

Annual Report

1977

THE ROCKEFELLER FOUNDATION
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December 31, 1977

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ORGANIZATIONAL INFORMATION

MEETINGS

The annual meeting of the Corporation and a regular stated meeting of the Board of Trustees were held on April 6, a stated meeting of the Board was held on December 5, and special meetings of the Board were held on January 14, June 21, and September 14. Two regular meetings of the Executive Committee of the Trustees were held to take actions within the general policies approved by the Board.

TRUSTEES AND PRINCIPAL OFFICERS

Cyrus R. Vance, partner in the law firm of Simpson, Thacher & Bartlett and former Secretary of the Army, resigned from the Board of Trustees, effective January 7, prior to assuming the office of Secretary of State. He was elected a Trustee in 1970 and served as Chairman of the Board from 1975 until his resignation. He also served for five years as a member of the Executive Committee, and for four years as an alternate member of the Finance Committee.

John D. Rockefeller IV, former President of West Virginia Wesleyan, resigned from the Board of Trustees, effective January 17, upon undertaking the governorship of West Virginia. He was elected a Trustee in 1968 and served for five years as a member of the Nominating Committee.

W. Michael Blumenthal, formerly President and Chief Operating Officer of The Bendix Corporation, resigned from the Board of Trustees, effective January 20, upon assuming the office of Secretary of the Treasury. He was elected a Trustee in 1971 and served for two years as a member of the Executive Committee, for ten months as a member of the Finance Committee and for three years as an alternate member, and for three years as a member of the Committee on Audit, for two of those years as its Chairman.

Frederick Seitz, former President of Rockefeller University, retired from the Board of Trustees, effective June 30. He was elected a Trustee in 1964 and served for eight years as a member and for three and one-half years as an alternate member of the Executive Committee, for three years as a member of the Finance Committee, for three years as a member of the Nominating Committee, for two of those years as its Chairman, and for one year as a member of the Committee on Audit.

Maurice F. Strong, President of Petro-Canada, resigned from the Board of Trustees, effective November 23, after being appointed Chairman of the International Development Research Centre. He was elected a Trustee in 1971 and

served for three years as an alternate member of the Executive Committee, for one year as a member of the Finance Committee, and for two years as a member of the Committee on Audit.

Robert H. Ebert, former Dean of Harvard Medical School, resigned from the Board of Trustees, effective December 5. He was elected a Trustee in 1966 and served for four years as a member of the Executive Committee, for four years as a member of the Nominating Committee, for two of those years as its Chairman, and for three years as a member of the Committee on Audit. Dr. Ebert will take up new duties as President of the Milbank Memorial Fund on January 3, 1978.

At the January meeting Kenneth N. Dayton, Chairman of the Board of the Dayton Hudson Corporation, was elected a Trustee, effective February 10. He has been associated, successively since 1946, with Dayton's, Minneapolis; The Dayton Corporation; and the Dayton Hudson Corporation, of which he became chairman in 1974. He is a trustee of the Dayton Hudson Foundation, the General Mills Foundation, and the Minneapolis Foundation, and a member of the Business Committee for the Arts and the Minnesota State Arts Board.

At the April meeting Henry B. Schacht, Chairman and Chief Executive Officer of the Cummins Engine Corporation, was elected a Trustee, effective immediately. He has been associated with the Cummins Engine Corporation since 1964. He is a trustee of the Committee for Economic Development, the Urban Institute, and the Cummins Engine Foundation.

Allan C. Barnes retired as Vice-President of the Foundation on June 30. He joined the Foundation in that capacity in 1970, after holding positions in the departments of obstetrics and gynecology at Johns Hopkins University, Western Reserve University, Ohio State University, and the University of Michigan. Following his retirement he served for six months as a Consultant to the Foundation. He will begin as Consultant to the Population Council in January.

John Maier retired as Director for Health Sciences on June 30. He joined the Foundation in 1940 as a research staff member of the International Health Division Laboratories at the Rockefeller Institute. He conducted malaria research in Venezuela and Sardinia and was director of the Foundation's Paris office. In 1958 he came to the New York office, where he has served as Assistant Director for Biological and Medical Research, Associate Director for Biomedical Sciences and, since 1973, as Director.

THE

PRESIDENT'S

REVIEW

It is an honor to review the activities of The Rockefeller Foundation for 1977, my sixth year as president of the Foundation. The year was a particularly important one: an extraordinary period of prodigious effort by both trustees and staff has resulted in significant changes in our programs and policies. We face the future with renewed energy, strengthened by an intense period of review and evaluation of all our activities.

A review of the Foundation's programs and policies was initiated with my arrival in 1972 and completed by the trustees in 1973. The results were published in 1974 as *The Course Ahead*. A new program was established in International Relations; more rigorous objectives and procedures of evaluation were established for each program; increased emphasis was placed on fellowships in our domestic programs; increased efforts in the humanities were undertaken; the dissemination of information about the Foundation, its studies, and those of its grantees received increased attention; and major projects were initiated, such as the International Agricultural Development Service, the American Music Recording Project, and regional environmental studies, to name but a few.

