \$750,000, a joint undertaking with the Population Sciences program, to continue its family planning work in developing countries unimpaired, and \$200,000 was made available, working with Foundation programs in International Relations and Arts and Humanities, to the European Cooperation Fund to support the publication of Central European émigré writers.

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Exploratory projects, and those of merit, but ineligible under program guidelines, funded in 1985 were:

PENELOPE E. ANDREWS, *Johannesburg, South Africa, to supplement a Chamberlain Fellowship in Legislative Research at the Columbia University School of Law:*

\$3,000

COLUMBIA UNIVERSITY, *New York, New York, for research fellowships for two South African epidemiologists.*

\$133,000

EDITORIAL PROJECTS IN EDUCATION, *Washington, D.C., to strengthen its publication Education Week (jointly sponsored with the Arts and Humanities and Equal Opportunity programs for a total of \$100,000).*

\$50,000

EUROPEAN COOPERATION FUND, *Brussels, Belgium, to support the publications and translation of literary works of Central European writers (jointly sponsored with the Arts and Humanities and International Relations programs for a total of \$200,000).*

\$150,000

INDIANA UNIVERSITY, *Bloomington, Indiana, for use by its African Studies Program for a conference on museums sharing their collections of African art.*

\$7,500

INTERNATIONAL INSTITUTE FOR ENVIRONMENT AND DEVELOPMENT, *Washington, D.C., for private sector activities of the United Nations Office for Emergency Operations in Africa.*

\$25,000

INTERNATIONAL PLANNED PARENTHOOD FEDERATION, *London, England, toward its family planning programs in the developing world (jointly sponsored with the Population Sciences program for a total of \$750,000).*

\$500,000

INTERNATIONAL UNION OF ANTHROPOLOGICAL AND ETHNOLOGICAL SCIENCES, *Durham, England, for African participants to attend a workshop on scientific writing for international journals.*

\$5,000

LONG BOW GROUP, *Philadelphia, Pennsylvania, toward the costs of a documentary film on health care in rural China (jointly sponsored with the Arts and Humanities program for a total of \$25,000).*

\$10,000

PETER MAGUBANE, *New York, New York, to enable him to complete a photographic study of women in South Africa.*

\$5,000

MEDICAL EDUCATION FOR SOUTH AFRICAN BLACKS, *Washington, D.C., toward costs of an investigation by representatives of the Johns Hopkins, Harvard, and Tufts medical schools of facilities for training black health professionals in South Africa.*

\$7,500

NATIONAL COUNCIL FOR RESEARCH ON WOMEN, *New York, New York, toward costs of establishing an institutional base for the Women's Dialogue: U.S./U.S.S.R.*

\$35,000

NATIONAL MUSEUMS OF KENYA, *Nairobi, Kenya, for development of its International Field School in Palaeoanthropology.*

\$25,000

OBOR, *Clinton, Connecticut, for publishing a special issue of the Manila-based journal Solidarity, on the topic of ideology and modernization.*

\$5,000

OVERSEAS DEVELOPMENT COUNCIL, *Washington, D.C., general support.*

\$750,000

PARTNERSHIP FOR PRODUCTIVITY INTERNATIONAL, *Washington, D.C., for a conference to develop a concerted and comprehensive response to the food crisis in Africa.*

\$5,000

POPULATION REFERENCE BUREAU, *Washington, D.C., toward costs of its project to build population education into the Model United Nations program (jointly sponsored with the Population Sciences program for a total of \$25,000).*

\$10,000

UNIVERSITY OF CALIFORNIA, *Los Angeles, California, toward costs of the eighth general conference of the International Association of Universities.*

\$25,000

UNIVERSITY OF GEORGIA LAW SCHOOL ASSOCIATION, *Athens, Georgia, toward the costs of an archival collection of Dean Rusk's papers, memoranda, and letters.*

\$7,500

UNIVERSITY OF NAIROBI, *Nairobi, Kenya, for the preparation of research materials relevant to the UN Women's Decade Conference, and dissemination of its conclusions.*

\$50,000

WILLIAMS COLLEGE, *Williamstown, Massachusetts, for a conference, "Development Politics and Economics Training."*

\$5,000

WOMEN IN NEED, *New York, New York, toward costs of setting up and operating a child care service.*

\$50,000

WOMEN'S FUNDING COALITION, *New York, New York, toward the costs of a planning workshop to consider future directions of development alternatives with Women for a New Era.*

\$25,000

WORLD BANK, *Washington, D.C., toward costs of archival research on the Rockefeller Foundation's contribution to Indian agricultural development.*

\$6,000

WORLD HEALTH ORGANIZATION, *Geneva, Switzerland, for its Special Programme on Vaccine Development (jointly sponsored with the Health Sciences program for a total of \$1,000,000).*

\$300,000

WORLD PRIORITIES, *Washington, D.C., toward the purchase and shipment of 8,000 copies of Women . . . A World Survey, for distribution at the UN Women's Decade Conference in Nairobi, Kenya.*

\$7,500

The development process is much more complex and uncertain than was foreseen 25 years ago: development-oriented organizations have realized relatively few of the high hopes with which they began their efforts to improve the quality of life in the poorer countries. Even where dramatic growth has been achieved, concomitant impacts on the social and political fabric were unexpected and are still poorly understood.

In 1982, the RF initiated a program under which 14 fellows, seven from Africa and seven from Southeast Asia, undertook two-year studies on the antecedents and consequences of development as it relates to their own societies. A central part of the rationale was the need to incorporate Third World perspectives into development scholarship and planning, and to offer the investigators time to reflect on subjects broader than feasibility studies and project evaluations that dominate the research scene in Africa and Southeast Asia.

The two regional groups met last September at the Foundation's Bellagio Conference and Study Center with three eminent development specialists to discuss the drafts of papers that had come out of their research. Participants agreed on the value of this program in nurturing professional growth of the social sciences in the Third World, and on the contribution of mechanisms such as regional workshops and joint meetings, in helping the fellows to expand their scholarly horizons.

In 1985, an appropriation of \$530,000 was made to continue the Reflections on Development program, with minor modifications based on past experience. Current fellows, their affiliations and research topics, are:

PETER ANYANG' NYONG'O, *Addis Ababa University, Ethiopia*. "State and Society in Kenya from Independence to the Present."

ARIEF BUDIMAN, *Satya Wacana Christian University, Indonesia*. "The Indonesian Economy in the 1970s: Toward a New Strategy of Development."

PETER PALMER EKEH, *University of Ibadan, Nigeria*. "Colonialism and Social Formations in Africa."

LIM TECK GHEE, *Universiti Sains Malaysia, Malaysia*. "Nongovernmental Organizations in the ASEAN Regions, 1970-82: Studies in Citizen Participation."

REYNALDO ILETO, *De La Salle University, Philippines*. "Toward a Critique of Developmentalist Historiography: Reflections on Suppressed Voices in the Philippine Past, 1860-1960."

YAA LUCKHAM, *University of Sussex, England*. "Migrant Workers' Human Rights and Development in West Africa."

MAHMOOD MAMDANI, *Makerere University, Uganda*. "The Peasant Question in Uganda."

MAHAR MANGALIAS, *Philippine Social Science Center, Philippines*. "Distributive Justice in the Philippines: Ideology, Policy, and Surveillance."

ASSEFA MEHRETU, *Michigan State University*, "Space and Development in Africa."

MABEL MILIMO, *University of Zambia*, "Women, Development, and Population."

FELIX MNTHALI, *University of Botswana*, "Perceptions of Change: A Critical Study of the Concepts of Development in the Works of Creative Writers in Africa."

CHANDRA MUZZAFAR, *Universiti Sains Malaysia, Malaysia*, "Islamic Resurgence and Southeast Asia."

SOMBOON SUKSAMRAN, *Social Science Association of Thailand*, "Buddhist Approaches to Development."

KANOK WONGTRANGAN, *Chulalongkorn University, Thailand*, "Development and Its Bureaucratic Constraints."

RESEARCH
PROGRAM ON
U.S.
IMMIGRATION

In 1982, the Foundation established a research program to develop the knowledge and analysis-base necessary for assessing the causes and effects of current immigration to the United States, including refugee migration, and to clarify the public policy debate in the United States on immigration and refugee issues. Since these issues cut across the Foundation's programs, all the programs joined in support of this effort. Projects have been supported on refugee resettlement, labor market impacts of immigrants and refugees, social and economic conflict between new immigrants and minority groups, and policy and other factors likely to influence immigration levels. In addition, workshops to disseminate the research findings to the policy community have been sponsored.

GRANTS

CENTER FOR MIGRATION STUDIES, *New York, New York*, for the *Eighth Annual National Legal Conference on Immigration and Refugee Policy*.
\$6,000

DAVID W. HAINES, *Alexandria, Virginia*, for research on the experiences of refugees from Southeast Asia in the U.S.
\$19,430

GUILLERMINA JASSO and MARK R. ROSENZWEIG, *University of Minnesota, Minneapolis, Minnesota*, to undertake a research project entitled "Family Reunification and the Immigration Multiplier."
\$32,000

JOHNS HOPKINS UNIVERSITY, *Baltimore, Maryland*, for a conference and publication of comparative studies of the informal sector in developing and developed countries.
\$20,000

WALTER S. McMANUS, *University of Florida, Gainesville, Florida*, for research on the effect of English language proficiency on the assimilation of immigrants in the U.S.
\$19,688

SUSAN OLZAK, *Cornell University, Ithaca, New York, to study economic issues and ethnic conflict involving immigrants in the U.S.*

\$35,000

REFUGEE POLICY GROUP, *Washington, D.C., for a study entitled "Temporary Safe Haven: Policy Responses to Refugee-like Situations."*

\$49,532

TERESA A. SULLIVAN and HARLEY L. BROWNING, *the University of Texas at Austin, for research on immigration, entrepreneurship, and welfare in the U.S.*

\$28,369

BLACK SOUTH
AFRICAN
LEADERSHIP
DEVELOPMENT

Since 1982, following a recommendation in the Foundation-sponsored report *South Africa: Time Running Out*, the RF has supported young black South Africans who are showing leadership potential in a range of community-based organizations responsive to black aspirations. In 1985, the following grants were made:

GRANTS

AFRICAN WRITERS' ASSOCIATION, *Johannesburg, South Africa, in support of salary and training of its organizer/secretary.*

\$7,500

BLACK LAWYERS' ASSOCIATION LEGAL EDUCATION TRUST, *Johannesburg, South Africa, for use by its Legal Education Center, in support of its program officer.*

\$45,000

DIAKONIA, *Durban, South Africa, in support of a full-time worker of the Durban Detainees Support Committee.*

\$12,300

MPIKAIPHELI FIGLAN, *Johannesburg, South Africa, in support of his work as a book designer at Skotaville Publishers.*

\$4,500

NATIONAL MEDICAL AND DENTAL ASSOCIATION, *Natal, South Africa, toward the cost of its Primary Health Care Program.*

\$24,500

SOUTH AFRICAN COMMITTEE FOR HIGHER EDUCATION TRUST, *Johannesburg, South Africa, toward the costs of its Labor Education Project.*

\$22,000

SOUTHERN AFRICAN CATHOLIC BISHOPS' CONFERENCE, *Pretoria, South Africa, in support of two reporters for its newspaper, 'The New Nation.*

\$23,770

**EXPLORING
LONG-TERM
IMPLICATIONS OF
CHANGING
GENDER ROLES**

Through this initiative, a major contribution of the Foundation's Task Force on Women's Programming, the Foundation seeks to contribute to greater understanding of the profound social and economic phenomena associated with the rapidly changing status of women. Grants made in 1985 were funded with a Special Interests and Explorations appropriation voted by the Board of Trustees in 1984; in addition, matching funds were provided by the Equal Opportunity program, the Agricultural Sciences and Population Sciences programs, and from the Special Contingency Fund, for a total of \$873,340.

Particular attention was given to:

- Continuing trends in women's employment and family responsibilities;
- Differences in allocation of income and time between men and women within the household and their implication for the social welfare of the family and, in particular, children;
- The psychological dimensions of gender roles and changing patterns of socialization.

The following actions were taken in 1985:

GRANTS

IRIS BERGER, *Delmar, New York, a study entitled "Women and Industrialization in South Africa, 1900-1980."*

PHYLLIS BERMAN, *Bethesda, Maryland, to complete a literature review and a research study entitled "Gender Role Socialization and the Development of Sex Differences in Responsiveness to the Young: Implications for Maternal and Paternal Roles."*

BOSTON UNIVERSITY, *Boston, Massachusetts, a study by Leslie Brody entitled "Children's Feelings Toward Other Children Engaged in Both Male and Female Sex-Role Stereotypic Behavior and Sex-Role Neutral Behavior."*

ELSA CHANEY, *Hyattsville, Maryland, and SCARLETTE GILLINGS, Kingston, Jamaica, a study entitled "Integrated Rural Development: The Impact on Gender Roles."*

CORNELL UNIVERSITY, *Ithaca, New York, two studies by Sandra Bem entitled "Children's Thinking About Gender."*

JEAN ENSMINGER, *St. Louis, Missouri, a study entitled "The Political Economy of Changing Gender Roles Among the Pastoral Galole Orma."*

JUNE HAHNER, *Albany, New York, a study to examine the changing nature of women's work in Brazil from 1850 to 1920.*

GILLIAN HART, *Boston, Massachusetts, a study entitled "Gender and Agrarian Differentiation in the Muda Scheme, Malaysia."*

HARVARD UNIVERSITY, *Cambridge, Massachusetts, a study by Lee Rainwater entitled "Women's Contribution to the Family Economy: A Cross-National Study."*

INTERNATIONAL CENTER FOR RESEARCH ON WOMEN, *Washington, D.C.*, a study to examine the effect of women's work and social support resources on infant feeding practices.

SHANYISA ANOTA KHASLANI, *Nairobi, Kenya*, to undertake a study on refugee and displaced women in Kenya and Tanzania and the economic assistance programs implemented to meet their needs.

ELLEN LEWIN, *San Francisco, California*, to complete a work on single motherhood in America.

LONDON SCHOOL OF ECONOMICS, *London, England*, a study by Jane Lewis entitled "Elderly Women's Perceptions of the Family Care of Elderly Women."

ELAINE TYLER MAY, *Minneapolis, Minnesota*, a study entitled "Gender Roles and the Family in Postwar America."

MICHIGAN STATE UNIVERSITY, *East Lansing, Michigan*, a study by Lidia Kostyniuk entitled "Implications of Changing Gender Roles on Transport System Use and Needs."

NATIONAL SENIOR CITIZENS LAW CENTER, *Washington, D.C.*, a study by Burton Fretz entitled "The Effectiveness of the Private Pension System in Meeting the Needs of Working Women."

NEW YORK UNIVERSITY, *New York, New York*, a study by Madeline Heilman entitled "Unintended Consequences of Affirmative Action Programs: Some Emerging Problems for Working Women."

MARY BETH NORTON, *Ithaca, New York*, a study entitled "Gender and Society in Seventeenth-Century America."

SUSAN OKIN, *Waltham, Massachusetts*, toward the cost of completing her book *Justice and Gender*.

RESEARCH FOUNDATION OF THE STATE UNIVERSITY OF NEW YORK, *Albany, New York*, for use by Patricia A. Roos, *State University of New York at Stony Brook*, toward the costs of a study entitled "The Determinants of Change in Occupations: Sex Composition Between 1970 and 1980."

E. ANTHONY ROTUNDO, *Andover, Massachusetts*, a study entitled "Modern Manhood: A Historical Study in the Dynamics of the Middle-Class Male Role in Twentieth-Century America."

RUTGERS UNIVERSITY, *New Brunswick, New Jersey*, a study by Mark Killingsworth entitled "Marriage, Labor Supply and Wage Rates."

LONDA SCHIEBINGER, *Stanford, California*, a study entitled "Women and the Origins of Modern Science."

CAROL B. STACK, *Durham, North Carolina*, a study entitled "The Culture of Gender Among Women and Men of Color."

STANFORD UNIVERSITY, *Stanford, California*, a study by Lenore Weitzman entitled "His, Hers or Theirs: Changing Gender Roles and Marital Property Reforms."

UNIVERSITY OF CALIFORNIA:

at Davis: *A study by Sarah Blaffer Hrdy entitled "Allocation of Investment in Sons and Daughters: A Study of Legacies and Beneficiaries."*

at Los Angeles: *A study by Martin Wachs entitled "Men, Women, and Wheels: The Relationship Between Gender and Mobility in American Society."*

UNIVERSITY OF ILLINOIS, *Urbana-Champaign, Illinois, a study by Barbara Reskin entitled "The Determinants of Change in Occupations: Sex Composition Between 1970 and 1980."*

UNIVERSITY OF MICHIGAN, *Ann Arbor, Michigan:*

A study by Mary Corcoran and Paul Courant entitled "Sex Role Socialization, Labor Market Segregation and Women's Earnings."

A study by Martha Hill entitled "The Role of Economic Resources and Dual-Family Status in Child Support Payments."

UNIVERSITY OF TEXAS, *Austin, Texas, a study by Sandra Rosenbloom entitled "Transportation Planning Implications of Changing Gender Roles in Non-Traditional Households."*

WENDY WOOD, *College Station, Texas, a study entitled "Sex Differences in Group Performance."*

YALE UNIVERSITY, *New Haven, Connecticut, for use by the Yale University School of Law, toward the costs of the study by Robert Burt entitled "Gender and Professional Socialization Issues in Law and Legal Education."*

THE SOCIAL
SCIENCES IN
KENYA AND
TANZANIA

The governments of these two countries, having established the provision of education as a major national goal, are spending a very high proportion of their budgets on education. Yet little knowledge exists of the influence of education on personal well-being and national goals. The broad purpose of this project, begun in 1977, is to work with the universities of Nairobi and Dar es Salaam, as well as the ministries of education, to build up a core of East African scholars to carry out the requisite research and evaluation projects. In 1985, the following actions were approved:

GRANTS

WAMBUI GITHIORA, *Columbia University, New York, New York, to complete her studies while conducting research on factors in the Kenyan secondary educational system that hinder or promote training for women in science and technology fields.*

\$9,900

KENYATTA UNIVERSITY COLLEGE, *Nairobi, Kenya, an anthropological study entitled "Changing Aspects of Wadigo Indigenous Education with Special Reference to Women."*

\$3,570

UNIVERSITY OF DAR ES SALAAM, *Tanzania, to enable the Department of Education to prepare and disseminate a detailed review of the state secondary education in Tanzania.*

\$11,000

UNIVERSITY OF NAIROBI, *Nairobi, Kenya:*

For a study by its Institute of Development Studies, "Expansion of Higher Education and National Development."

\$15,000

To enable two educational researchers at the Institute for Development Studies to attend meetings of the Comparative and International Education Society. \$7,100

STRENGTHENING
THE
PHILANTHROPIC
SECTOR

Since the 1930s, when Beardsley Ruml attempted unsuccessfully to form a national association of foundations, the Rockefeller Foundation and Rockefeller family representatives have played leadership roles in encouraging foundations—and the voluntary sector more generally—to strive for higher standards of public responsibility. In consequence, the Foundation has a special interest in strengthening what has come to be called the third sector, annually providing support to major organizations that serve the sector, and on occasion assisting activities designed to contribute to its effectiveness.

GRANTS

COUNCIL ON FOUNDATIONS, *Washington, D.C.:*

General support.

\$21,700

For the third international conference of foundation and business leaders. \$5,000

FOUNDATION CENTER, *New York, New York, general support.*

\$50,000

INDEPENDENT SECTOR, *Washington, D.C.:*

General support.

\$5,900

For its project "Studies in Leadership."

\$50,000

Contribution to its "Fund for the Future."

\$250,000

NEW YORK REGIONAL ASSOCIATION OF GRANTMAKERS, *New York, New York, general support.*

\$4,700

NEW YORK UNIVERSITY, *New York, New York, toward a study on modern portfolio management and the prudent man rule.*

\$22,400

WOMEN AND FOUNDATIONS/CORPORATE PHILANTHROPY, *New York, New York, toward the cost of its programs.*

\$25,000

BELLAGIO STUDY
AND
CONFERENCE
CENTER

The Bellagio Study and Conference Center is an historic estate in the Italian Alps located high on the promontory that divides Lake Como and overlooks the town of Bellagio. Bequeathed to the Foundation in 1959, the Center, also known as the Villa Serbelloni, is administered from the Foundation's New York office by a committee; Nan S. Robinson was the chairman in 1985.

The Center has been the venue for a great variety of stimulating meetings for scholars from all over the world who meet in small groups to examine issues of international importance. Bellagio conferences have been the modest beginnings of worldwide cooperative undertakings in agricultural research, population stabilization efforts, as well as current efforts to step up the immunization of the world's children. Conferences held at the Center are generally related to the Foundation's own programs. In 1985, the following 35 meetings and small working groups were convened:

NATIONAL AND INTERNATIONAL CONFLICTS AND NON-VIOLENT SOLUTIONS—*Harold B. Bamburg, Director, Centre for International Understanding, St. Louis, Missouri.*

RESEARCH PRIORITIES FOR SUB-SAHARAN AFRICA—*Deepak Lal, Economics and Research Staff, and Marcelo Selousky, Operations Policy Staff, both of the World Bank, Washington, D.C.*

THE EVIDENCE OF ART: IMAGES AND MEANINGS IN HISTORY—*Robert I. Rotberg, Massachusetts Institute of Technology and Journal of Interdisciplinary History, Cambridge, Massachusetts.*

THE IMPACT OF AGRICULTURAL AND FOOD SUPPLY POLICIES ON NUTRITION AND HEALTH STATUS—*Mitchel B. Wallerstein, Food, Nutrition, and Poverty Programme, United Nations University, Massachusetts Institute of Technology, Cambridge, Massachusetts.*

WOMEN AND AGRICULTURAL TECHNOLOGY—*Josette Murphy, International Service for National Agricultural Research, The Hague, Netherlands, and Joyce L. Mook, Rockefeller Foundation.*

MANAGING TRADE RELATIONS IN THE 1980s—*Seymour J. Rubin, American Society of International Law, Washington, D.C.*

CONSULTATION ON IMMUNOMODULATION—*Gordon Ada, Microbiology Department, John Curtin School of Medical Research, Canberra, Australia.*

EMERGING ISSUES IN INTERNATIONAL MIGRATION—*Riad B. Tabbarah, IUSSP Committee on Social and Economic Aspects of International Migration, United Nations Development Programme, Tunis, Tunisia.*