The Board of Trustees has conducted two extensive reviews over the past three years. The preliminary results of a five-year program review initiated by the president in late 1976 were also made available to them.

As a result of these extensive reviews, the Board expressed serious concern about excessive diffusion of interests; the apparent lack of a unifying theme; an excessive burden on the trustees of reports and grant descriptions, with too little time devoted to policy discussions. The question was posed as to whether or not the Foundation should be continued or disbanded, as were immediate questions concerning each of our programs.

Should the Foundation be Maintained or Dissolved?

The trustees had once before reviewed this question in 1964, and reaffirmed the policy of spending above income, using principal to support programs and unusual opportunities. Today the arguments *against* continuing the Foundation's activities are:

- The growth of governmental programs and de facto "foundations" (National Endowment for the Arts, National Endowment for the Humanities, National Institutes of Health, Agency for International Development, National Science Foundation) with massive sums of money and substantial technical expertise, both national and international, have diminished the importance of the RF's staff and the comparatively insignificant amounts of money spent;
- The contention by some that foundations are self-perpetuating, autonomous centers of economic power noted for their arrogance, self-fulfilling prophecies, and fuzzy methods of self-congratulatory evaluation, answering to no one and meeting no tests of survival—such as the ability to sell products, raise funds, or provide needed services.

Arguments *for* continuing the Foundation under the present policies of expenditure are:

- The growth of monolithic government and increasingly centralized power increases the importance of maintaining voluntary institutions and pluralistic approaches to problem solving;
- A major opportunity exists to influence the policies and expenditures of governments both through monitoring and evaluating their programs, and by turning over successful

experiments to the institutions of government thereby translating the results into national and international programs and policies;

- The Foundation is unique in its broad mandate, its flexibility, its capacity for objectivity and for sustained effort over long periods of time, its relative freedom from political control, the symbolic significance of its support to other potential donors, its intellectual freedom and capacity to innovate and take chances, its history of accomplishment and good will in many parts of the world;

- The history of the RF is one of substantial accomplishment—it has more than fulfilled its mandate and the past five years has seen this record sustained. Grim as things look today, the worst is likely yet to come—and with it exceptional opportunities to be of service.

The recommendation that the RF should be continued under present guidelines of overall expenditure was approved by the trustees with the feeling that the goose that has laid so many golden eggs should not be killed. Increased emphasis should be placed on seizing or responding to unusual opportunities through an increase in flexible funds to pursue overarching issues involving several or all of the Foundation's program areas, such as neglected aspects of: 1) the problems of unemployment and inflation, and 2) the transformation of progress and the transition from uncontrolled expansion to sustainable growth in the developing countries.

What are the Themes?

The Rockefeller Foundation's theme of action commits it to continued efforts to identify and assist in exploring critical issues among the major problems facing our shrinking, interdependent world—the problems of agricultural development, nutrition and health, population stabilization, energy and water resources, environmental and ecological integrity, and the reduction of conflict. The areas of interest come together naturally, and are themselves interdependent in many ways.

Profound changes have occurred in the world in just the past ten years, based primarily on the widespread recognition that:

- High birth rates and the geometrical expansion of populations, if continued, will outstrip all attempts to meet basic human needs and swamp all efforts to reduce destructive conflict;

- World supplies of fossil fuels are not inexhaustible and a transition from primary reliance on oil to reliance on other sources of energy must occur within the next few decades for necessary agricultural and industrial development;

- Uncontrolled growth can no longer be accommodated—the minerals and the energy necessary must be conserved and used wisely to prevent despoliation of the environment and to prevent wasteful exhaustion of finite natural resources;

- All nations are interdependent, economically and politically; basic human rights have assumed new importance—rights of human freedom and fulfillment of basic human needs, and rights to access to those materials, commodities, and technologies central to national development; with interdependence and the rise of new nation states, the potential for destructive conflict, and its actual occurrence, has risen as populations expand and competition increases;

- The phenomenon of ecological interdependence must be understood—perturbations in the system have widespread local, as well as distant, effects on man’s environment. This requires that many disciplines must come together to provide solutions to complex problems. Unforeseen or unanticipated harmful consequences of isolated decisions—whether in technical solutions or in solutions to social problems such as inflation and unemployment—must be avoided;
- The development of the modern technologies of communication and rapid transportation and the provision for and easy availability of national and international fora in which to air the world’s problems amplify the opportunities to influence massive audiences, and bring extreme political pressure to bear.

There is no lack of problems, nationally and internationally. The RF could make abrupt changes in its directions and programs, restaff itself appropriately, and very likely make significant contributions, but only after a hiatus of inefficient and costly turmoil. Such abrupt changes would reduce the enormous leverage we have in certain areas of historic interest. Our history and tradition, our present programs and their objectives provide for 1) balance among scientific-technical, policy, and humane interests; 2) focus on the major issues besetting the world in the “vertical” dimension (food, population, health, energy, conflict) and with further research on the “horizontal” dimension (unemployment, inflation, environment, policy) should more than justify our existence and allow further significant contribution, both nationally and internationally.