GOOD HEALTH AT LOW COST—*Scott B. Halstead and Kenneth S. Warren, Rockefeller Foundation.*

AFRICAN DEVELOPMENT STRATEGIES—*Robert J. Berg, Overseas Development Council, Washington, D.C., and Jennifer S. Whitaker, Council on Foreign Relations, Inc., New York, New York.*

AMERICAN-SOVIET RELATIONS: PERCEPTIONS AND MISPERCEPTIONS—*Seweryn Bialer, Research Institute on International Change, Columbia University, New York, New York.*

THE FUTURE OF HEALTH AND HEALTH SYSTEMS IN INDUSTRIALIZED SOCIETIES—*Bui Dang Ha Doan, Center for Medical Sociology and Demography, Paris, France.*

VECTORS OF PATHOGENS AFFECTING HUMAN, ANIMAL, AND PLANT HEALTH—*Kerry F. Harris, Department of Entomology, Texas A&M University, College Station, Texas; Edouard Kurstak, Faculty of Medicine, University of Montreal, Quebec, Canada; and John J. McKelvey, Jr., Rockefeller Foundation (retired).*

THE SUPPORT AND PRESENTATION OF CONTEMPORARY ARTS IN EUROPE AND AMERICA: ISSUES AND EXPLORATIONS—*Alberta Arthurs and Howard Klein, both of the Rockefeller Foundation.*

THE CAUSES OF BACKWARDNESS IN EASTERN EUROPE: LATE FIFTEENTH TO THE EARLY TWENTIETH CENTURY—*Daniel Chivot, University of Washington, Seattle, Washington, and Jason H. Parker, American Council of Learned Societies, New York, New York.*

COMPARATIVE JUDICIAL AND LEGAL ELITES—*John R. Schmidhauser, University of Southern California, Los Angeles, California.*

EFFECTS OF NATIONAL PROGRAMS OF NUTRITION AND PRIMARY HEALTH CARE ON THE HEALTH-SEEKING BEHAVIOR OF FAMILIES—*Nevin S. Scrimshaw, Food, Nutrition, and Poverty Programme of the United Nations University, Massachusetts Institute of Technology, Cambridge, Massachusetts, and Susan Scrimshaw, School of Public Health, University of California, Los Angeles, California.*

CONCEPTUAL CLARIFICATION AND INTERNATIONAL UNDERSTANDING: THE ROLE OF DEVELOPMENT—*Roger Morgan, Centre for International Studies, Rolle College, Exmouth, England, and Kees Zwaga, Centre for International Education, Alkmaar, Netherlands, both of the European Development Education Curriculum Network.*

THE FUTURE OF NUCLEAR ARMS CONTROL—*Robert O'Neill, International Institute for Strategic Studies, London, England, and Spurgeon Koeny, Jr., Arms Control Association, Washington, D.C.*

GENDER AND POLITICAL CULTURE IN THE AGE OF DEMOCRATIC REVOLUTION—*Harriet B. Applewhite, Southern Connecticut State University, New Haven, Connecticut, and Darline Gay Levy, New York University, New York, New York.*

ETHNOHISTORICAL MODELS FOR THE EVOLUTION OF LAW WITHIN SPECIFIC SOCIETIES—*June Starr, Department of Anthropology, State University of New York, Stony Brook, New York, and Jane F. Collier, Department of Anthropology, Stanford University, Stanford, California.*

INTERNATIONAL BANKING AND INDUSTRIAL FINANCE, 1870-1914—*Rondo Cameron, Emory University, Atlanta, Georgia, and Valeri Bovykin, Institute of the History of the U.S.S.R., Moscow, U.S.S.R.*

DETRITAL SYSTEMS FOR AQUACULTURE—*Roger S. V. Pullin, Aquaculture Program, International Center for Living Aquatic Resources Management, Metro Manila, Philippines, and David J. W. Moriarty, Commonwealth Scientific and Industrial Research Organization, Cleveland, Australia.*

REFLECTIONS ON DEVELOPMENT—*Joyce L. Moock and David Court, both of the Rockefeller Foundation.*

GENDER, TECHNOLOGY, AND EDUCATION—*Susan C. Bourque, Smith College, Northampton, Massachusetts, and Joan W. Scott, Institute for Advanced Study, Princeton, New Jersey.*

ANHYDROUS BIOLOGY—*A. Carl Leopold, Boyce Thompson Institute, Cornell University, Ithaca, New York.*

IMPROVING FOREIGN LANGUAGE CAPABILITY AND INTERNATIONAL UNDERSTANDING IN EUROPE AND THE UNITED STATES—*Robert Picht, Franco-German Institute, Ludwigsburg, Federal Republic of Germany, and James A. Perkins, International Council for Educational Development, Princeton, New Jersey.*

THE SOVIET UNION AND THE THIRD WORLD: THE LAST THREE DECADES—*Andrzej Korbonski, Department of Political Science, University of California, Los Angeles, California, and Francis Fukuyama, Political Science Department, Rand Corporation, Santa Monica, California.*

PRIORITY HEALTH PROBLEMS IN MEDICAL EDUCATION—*Victor R. Neufeld, McMaster University, Hamilton, Ontario, Canada, and Network of Community-Oriented Educational Institutions for Health Sciences.*

SOUTHEAST ASIA: MOVING FROM THE 1980S TO THE 1990s—*Donald L. Ranard, Center for International Policy, Washington, D.C.*

THE CALCULUS OF TERROR: NUCLEAR STRATEGY AND ITS DISCONTENTS—*Roman Kolkowicz, University of California, Los Angeles, California.*

POST-NAIROBI DONORS MEETING ON WOMEN AND DEVELOPMENT—*Dame Nita Barrow, Cave Hill, Barbados, and Jill Sheffield, Carnegie Corporation, New York, New York.*

SMALL WORKING GROUPS—1985

THE BIOCHEMISTRY AND PHYSIOLOGY OF INFECTIOUS PLANT DISEASE—*Robert N. Goodman, Department of Plant Pathology, University of Missouri, Columbia, Missouri.*

SOUTH AFRICA: STATE AND SOCIETY—*Stanley B. Greenberg, Southern African Research Program, Yale University, New Haven, Connecticut, and Hermann Buhr Giliomee, University of Cape Town, Cape Town, South Africa.*

DECENTRALIZED EDUCATIONAL REFORM IN FIVE COUNTRIES
—*Thomas S. Popkewitz, University of Wisconsin, Madison, Wisconsin.*

RESIDENCIES

In addition to conferences, the Foundation offers competitive three-to-five-week residencies to scholars, writers, composers, and artists engaged in major projects. As in previous years, modest funds were made available to assist selected applicants, principally from developing countries, in meeting travel costs to undertake residencies. During 1985, the Center was able to accommodate the following 92 men and women from 15 countries.

FRANCIS A. ALLEN, *Edson R. Sunderland Professor of Law, University of Michigan, Ann Arbor, Michigan—a study of the “general part” of criminal law.*

MICHAEL J. BARNES, *Senior Producer, British Broadcasting Corporation Television, London, England—a book on the uses of hypnosis.*

JOHN BEALL, *Professor of Music and Composer in Residence, West Virginia University, Morgantown, West Virginia—a multmovement work for orchestra.*

LARRY BELL, *Boston Conservatory of Music, Boston, Massachusetts—a four-movement piece for chamber orchestra, a guitar solo, and a piece for cello and piano.*

BRUNO BETTELHEIM (*Stella M. Rowley Distinguished Professor Emeritus of Education, Psychology, and Psychiatry, University of Chicago*), *Portola Valley, California—a book. Seminars in Psychotherapy (joint project with Alvin Rosenfeld).*

ANTHONY H. BIRCH, *Chairman, Department of Political Science, University of Victoria, Victoria, British Columbia, Canada—a book. Nationalism and National Integration.*

ANDRE BLEIKASTEN, *English Department, University of Strasbourg II, Strasbourg, France —translation of “The Unvanquished” for the second volume of William Faulkner’s works in the Gallimard Pleiade series.*

DANIEL B. BOTKIN, *Director, Environmental Studies Program, University of California, Santa Barbara, California—a book. The Space Age and the Environment.*

DOROTHY C. BROWNE (*formerly Dorothy Houze*), *Assistant Professor, School of Public Health, University of North Carolina, Chapel Hill, North Carolina—a book. Child Health Advocacy and Health Policy.*

JAMES MacGREGOR BURNS, *Woodrow Wilson Professor of Government, Williams College, Department of Political Science, Williamstown, Massachusetts—institutional and ideological aspects of the early New Deal and New Deal political thought for the third volume of his trilogy The American Experiment.*

SIGRID BURTON, *New York, New York—paintings.*

GERALD BUSBY, *New York, New York—an opera, Cousin Lily.*

MAYRA BUVINIC, *Director, International Center for Research on Women, Washington, D.C.—“Projects for Women in the Third World: Explaining Their Misbehavior.”*

OLIVE ANTHONY CHECKLAND, *Research Fellow in Scottish History, University of Glasgow, Glasgow, Scotland—Britain’s Encounter with Meiji Japan, 1868-1912.*

SYDNEY GEORGE CHECKLAND, *Professor of Economic History Emeritus, University of Glasgow, Glasgow, Scotland—The Elgins, 1633-1917: A Tale of Aristocrats, Proconsuls, and Their Wives.*

DICK CLARK, *Senior Fellow, Aspen Institute for Humanistic Studies, Washington, D.C.—a book, U.S.-Soviet Relations in a Second Reagan Administration.*

RICHARD P. CLAUDE, *Professor of Government and Politics, University of Maryland, College Park, Maryland—a textbook, Human Rights: International Issues and Action.*

JOHN A. CLAUSEN, *Professor of Sociology, Emeritus, and Research Sociologist, Institute of Human Development, University of California, Berkeley, California—a book on the impact of mental illness on the families of married patients.*

GILES CONSTABLE, *Director, Dumbarton Oaks, Washington, D.C.—a series of lectures, “The Reformation of the Twelfth Century.”*

CARLO COPPOLA, *Chairman, Area Studies Programs, Oakland University, Rochester, Michigan—a book, Faiz Ahmed Faiz: Freedom Writer, Freedom Fighter.*

ANNE CRICHTON, *Professor of Health Care and Epidemiology, University of British Columbia, Vancouver, Canada—readings on Canadian health services for a book comparing British, Canadian, and Australian health policies.*

MILENA DOLEZELOVA-VELINGEROVA, *Professor of Chinese Literature, Department of East Asian Studies, University of Toronto, Ontario, Canada—“Lu Xun and the Intercultural Dimensions of Chinese Literary Modernism.”*

ROBERT FAGLES, *Professor and Chairman, Department of Comparative Literature, Princeton University, Princeton, New Jersey—translation of Homer’s Iliad.*

LOIS G. FORER, *Judge, Court of Common Pleas, Philadelphia, Pennsylvania—a book on individual rights in conflict with the First Amendment.*

PAULA FOX, *Brooklyn, New York—a novel and short stories.*

LAWRENCE H. FUCHS, *Chairman, Department of American Studies and Walter and Meyer Jaffe Professor of American Civilization and Politics, Brandeis University, Waltham, Massachusetts—a book, The Ethnic Kaleidoscope: Immigration, Ethnicity and Public Policy.*

JOYCE GELB, *Chairperson, Department of Political Science, City College, New York, New York*—a book, *Feminists in Two Nations: A Comparative Analysis of Social Movements in the United States and United Kingdom.*

GEORGE P. GEORGHIOU, *Professor and Chairman, Department of Entomology, University of California, Riverside, California*—a book on *pesticide resistance (joint project with Jonathan Gressel and Spyros G. Georgopoulos).*

SPYROS G. GEORGOPOULOS, *Professor of Plant Pathology, Athens College of Agricultural Science, Athens, Greece*—a book on *pesticide resistance (joint project with George P. Georgiou and Jonathan Gressel).*

GEORGE GIBIAN, *Goldwin-Smith Professor of Russian and Comparative Literature, Cornell University, Ithaca, New York*—a book, *The Importance of Being Russian: The Russian Quest for National Identity.*

LOUIS A. GOTTSCHALK, *Director, Psychiatric Consultation and Liaison Program and Professor, Department of Psychiatry and Human Behavior, University of California, Irvine, California*—a paper, "Artificial Intelligence: The Computerization of the Content Analysis of Natural Language."

JONATHAN GRESSEL, *Gilbert de Botton Professor of Plant Sciences, Department of Plant Genetics, Weizmann Institute of Science, Rehovot, Israel*—a book on *pesticide resistance (joint project with George P. Georgiou and Spyros G. Georgopoulos).*

ROBERT N. HAMBURGER, *Professor of Pediatrics, and Head, Pediatrics Immunology & Allergy Division, School of Medicine, University of California, San Diego, La Jolla, California*—"On the Origins of the Unique School of Medicine at the University of California in San Diego."

ELISABETH HANSOT, *Professor of Political Science, University of Nevada, Reno, Nevada*—a book on *the history of gender in public schools (joint project with David B. Tyack).*

DONALD R. F. HARLEMAN, *Ford Professor of Engineering, Massachusetts Institute of Technology, Cambridge, Massachusetts*—a book, *Transport Processes in Water Quality Control.*

JOEL HOFFMAN, *Associate Professor of Composition, College Conservatory of Music, University of Cincinnati, Cincinnati, Ohio*—a *violin concerto.*

ARTURO ISRAEL, *Senior Advisor, Institutional Development, World Bank, Washington, D.C.*—a *manuscript on institutional development in Third World countries.*

ROBERT F. KALLMAN, *Professor of Radiobiology, Stanford University Medical Center, Stanford, California*—a book, *Optimization of Experimental Rodent Tumor Models in Cancer Research.*

JANET A. KAPLAN, *Assistant Professor of Art History, Moore College of Art, Philadelphia, Pennsylvania*—a book on *the Spanish-born Mexican surrealist painter, Remedios Varo (1908-1963).*

HERBERT C. KELMAN, *Richard Clarke Cabot Professor of Social Ethics, Department of Psychology and Social Relations, Harvard University, Cambridge, Massachusetts—a book, Crimes of Obedience.*

SHELTON U. KODIKARA, *Professor of Political Science, University of Peradeniya, Peradeniya, Sri Lanka—a monograph, The Superpowers and Regional Conflict in South Asia.*

PAULINE KOLENDA, *Professor of Anthropology, University of Houston, Houston, Texas—a book on change in Khalapur, a North Indian Village.*

BENNETT KOVRIG, *Chairman, Department of Political Science, University of Toronto, Toronto, Canada—a study of the governance of the Hungarian Socialist Workers Party.*

DONALD McLEAN LAMBERTON, *Professor of Economics, University of Queensland, St. Lucia, Australia—a book, Information Infrastructures in Economic Development.*

SYDNEY LEA, *Editor, New England Review and Bread Loaf Quarterly, Hanover, New Hampshire—a volume of poems.*

HERBERT M. LEFCOURT, *Professor of Psychology, University of Waterloo, Waterloo, Ontario, Canada—a book on the role of humor as a moderator of stress.*

BARBARA F. LEFCOWITZ, *Professor of English, Anne Arundel Community College, Arnold, Maryland—poems for The Queen of Lost Baggage and short stories for The Book of Ignorance.*

STEPHEN LOCK, *Editor, British Medical Journal, London, England—a book, Peer Review in Medicine: A Delicate Balance.*

HANS W. LOEWALD, *Clinical Professor of Psychiatry, Emeritus, Department of Psychiatry and Child Study Center, Yale University School of Medicine, New Haven, Connecticut—"An Investigation of Religious and Moral Implications of Psychoanalytic Theory and Therapy."*

FREDERIC D. LUKE, *Lecturer in Modern Languages, Oxford University, and Tutor in German, Christ Church, Oxford, England—a new verse translation of Goethe's Faust (Part One).*

JOHN F. McDERMOTT, JR., *Chairman and Professor, Department of Psychiatry, John A. Burns School of Medicine, University of Hawaii at Manoa, Honolulu, Hawaii—Adolescent Personality Development in the 1980's: A Reconsideration of the Separation-Individuation Process in Males and Females in the Context of Their Families.*

HENK ROMIJN MEIJER, *Senior Lecturer, Department of English, University of Amsterdam, Amsterdam, Netherlands—three satirical short stories on the plight of the artist/writer in the late sixties and seventies.*

RICHARD H. MINEAR, *Department of History, University of Massachusetts, Amherst, Massachusetts—translations of Summer Flowers and City of Corpses, written by survivors of Hiroshima.*

JAMES A. R. NAFZIGER, *Professor of Law, Willamette University, Salem, Oregon—a book on international sports law.*

JUNE NASH, *Department of Anthropology, City College and the Graduate Center, New York, New York—a book on the impact of industry in a New England city on family, household, and community.*

GAYL D. NESS, *Professor of Sociology and Director, Program in Population Planning, University of Michigan, Ann Arbor, Michigan—a paper on Asian traditions, and a technical report on the management of family planning programs.*

HANS NEURATH, *Professor Emeritus of Biochemistry, University of Washington, Seattle, Washington—a monograph on proteolytic enzymes.*

JOSEPH S. NYE, *Professor of Government, John F. Kennedy School of Government, Harvard University, Cambridge, Massachusetts—a book on nuclear ethics.*

EUGENE O'BRIEN, *Head, Division of Composition and Theory, Benjamin T. Rome School of Music, Catholic University of America, Washington, D.C.—a triple concerto for percussion and large orchestra.*

THOMAS L. PANGLE, *Professor of Political Science, University of Toronto, Toronto, Ontario, Canada—an essay on the Federalist Papers.*

JOSE PASTORE, *Professor of Sociology, University of São Paulo, São Paulo, Brazil—a book on labor disputes in Brazil.*

SIDNEY POLLARD, *Professor of Economic History, University of Bielefeld, Bielefeld, Federal Republic of Germany—The Economic Decline of Britain: The Late Victorian Turning Point.*

DAVID PORTER, *Department of English, University of Massachusetts, Amherst, Massachusetts—a book on linguistic theory and visual art.*

LIANE ISGOUR RANIERI, *RTBF—Cité de la Radio-Television, Brussels, Belgium—a biography of Belgian banker and statesman Emile Franqui.*

ANDRE ROBERT, *Senior Scientist, Diabetes and Gastrointestinal Diseases Research, Upjohn Company, Kalamazoo, Michigan—a book on cytoprotection.*

PEARL T. ROBINSON, *Department of Political Science, Tufts University, Medford, Massachusetts—a book on traditional authority and the political economy of rural development in Niger.*

ALVIN ROSENFELD, *Director, Psychiatric Services, Jewish Child Care Association, New York, New York—a book. Seminars in Psychotherapy (joint project with Bruno Bettelheim).*

MANUEL RUIZ-FIGUEROA, *Professor and Researcher, Center for Asian and African Studies, El Colegio de México, Mexico D.F., Mexico—a textbook on the history of Islam and a comparative study on medieval European and medieval Islamic political thought.*

BONNIE RYCHLAK, *New York, New York—drawings as ideas for sculpture.*

JAMES A. SANDERS, *President, Ancient Biblical Manuscript Center, and Elizabeth Hay Bechtel Professor of Intertestamental and Biblical Studies, School of Theology at Claremont, Claremont, California—a book, How Luke Read Scripture (LXX).*

NANCY SCHOENBERGER, *Academy of American Poets, New York, New York—a collection of poems on Italian Renaissance paintings and frescoes and her Southern heritage.*

DANIEL L. SCHORR, *Washington, D.C.— a book on the prevention of damaging outcomes among American youth (joint project with Lisbeth Bamburger Schorr).*

LISBETH BAMBURGER SCHORR, *Lecturer in Social Medicine and Health Policy, Harvard University Medical School, Cambridge, Massachusetts—a book on the prevention of damaging outcomes among American youth (joint project with Daniel L. Schorr).*

JAMES R. SCOTT, M.D., *Chairman, Department of Obstetrics and Gynecology, University of Utah Medical Center, Salt Lake City, Utah—the fifth edition of Danforth's Obstetrics and Gynecology.*

ROGER SHERMAN, *Brown-Forman Professor of Economics and Chairman, Department of Economics, University of Virginia, Charlottesville, Virginia—a book on optimal pricing, and papers, "Public Prices for Merit Goods" and "Basic Needs and Distributional Weights in Socially Optimal Pricing."*

CAROL LOEB SHLOSS, *First Drexel Fellow in the Humanities, Drexel University, Philadelphia, Pennsylvania—a book, The Privilege of Perception: Photography and the American Writer, 1840-1970.*

WILLIAM A. SILVERMAN, M.D., *Greenbrae, California—a book, Retinopathy of Prematurity: Current Controversies.*

JOHN G. SIMON, *Augustus Lines Professor of Law, Yale University School of Law, New Haven, Connecticut—the nonprofit sector in the U.S. as compared with other societies.*

GUNNAR SJÖBLOM, *Department of Political Science, University of Copenhagen, Copenhagen, Denmark—a book, Party Government Under Societal Changes.*

IGNACIO J. SOTO LLOSA, *Researcher, Centro de Investigación de la Universidad del Pacífico, Lima, Peru—"Towards a Theory of Economic Development: Conceptual Framework and Methodological Foundations."*

GEORGE STARBUCK, *Professor of English and Creative Writing, Boston University, Boston, Massachusetts—new poetry.*

ALEXANDER DICKSON TAIT, *Lecturer in Steroid Biochemistry, Departments of Medicine and Obstetrics and Gynecology, University of Cambridge, Addenbrooke's Hospital, Cambridge, England—a review of the biosynthesis of the steroid hormones.*

ELIZABETH JOYCE TAIT, *Lecturer in Systems, Technology Faculty, Open University, Milton Keynes, England*—a book, *Managing the Risks of Pests and Pesticides*.

ALEX TSAFRIRI, *Department of Hormone Research, Weizmann Institute of Science, Rehovot, Israel*—“*Local Non-Steroidal Inhibitors of Ovarian Function.*”

DAVID B. TYACK, *Vida Jacks Professor of Education and Professor of History, School of Education, Stanford University, Stanford, California*—a book on the *history of gender in public schools (joint project with Elisabeth Hansot)*.

GEORGE B. UDVARHELYI, M.D., *Professor of Neurosurgery, Emeritus, Johns Hopkins Medical Institutions, Baltimore, Maryland*—*articles on the importance of bringing the humanities back into medical education; also, a book, The History of Ideas in Neurosurgery.*

ANTHONY E. VAZZANA, *Professor of Music, University of Southern California, Los Angeles, California*—a *string quartet*.

ARTURO VIVANTE, *Professor of Literature, Bennington College, Bennington, Vermont*—a *novel set in Venice, tentatively entitled Magda*.

CAROL A. B. WARREN, *Professor of Sociology, University of Southern California, Los Angeles, California*—a *monograph, Madwives: Schizophrenic Women at Mid-Century*.

RALPH J. WEDGWOOD, M.D., *Head, Division of Immunology and Rheumatology, Department of Pediatrics, School of Medicine, University of Washington, Seattle, Washington*—a *textbook, Essentials of Pediatrics*.

RICHARD S. WESTFALL, *Distinguished Professor of History and Philosophy of Science, Indiana University, Bloomington, Indiana*—*articles on Galileo*.

GEORGE A. ZENTMYER, *Professor of Plant Pathology, Emeritus, University of California, Riverside, California*—*papers and articles on Phytophthora*.

The 1985 Annual Report of the Bellagio Study and Conference Center can be requested by writing to the Manager, Conference Office, Rockefeller Foundation, 1133 Avenue of the Americas, New York, New York 10036.

ROCKEFELLER
ARCHIVE
CENTER

The Rockefeller Archive Center, a division of the Rockefeller University, serves as a permanent repository and research center for the archival material of the Rockefeller University, the Rockefeller Foundation, the Rockefeller Brothers Fund, the Rockefeller family, and individuals and organizations associated with their activities.

Since it opened in August 1975, a total of 3,951 scholar visits have been made to the Center. The authors of 92 articles and 45 books have acknowledged use of the records at the Center in their writing. In 1985, 142 scholars made 439 visits to do research. The topics investigated included the history of science, higher education for women, the social

sciences, public health, nursing, agricultural development, philanthropy, population control, psychiatry, and biographies of prominent scientists and educators.

Research grants were made to assist 18 scholars.

In 1985, the Center sponsored a conference in conjunction with the International Union of the Historians and Philosophers of Science entitled "Documentary Editing in the History of Science and Technology." The conference, which was supported by the Josiah Macy, Jr. Foundation, was attended by scholars from six foreign countries and the United States.

GRANT

ROCKEFELLER UNIVERSITY, *New York, New York, toward the operating costs of the Rockefeller Archive Center.*

\$370,000

FELLOWSHIPS

Grants made to individuals, either directly or through selected organizations, are an important means of achieving the Foundation's goals. Such fellowships are made either for the purpose of advanced training, or to enable the individual to produce a piece of work.

Individual awards funded in 1985 directly by the Foundation's programs and through Special Interests and Explorations are listed in the specific sections of this report. Details may be obtained by writing to the directors. In addition, in 1985 the Foundation continued its General Fellowships and Social Science Research Fellowships; and made the first appointments under a new program of Biotechnology Career Fellowships.

GENERAL FELLOWSHIPS

The Rockefeller Foundation has had a General Fellowship program for more than 70 years. The functions of these fellowships have been to select from all over the world men and women of outstanding promise in fields of interest to the Foundation, and to help prepare them to make significant contributions to research and teaching or public service. More than 12,000 individuals have held such fellowships.

During 1985, a total of 87 persons held General Fellowships. Of this total, 60 that began in previous years were continued in 1985, and 27 new awards became active during the year. Their distribution is as follows:

AGRICULTURAL SCIENCES

(Previous awards continued into 1985: 14. New awards: 6)

ARGENTINA

STANELONI, ROBERTO JULIO—*University of Buenos Aires, 1972. Plant molecular biology. Appointed from the University of Buenos Aires. Place of study: U.S.A.*

CHINA

HU JINGUO—*Huazhong Agriculture College, 1982. Genetics and breeding. Appointed from the University of California, Davis. Place of study: U.S.A.*

WANG KAN—*Fudan University, 1982. Plant genetics. Appointed from Fudan University, Shanghai. Place of study: Belgium.*

ZHONG GANYUAN—*Chinese Academy of Agricultural Sciences, 1985. Plant genetics and breeding. Appointed from the Chinese Academy of Agricultural Sciences, Beijing. Place of study: U.S.A.*

COLOMBIA

SANZ-SCOVINO, JOSE IGNACIO—*University of Reading, 1983. Soil science. Appointed from the University of Reading, United Kingdom. Place of study: United Kingdom*

KOREA

KIM, HWA YEONG—*Seoul National University, 1982. Plant molecular genetics. Appointed from the Office of Rural Development, Suweon. Place of study: U.S.A.*

**HEALTH
SCIENCES**

(Previous awards
continued into
1985: 1. New
awards: 2)

UGANDA

NTAMBI, JAMES MUKASA—*Johns Hopkins University, 1985. Molecular parasitology. Appointed from Makerere University, Kampala. Place of study: U.S.A.*

UNITED STATES

SHAPIRO, THERESA—*Johns Hopkins University, 1978. Antiparasitic chemotherapy. Appointed from Johns Hopkins University. Place of study: U.S.A.*

**POPULATION
SCIENCES**

(Previous awards
continued into
1985: 17. New
awards: 19)

ARGENTINA

CHILLIK, CLAUDIO FABIAN—*University of Buenos Aires, 1979. Reproductive biology. Appointed from the Eastern Virginia Medical School. Place of study: U.S.A.*

BANGLADESH

KHANDKER, SHAHIDUR RAHMAN—*McMaster University, 1983. Economic demography. Appointed from Yale University. Place of study: U.S.A.*

BRAZIL

RIOS NETO, EDUARDO LUIZ GONCALVES—*Federal University of Minas Gerais, 1982. Demography. Appointed from the Federal University of Minas Gerais, Belo Horizonte. Place of study: U.S.A.*

DO VALE, MARIA DO CARMO FONSECA—*University of Pennsylvania, 1975. Demography. Appointed from the Federal University of Minas Gerais, Belo Horizonte. Place of study: U.S.A.*

CHINA

DAI RONG-XI—*Shan-Dong University, 1956. Reproductive biology. Appointed from the Academia Sinica, Shanghai. Place of study: U.S.A.*

MA RONG—*Brown University, 1984. Demography. Appointed from the Chinese Academy of Social Sciences, Beijing. Place of study: U.S.A.*

WANG HAI-YUN—*University of Birmingham, 1982. Reproductive biology. Appointed from the Academia Sinica, Beijing. Place of study: U.S.A.*

INDIA

BHATTACHARYYA, AMITABHA—*University of Calcutta, 1984. Reproductive biology. Appointed from the University of Hawaii. Place of study: U.S.A.*

MALATHY, PUTHAN VEEDU—*Indian Institute of Science, 1985. Reproductive biology. Appointed from the University of Kansas. Place of study: U.S.A.*

MATHUR, PREMENDU PRAKASH—*Banaras Hindu University, 1981. Reproductive biology. Appointed from Kurukshetra University. Place of study: U.S.A.*

SAHNI, MUKESH KUMAR—*University of Jodhpur, 1977. Reproductive biology. Appointed from Meerut College. Place of study: U.S.A.*

SINHA HIKIM, AMIYA PRASAD—*University of Calcutta, 1984. Reproductive biology. Appointed from the University of Calcutta. Place of study: U.S.A.*

KENYA

NJOGU, WAMUCII—*University of Chicago, 1984. Sociology. Appointed from the National Council for Population and Development, Nairobi. Place of study: U.S.A.*

JAPAN

ENDO, YOSHIHIRO—*Keio University, 1984. Reproductive biology. Appointed from Keio University, Tokyo. Place of study: U.S.A.*

HOSOI, YOSHIHIKO—*Kyoto University, 1982. Reproductive biology. Appointed from Johns Hopkins University. Place of study: U.S.A.*

TANAKA, YASUHIRO—*Nara Medical University, 1983. Reproductive biology. Appointed from Nara Medical University, Kashihara. Place of study: U.S.A.*

MEXICO

BRAMBILA PAZ, CARLOS—*University of Chicago, 1982. Demography. Appointed from El Colegio de México, Mexico City. Place of study: U.S.A.*

VILAR-ROJAS, CECILIA—*Universidad Nacional Autónoma de México, 1977. Reproductive biology. Appointed from the Instituto Mexicano del Seguro Social, Mexico City. Place of study: U.S.A.*

NIGERIA

ATEMIE, JOSIAH DAGOGO—*Brown University, 1983. Demography. Appointed from Brown University. Place of study: U.S.A.*

Key to abbreviations used in the following sections:

AS—*Agricultural Sciences, HS—Health Sciences, PS—Population Sciences.*

**SOCIAL SCIENCE
RESEARCH
FELLOWSHIPS**

This competitive program provides opportunities for young North American social scientists to conduct collaborative research in agriculture or population studies at foreign institutions. Eight fellows were appointed in 1985.

BRUCE A. CHRISTENSON—*a sociologist conducting research on the impact of sociodemographic change on the lives of females and males within family, work, and educational institutions, while located at the Center for Demographic and Urban Development Studies, El Colegio de México, Mexico City. (PS)*

PAUL A. DOROSH—*an agricultural economist evaluating research priorities at IITA, and conducting research on cassava production in Africa, while located at the International Institute of Tropical Agriculture, Ibadan, Nigeria. (AS)*

PAUL D. FRENZEN—*a sociologist conducting research on mortality and fertility, while located at the University of Ife, Ile-Ife, Nigeria. (PS)*

ABRAHAM C. GOLDMAN—*a geographer assisting the International Institute of Tropical Agriculture, Ibadan, Nigeria, in its farming systems research activities. (AS)*

DEBORAH MERRILL-SANDS—*an anthropologist studying the managerial implications, in selected developing countries, of on-farm research in national research organizations, while located at the International Service for National Agricultural Research, The Hague, Netherlands. (AS)*

JOHN W. MOLYNEAUX—*an economist conducting research on determinants of fertility, while located at the Demographic Institute, University of Indonesia, and the National Family Planning Coordinating Board, Jakarta. (PS)*

- DEBORAH S. RUBIN—*an anthropologist studying the implications, for food production and consumption, of shifts from maize to sugarcane production in the South Nyanza district of Kenya, as part of a collaborative research project for the International Food Policy Research Institute, Washington, D.C. (AS)*

SARA J. SCHERR—*an agricultural economist conducting research on agricultural policy related to agroforestry, while located at the International Council for Research in Agroforestry, Nairobi, Kenya. (AS)*

**BIOTECHNOLOGY
CAREER
FELLOWSHIPS**

This program endeavors to assist scientists based in the Third World to maintain leadership in the development and application of the new biotechnologies that offer great promise for improving the agricultural, health, and population prospects of poorer countries. The fellowships seek to accomplish this by establishing ongoing working relationships between outstanding younger biotechnology scientists working at Third World institutions, and research teams at advanced laboratories.

Many excellent young scientists from the Third World have received doctoral and postdoctoral-level training at advanced laboratories, and possess eminent scientific qualifications. On resuming work in their home countries, however, they are frequently cut off from ready access to the international scientific community. Their opportunities to conduct state-of-the-art research may be limited because of lack of facilities, reliable services and supplies, a comprehensive library and information system, or the critical mass of talent necessary for pioneering research in biotechnology. All too often the resulting sense of intellectual isolation leads these gifted younger people to seek a more favorable scientific environment elsewhere, whereupon the home countries lose the benefit of their training and abilities.

The Rockefeller Foundation program is intended to give well-trained scientists from developing countries an opportunity to continue to do advanced research in biotechnology, and to keep abreast of new developments in their fields, by enabling them to spend approximately three months each year, for a minimum of three consecutive years, at a premier research institution—usually, but not necessarily, one at which they had previously received postgraduate or postdoctoral training. It is hoped that recipients of these awards, by remaining part of the international research network, will enhance the biotechnology capabilities of developing-country institutions and encourage laboratories in advanced countries to undertake research relevant to developing-country problems; thereby making biotechnology a link, rather than a barrier, between North and South.

At the present time, the following areas of biotechnology are particularly emphasized by the divisions of the Foundation participating in the program:

Agricultural Sciences: Application of advances in molecular and cellular biology to the improvement of crop and livestock production.

Health Sciences: Application of advances in molecular and cellular biology, immunology, and chemistry to the major diseases of the poorer countries.

Population Sciences: Application of advances in molecular and cellular biology to the development of improved methods of contraception for both women and men.

ARGENTINA

TURRENS, JULIO F.—*Universidad de Buenos Aires. Mechanisms of electron transport and energy transduction in mitochondria from trypanosomes, at Johns Hopkins University, Baltimore. (HS)*

BANGLADESH

AHMED, ZIA UDDIN—*International Centre for Diarrhoeal Disease Research, Dhaka. Development of a live oral vaccine against shigellosis in man, at the University of Adelaide, Australia. (HS)*

BRAZIL

BARRETO DE CASTRO, LUIZ ANTONIO—*Empresa Brasileira de Pesquisa Agropecuária, Brasília. Application of genetic engineering to improving protein quality of crop plants, at the University of California, Los Angeles. (AS)*

CAMPOS, FRANCISCO DE ASSIS DE PAIVA—*Universidade Federal do Ceará, Fortaleza. Protein inhibitors of proteinases as plant defenses, at Washington State University, Pullman. (AS)*

CAMPOS-NETO, ANTONIO—*Universidade de São Paulo. Responses of a series of cloned macrophage hybridoma lines to Leishmania, at the Harvard Medical School, Boston. (HS)*

RUMJANEK, FRANKLIN DAVID—*Universidade Federal de Minas Gerais, Belo Horizonte. Female schistosome sexual maturation and oogenesis at the gene level of expression, at the National Institute for Medical Research, London, United Kingdom. (HS)*

CHILE

SOTO-ROMO, EMILIANO ALBERTO—*Universidad de Chile, Santiago. Regulation of human corpus luteum function, at the University of Pennsylvania, Philadelphia. (PS)*

CHINA

CHEN WEI-FENG—*Beijing Medical College. Colorimetric and fluorometric assays for measuring T cell function in limited dilution culture, at the Walter and Eliza Hall Institute of Medical Research, Victoria, Australia. (HS)*

HONG GUO-FANG—*Shanghai Institute of Biochemistry. Molecular genetics of Rhizobium nitrogen fixation genes, at the John Innes Institute, Norwich, United Kingdom. (AS)*

HU MENG-DONG—*Shanghai Hygiene and Anti-Epidemic Center. Hepatitis A virus, at the Max v. Pettenkofer-Institut, Munich, Germany. (HS)*

MA QING-SHENG—*Guangxi Agricultural College, Nanning. Genetic study of plant-microbe interactions, at the John Innes Institute, Norwich, United Kingdom. (AS)*

NIU EN-MEI—*International Peace Maternity and Child Health Hospital, Shanghai. Application of molecular biology to the development of probes for use in cloning genes for ZP proteins, at the Baylor College of Medicine, Houston. (PS)*

SHI PU-TAO—*Shanghai Institute of Biochemistry. Synthesis of peptides of malaria proteins, at the Walter and Eliza Hall Institute of Medical Research, Victoria, Australia. (HS)*

WANG LINFANG—*Institute of Basic Medical Sciences, Beijing. Genetic expression of a specific sperm membrane protein during spermatogenesis, at the Population Council Center for Biomedical Research, New York. (PS)*

ZHU JIA-BI—*Shanghai Institute of Plant Physiology. Regulation of biological nitrogen fixation in Rhizobium-legume symbiont, at the University of California, San Diego. (AS)*

HONG KONG

CHEAH, KATHRYN SONG ENG—*University of Hong Kong. Expression of the human type II collagen gene, at the Medical Research Council Mammalian Development Unit, London, United Kingdom. (HS)*

INDIA

GOWRISHANKAR, J.—*Centre for Cellular and Molecular Biology, Hyderabad. Characterization of an osmoregulatory gene in Escherichia coli and the development of suitable vectors carrying this gene for introduction into plants and microorganisms of industrial importance, at the University of Melbourne, Australia. (AS)*

PENTAL, DEEPAK—*Tata Energy Research Institute, New Delhi. Somatic cell hybridization, at the Max-Planck-Institut für Züchtungsforschung, Köln, Germany. (AS)*

KOREA

AN, CHUNG SUN—*Seoul National University. Isolation of genes involved in nodulation and nitrogen fixation in Frankia symbioses, at the University of Tennessee, Knoxville. (AS)*

KANG, SEONG-MO—*Gyeongsang National University, Gjinju. Manipulation of the nitrogen economy of plants by modifying the senescence process, at the University of Illinois, Urbana. (AS)*

MALAYSIA

RASOOL, NASSAR BANU GHULAM—*University of Malaya. Molecular basis of the pathogenicity of Coxsackie viruses, at the University of Warwick, Coventry, United Kingdom. (HS)*

NIGERIA

ADEYEMO, OYEWOLE—*University of Ibadan. Molecular biology of the sperm protein(s) involved in egg-sperm binding during fertilization, at the Population Council Center for Biomedical Research, New York. (PS)*

TURKEY

TOLUN, ASLIHAN—*Boğaziçi Üniversitesi, İstanbul. Carrier state determination and prenatal diagnosis of genetic diseases, at the Uppsala Universitets Biomedicinska Centrum, Sweden. (HS)*

URUGUAY

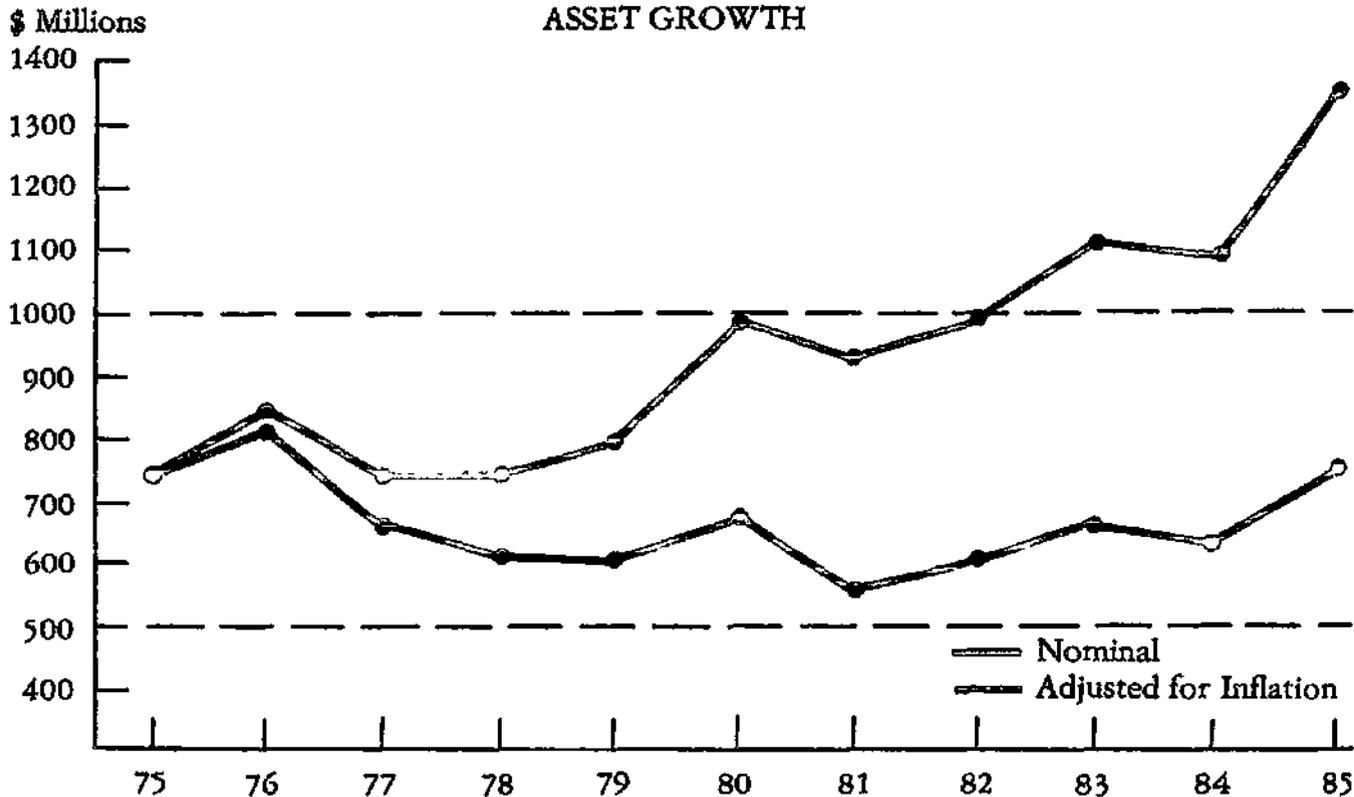
STOLL, GUILLERMO MARIO—*Instituto de Investigaciones Biológicas Clemente Estable, Montevideo. Genetic markers in wheat, at Yale University, New Haven. (AS)*

**FINANCIAL
STATEMENTS**

FINANCIAL STATEMENTS

The market value of the Foundation's investments increased 22.7% during 1985. The year-end market value of \$1344 million was a record level for the Foundation.

The graph below places year-end 1985 asset values into a ten-year historical perspective. Assets in nominal dollars have grown at a 6.2% annual rate over the ten year period. Adjusted for inflation, assets grew at a 0.2% annual rate.



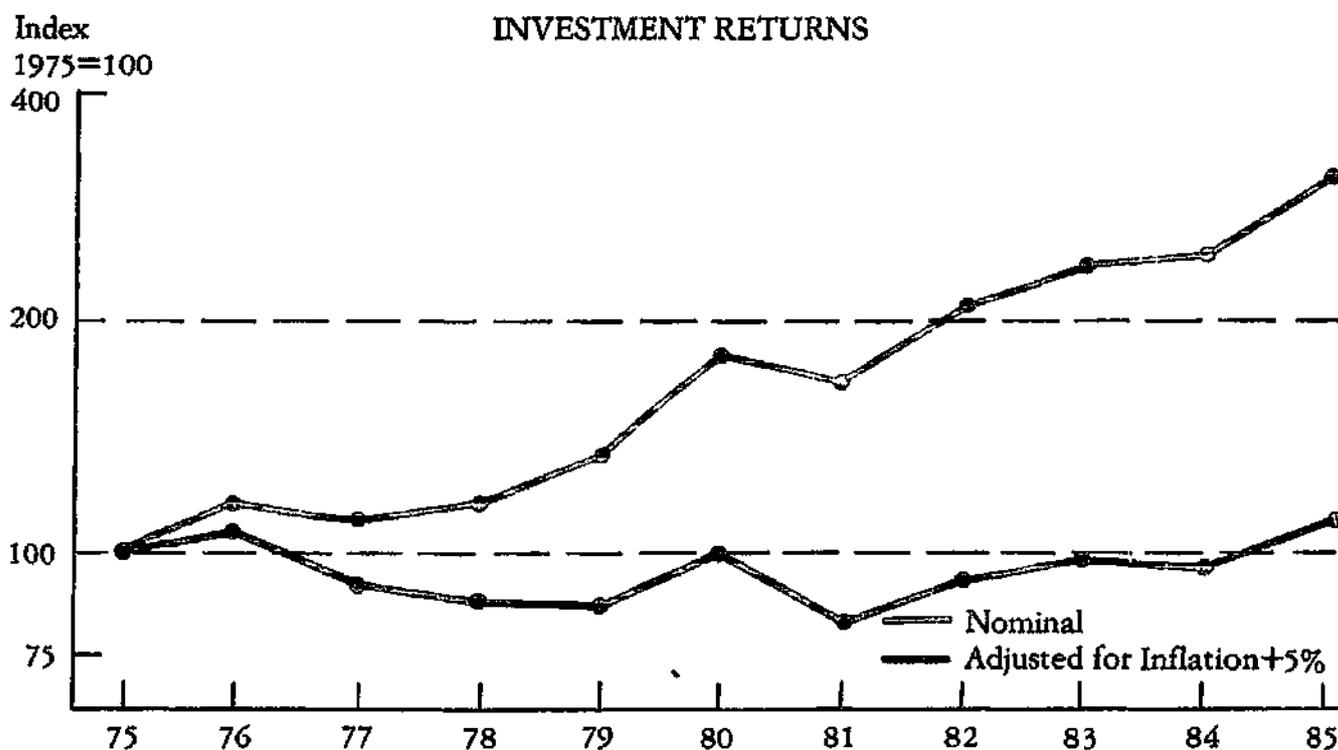
As the table below indicates, the Foundation continued diversifying into foreign securities and real estate during 1985. Initial commitments to venture capital also were made in 1985.

| | <i>Asset Mix</i> | | | |
|--------------------|--------------------|----------------|--------------------|----------------|
| | <i>12/31/84</i> | | <i>12/31/85</i> | |
| | <i>\$ Millions</i> | <i>Percent</i> | <i>\$ Millions</i> | <i>Percent</i> |
| Equities | \$ 689 | 62.9% | \$ 911 | 67.8% |
| Bonds | 187 | 17.1 | 193 | 14.4 |
| Cash | 162 | 14.8 | 114 | 8.5 |
| Foreign Securities | 43 | 3.9 | 91 | 6.8 |
| Real Estate | 14 | 1.3 | 28 | 2.1 |
| Venture Capital | — | — | 5 | 0.4 |
| | <u>\$1,095</u> | <u>100%</u> | <u>\$1,344</u> | <u>100%</u> |

INVESTMENT RETURNS

The total return on assets for 1985 was +28.4%. Foreign securities provided the highest returns followed by domestic equities and bonds.

Cumulative bonds for the past ten years are shown in the graph below. The average compound rate of return for this period was +12.4%. The lower line on the graph compares returns against a benchmark of inflation plus 5%. The inflation plus 5% benchmark represents the minimum return that would permit the Foundation to make the minimum payout under current law and still maintain the value of remaining assets in real dollar terms. As the graph indicates, returns have slightly exceeded the inflation plus 5% benchmark over this ten-year period.

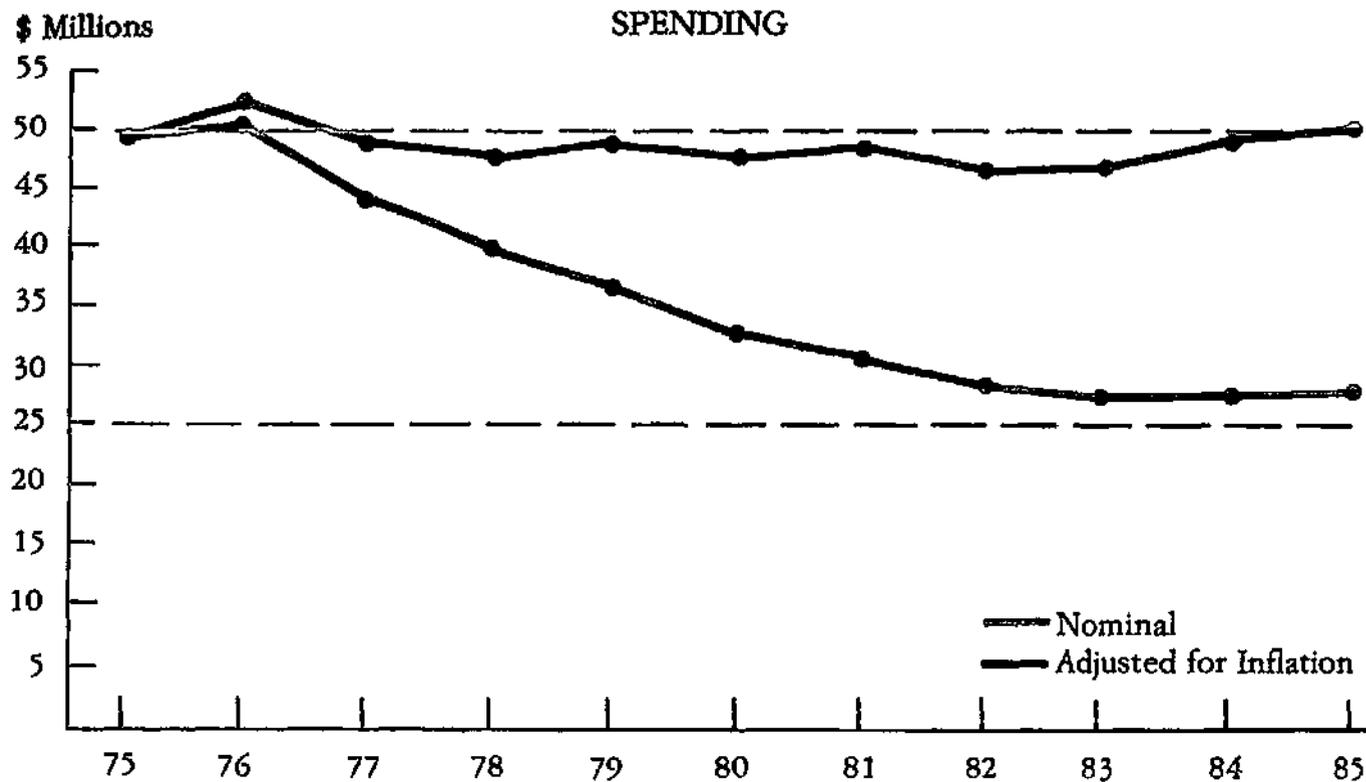


INVESTMENT MANAGERS

The Foundation had six equity managers at the end of 1985: Batterymarch Financial; Campbell Advisors; Concord Capital; Geewax Terker; Warburg Pincus Counsellors; and Wells Fargo Investment Advisors. Bonds are managed by two firms: Rosenberg Capital and Wells Fargo. Two firms manage foreign securities: Compagnie de Banque et d'Investissements (Geneva) and Morgan Grenfell (London). A portion of cash reserves is managed internally. Citibank is custodian for domestic assets. Chase Manhattan Bank (London) is custodian for foreign securities.

SPENDING

Spending in 1985 totaled \$50.5 million, up 3.5% over the \$48.8 million spent in 1984. The graph below places 1985 spending into a ten-year historical perspective. Spending in nominal dollars has been relatively flat, hovering around the \$50 million level. In real terms, however, spending has been cut by over 40% since 1975.



SPENDING BY PROGRAM

Spending by program for the three years 1983-1985 is shown in the table below.

| | EXPENDITURES | | | | | |
|------------------------------------|---------------|-------------|---------------|-------------|---------------|-------------|
| | 1983* | | 1984* | | 1985* | |
| | \$ Mil | Percent | \$ Mil | Percent | \$ Mil | Percent |
| GRANTS AND OPERATIONS | | | | | | |
| Agricultural Sciences | \$ 6.3 | 13.4% | \$ 4.8 | 9.9% | \$ 7.2 | 14.3% |
| Arts and Humanities | 5.5 | 11.7 | 5.6 | 11.5 | 7.4 | 14.6 |
| Equal Opportunity | 5.9 | 12.5 | 7.0 | 14.3 | 7.7 | 15.2 |
| Health Sciences | 4.2 | 9.0 | 4.4 | 9.0 | 5.7 | 11.3 |
| International Relations | 2.9 | 6.2 | 4.6 | 9.4 | 3.7 | 7.3 |
| Population Sciences | 5.1 | 10.8 | 4.9 | 10.0 | 5.0 | 9.9 |
| Education for Development | 3.3 | 7.0 | 1.5 | 3.1 | 0.7 | 1.4 |
| Special Interests and Explorations | 2.0 | 4.3 | 3.5 | 7.2 | 3.9 | 7.7 |
| Interprogram | 1.5 | 3.2 | 1.5 | 3.1 | 1.6 | 3.2 |
| TOTAL GRANTS OPERATIONS | 36.8 | 78.1 | 37.8 | 77.5 | 42.9 | 84.9 |
| General administration | 5.7 | 12.1 | 5.4 | 11.1 | 5.2 | 10.3 |
| Capital items | 1.6 | 3.4 | 2.1 | 4.4 | 0.1 | 0.2 |
| Federal excise tax paid | 3.0 | 6.4 | 3.4 | 7.0 | 2.3 | 4.6 |
| TOTAL | \$47.1 | 100% | \$48.8 | 100% | \$50.5 | 100% |

*Figures rounded.

**ACCOUNTANTS'
OPINION**

**THE
ROCKEFELLER
FOUNDATION
1984-85
FINANCIAL
STATEMENTS**

The financial statements for 1984 and 1985 are presented on the following pages. The opinion of Arthur Young & Company, certified public accountants, is presented below.



A MEMBER OF ARTHUR YOUNG INTERNATIONAL

Arthur Young

Metropolitan Office
277 Park Avenue
New York, New York 10172
Telephone (212) 407-1500
Telex TR1-177878

The Board of Trustees
The Rockefeller Foundation

We have examined the accompanying statement of assets, obligations and principal fund of The Rockefeller Foundation at December 31, 1985 and 1984 and the related statements of operations and changes in principal fund and changes in financial position for the years then ended. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the statements mentioned above present fairly the financial position of The Rockefeller Foundation at December 31, 1985 and 1984, and the results of operations, changes in principal fund and changes in financial position for the years then ended, in conformity with generally accepted accounting principles applied on a consistent basis during the period.

Arthur Young & Company

March 13, 1986

STATEMENT OF
ASSETS,
OBLIGATIONS
AND PRINCIPAL
FUND
DECEMBER 31,
1985 AND 1984

| ASSETS | <u>1985</u> | <u>1984</u> |
|---|------------------------|------------------------|
| Investments (Note 2) | \$1,340,032,595 | \$1,096,680,726 |
| Cash | 347,382 | 512,697 |
| Accounts receivable (primarily related to security sales) | 2,211,585 | 1,325,249 |
| Dividends and interest receivable | 8,631,378 | 7,479,180 |
| Property—at depreciated cost | <u>3,002,348</u> | <u>3,337,341</u> |
| Total assets | <u>\$1,354,225,288</u> | <u>\$1,109,335,193</u> |
| OBLIGATIONS AND PRINCIPAL FUND | | |
| Accounts payable and accrued liabilities (primarily related to security purchases) | \$ 1,677,956 | \$ 5,028,450 |
| Federal excise tax payable (Note 3) | 4,153,124 | 2,285,663 |
| Deferred federal excise tax (Note 3) | 3,495,722 | 1,765,063 |
| Appropriations by the Trustees, approved for specific grantees/purposes but not yet paid (Note 4) | <u>31,687,475</u> | <u>27,785,843</u> |
| Total obligations | <u>41,014,277</u> | <u>36,865,019</u> |
| Principal fund: | | |
| Appropriations by the Trustees (Note 4): | | |
| For allocation to future grantees | 17,438,577 | 14,829,056 |
| For operating budget of the following year | <u>63,300,000</u> | <u>55,900,000</u> |
| | 80,738,577 | 70,729,056 |
| Unappropriated | <u>1,232,472,434</u> | <u>1,001,741,118</u> |
| Total principal fund | <u>1,313,211,011</u> | <u>1,072,470,174</u> |
| Total obligations and principal fund | <u>\$1,354,225,288</u> | <u>\$1,109,335,193</u> |

See accompanying notes

STATEMENT OF
OPERATIONS
AND CHANGES
IN PRINCIPAL
FUND
YEARS ENDED
DECEMBER 31,
1985 AND 1984

| | <u>1985</u> | <u>1984*</u> |
|--|------------------------|------------------------|
| Dividends | \$ 30,652,183 | \$ 23,105,415 |
| Interest | 31,978,665 | 39,017,011 |
| Other | <u>2,123,615</u> | <u>1,936,164</u> |
| | 64,754,463 | 64,058,590 |
| Realized gain on sale of marketable securities | <u>149,267,183</u> | <u>51,156,667</u> |
| Gross realized investment income | 214,021,646 | 115,215,257 |
| Less: investment expenses | <u>4,334,485</u> | <u>3,918,808</u> |
| Income before federal excise tax | 209,687,161 | 111,296,449 |
| Less: provision for federal excise tax (Note 3) | <u>4,157,042</u> | <u>2,287,329</u> |
| Net realized investment income | <u>205,530,119</u> | <u>109,009,120</u> |
| Grants approved, and program and administrative costs incurred | <u>52,407,678</u> | <u>47,349,930</u> |
| Net realized investment income over grants approved, and program and administrative costs incurred | 153,122,441 | 61,659,190 |
| Increase (decrease) in unrealized appreciation of marketable securities net of provision (reduction) for deferred federal excise tax - 1985: \$1,721,000; 1984: (\$1,595,000) (Note 3) | 87,618,396 | (74,816,879) |
| Principal fund at beginning of year | <u>1,072,470,174</u> | <u>1,085,627,863</u> |
| Principal fund at end of year | <u>\$1,313,211,011</u> | <u>\$1,072,470,174</u> |

*Reclassified to conform with 1985 presentation.

See accompanying notes

STATEMENT OF
CHANGES IN
FINANCIAL
POSITION
YEARS ENDED
DECEMBER 31,
1985 AND 1984

| | <u>1985</u> | <u>1984*</u> |
|---|----------------------|----------------------|
| Sources of cash: | | |
| Income before federal excise tax | \$ 209,687,161 | \$ 111,296,449 |
| Total—Sources of cash | <u>209,687,161</u> | <u>111,296,449</u> |
| Applications of cash: | | |
| Expenditures for grants and operations: | | |
| Agricultural Sciences | 7,247,374 | 4,842,627 |
| Arts & Humanities | 7,389,946 | 5,581,443 |
| Equal Opportunity | 7,680,958 | 6,991,362 |
| Health Sciences | 5,746,159 | 4,411,039 |
| International Relations | 3,690,603 | 4,556,263 |
| Population Sciences | 4,989,811 | 4,879,511 |
| Education for Development | 736,099 | 1,483,617 |
| Special Interests & Explorations | 3,898,206 | 3,544,345 |
| Interprogram | 1,556,489 | 1,529,476 |
| Quality of the Environment | — | <u>(283)</u> |
| | 42,935,645 | 37,819,400 |
| General administrative expenditures | 5,165,236 | 5,397,041 |
| Capital items, major improvements and related expenses | <u>70,172</u> | <u>2,137,513</u> |
| Sub-total | <u>48,171,053</u> | <u>45,353,954</u> |
| Federal excise tax paid | 2,279,923 | 3,443,427 |
| Securities and repurchase agreement transactions: | | |
| Purchases | 7,629,134,330 | 7,272,643,871 |
| Less: proceeds from sales, net of realized gains | <u>7,475,121,858</u> | <u>7,204,457,291</u> |
| | <u>154,012,472</u> | <u>68,186,580</u> |
| Net change in accounts receivable, dividends and interest receivable, accounts payable and accrued liabilities | <u>5,389,028</u> | <u>(6,043,206)</u> |
| Total—Applications of cash | <u>209,852,476</u> | <u>110,940,755</u> |
| Increase (decrease) in cash | (165,315) | 355,691 |
| Cash balance at beginning of year | <u>512,697</u> | <u>157,003</u> |
| Cash balance at end of year | <u>\$ 347,382</u> | <u>\$ 512,697</u> |

*Reclassified to conform with 1985 presentation.

See accompanying notes

**NOTES TO
FINANCIAL
STATEMENTS
DECEMBER 31,
1985 AND 1984**

**1. SUMMARY OF
SIGNIFICANT
ACCOUNTING
POLICIES**

Marketable securities are reported on the basis of quoted market value, and investment income and expenses are reported on the accrual basis. Realized gains and losses are calculated based on the average cost method for financial statements and the FIFO cost method for tax return purposes. Limited partnership interests are recorded at appraised value, when available; and when not available, are recorded at cost and adjusted for the Foundation's share of the limited partnership income or loss.

Appropriations by the Trustees are considered to be obligations when grants are approved for specific grantees or purposes. Program costs and general administrative expenses are charged to operations when incurred. Appropriations by the Trustees not released for specific grantees and the appropriation for the budget for the following year are considered as appropriated principal fund.

Expenditures for capital items and major improvements are included in the property account and depreciated on a straight-line basis over the lives of the respective assets or amortized over the term of the lease. The net change in the property account in 1985 was caused by additions of \$137,930, and a decrease of \$472,923 attributable to depreciation and amortization. The total depreciation, amortization, and write-off expense amounted to \$678,843 in 1984.

2. INVESTMENTS

| | December 31, 1985 | | December 31, 1984 | |
|-------------------------------|------------------------|------------------------|----------------------|------------------------|
| | Cost | Market Value | Cost | Market Value |
| Marketable securities: | | | | |
| Repurchase agreements | \$ 10,189,000 | \$ 10,189,000 | \$ 12,362,000 | \$ 12,362,000 |
| U.S. Government obligations | 173,481,550 | 184,712,189 | 144,912,132 | 148,233,084 |
| Money market fund | 1,187,169 | 1,187,169 | 820,235 | 820,235 |
| Foreign currency-short-term | 3,438,464 | 3,438,464 | 4,719,600 | 4,707,245 |
| Corporate notes | 67,129,517 | 67,145,889 | 114,939,334 | 114,967,824 |
| Corporate bonds | 43,324,741 | 46,831,017 | 56,937,639 | 58,724,911 |
| Other investments | 1,296,910 | 450,000 | 1,296,910 | 450,000 |
| Preferred stock | 1,764,912 | 2,390,860 | 2,145,899 | 1,946,591 |
| Common stock | 805,789,990 | 990,191,264 | 620,842,413 | 727,703,188 |
| Sub-total | <u>1,107,602,253</u> | <u>1,306,535,852</u> | <u>958,976,162</u> | <u>1,069,915,078</u> |
| Limited partnership interests | <u>32,152,030</u> | <u>33,496,743</u> | <u>26,765,648</u> | <u>26,765,648</u> |
| Total | <u>\$1,139,754,283</u> | <u>\$1,340,032,595</u> | <u>\$985,741,810</u> | <u>\$1,096,680,726</u> |

**3. FEDERAL
EXCISE TAX**

The Foundation qualifies as a tax-exempt organization under Section 501(c)(3) of the Internal Revenue Code and accordingly is not subject to federal income tax. However, the Foundation is classified as a private foundation and is subject to a federal excise tax of 2% on investment

income less investment expenses, and on net realized taxable gains on security transactions. Deferred federal excise tax arises from timing differences between financial and tax reporting relating to investment income and the difference between the tax basis and market value of marketable securities.

Not less than the fair market value at December 31, 1969 of securities owned at that date is used as the basis for determining taxable gains on subsequent sales of such securities. The basis for calculating taxable gains on securities held at December 31, 1985 is approximately \$1,172,700,000.

4. APPROPRIATIONS AND EXPENDITURES

Appropriations and expenditures for the year are summarized as follows:

| | Total <u>Appropriated</u> | Appropriated for specific grantees/ <u>purposes</u> | Appropriated for alloca- tion/next <u>year's budget</u> |
|--|------------------------------|--|--|
| Balance, January 1, 1985 | \$ 98,514,899 | \$27,785,843 | \$70,729,056 |
| Appropriations by the Trustees | — | 16,428,934 | (16,428,934) |
| Releases from appropriations | — | 36,156,854 | (36,156,854) |
| Less: lapses, reversions and refunds | (1,200,532) | (495,841) | (704,691) |
| 1986 Budget | 63,300,000 | — | 63,300,000 |
| Expenditures for grants and operations | <u>(48,188,315)</u> | <u>(48,188,315)</u> | — |
| Balance, December 31, 1985 | <u>\$112,426,052</u> | <u>\$31,687,475</u> | <u>\$80,738,577</u> |

5. LONG-TERM LEASES

At December 31, 1985, base rental commitments under non-cancellable leases for headquarters office space aggregate approximately \$5,970,000 and are payable at approximately \$720,000 annually until 1994. Under the leases, the Foundation is required to pay additional amounts for maintenance, electricity and taxes. Rental expense included in the statement of operations was approximately \$957,800 in 1985 and \$986,800 in 1984. The Foundation has subleased portions of their space under two separate sublease agreements. Net rental income under the first sublease will be approximately \$1.0 million and under the second approximately \$0.4 million during the remaining period of the leases.

6. PENSION PLAN

The Foundation maintains a non-contributory pension plan for regular salaried employees who are at least 21 years old and have completed one year of service or have attained the age of 40. The Foundation, based on actuarial calculations, makes annual contributions to the Plan equal to the amounts accrued for pension expense which were \$500,000 in 1985 and \$1,115,000 in 1984. A comparison of accumulated plan benefits and plan net assets is presented below.

| | January 1, <u>1985</u> | January 1, <u>1984</u> |
|---|---------------------------|---------------------------|
| Actuarial present value of accumulated plan benefits: | | |
| Vested | \$25,024,000 | \$22,825,000 |
| Nonvested | <u>481,000</u> | <u>709,000</u> |
| | <u>\$25,505,000</u> | <u>\$23,534,000</u> |
| Net assets available for benefits | <u>\$30,118,000</u> | <u>\$27,185,000</u> |

The actuarially assumed annual interest rates underlying the determination of the value of accrued benefits was 8.0%, with 3.35% used for the expected period of pension cost-of-living augmentation.

The total of annual premiums payable through March 1, 1987 to complete the purchase of supplementary annuities for personnel who retired under the Rockefeller Foundation's retirement plans in effect prior to April 1, 1975 was approximately \$573,000 as of December 31, 1985.

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