The Rockefeller Foundation should sustain its commitment to the advance of knowledge, to striking at root causes, to the constant search for unusual opportunities, and to avoiding scattered and short-term attempts. Our strategies emphasize scientific and technical solutions; translation of knowledge into public policy through interdisciplinary efforts involving the social sciences and international relations; the central role of educated and trained individuals and their institutionalization; and emphasis on ethical and moral imperatives through a broad humanistic concern. Continued efforts to disseminate widely the results of our studies or those we have supported must be a central concern—for public opinion shapes public policy, and an enlightened citizenry is the main hope of the United States and the world.

The Rockefeller Foundation has never been a purely scientific and technical organization. It has balanced these interests with an enduring commitment to the plight of minority groups and to the full development of an assertive humanism through the support of artistic and humanistic endeavors. In the case of minorities, our commitment to equal opportunity for all is central to our domestic efforts and has been since our founding. It must continue to be.

Is the Foundation too Diffuse?

The trustees’ perception is true—we have become diffuse and vague in some of our objectives, at least by comparison with our own past. The Foundation’s spending power has been reduced over the past decade, while the problems it addresses, and the people, technologies, and institutions involved, have become increasingly complex. Internally, the number of divisions and programs has increased over the past ten years, while the grants each officer handles have increased by over 50 percent. New fellowship programs

and increased emphasis on publications have also increased the work load while the staff has been reduced. There was too much diffusion, because program objectives were either too vague or too numerous. But we would be hard put to prove that diffusion has been serious or jeopardized the quality of our work.

We reviewed exhaustively each of our seven programs over the past year. In each, we recommended a reduced number of objectives and a much sharpened focus. Only in the case of two programs, Education for Development and Quality of the Environment, did the option exist for orderly completion of our aims, with redistribution of some critical functions and interests to remaining, relevant programs. For example, although we would not continue our work in across-the-board development of universities in the LDC's, we would continue our Fellowship Program and invite grant applications from the now stable and excellent universities of the LDC's, much as we would with American universities.

In reviewing the seven programs, we have asked ourselves two general questions about each: Should the program be continued? If the program is continued, what should be its major components and priorities for the next five years?

I. ARTS, HUMANITIES AND CONTEMPORARY VALUES

The Arts

Against Continuation: 1) Since 1965 governmental, foundation and corporate support for the Arts has increased from \$41 to \$345 million, and the number of performing arts organizations has increased from two times (symphony orchestras) to seven-fold (resident professional dance companies); 2) there are other concerns of vastly greater importance; 3) there is little interaction with other RF programs with the exception of Equal Opportunity and the Humanities.

For Continuation: 1) Unlike government and corporations we can undertake large projects of high risk, such as the American Music Recording Project and the international competition to perform music by American composers; 2) we are relatively free of political influences; 3) our leadership role has intrinsic and symbolic significance to the field; 4) a balance between humane concerns with the quality of life and purely scientific and technical pursuits should be maintained in the Foundation; 5) a new opportunity exists in the international field.

The Humanities

Against Continuation: 1) Growth of federal funding; 2) our own guidelines are vague, and results are difficult to quantify or evaluate.

For Continuation: 1) Our focus on the humanities and contemporary issues is unique—the world needs historical and philosophical perspectives on contemporary dilemmas (notable for their sophisticated complexities), not the least of which is the transformation of the idea of progress and controlled growth; 2) even with the National Endowment for the Humanities, support of the humanities is low; 3) the humanities need the guidance of carefully selected pilot experiments; 4) the world is sorely in need of the results of humanistic study, which in individuals enliven the imagination, quicken the ethical

sense, and enhance human understanding; 5) the practical as well as symbolic significance of the RF's dedication to an assertive humanism should not be underestimated.

II. EQUAL OPPORTUNITY

Against Continuation: 1) Substantial progress has been made during the last decade, massive public funds are available, and further advances can be anticipated in public policy and its implementation; 2) several major objectives have been accomplished; 3) the RF's role is minuscule compared with the magnitude of the problem; major advances will be achieved largely through legislative efforts.

For Continuation: 1) The RF has a historic commitment, and there is much to be done in furthering the application of results already achieved—we have symbolic and substantial reasons for continuing our efforts; 2) there are few sources of fluid funds for conducting experiments on a small scale to combat racial discrimination, to support the development of leaders, and to strengthen institutions devoted to resolving the plight of minorities.

III. CONQUEST OF HUNGER

Against Continuation: 1) Growth of massive funds spent on agriculture, such as World Bank expenditures from \$900 million in 1973 to \$2.3 billion in 1975; 2) with the Consultative Group on International Agricultural Research established and the promise of the International Agricultural Development Service, the RF's work is done—work spanning 35 years and over \$125 million expended; 3) other major organizations are assuming responsibility for tropical agricultural research and country programs.

For Continuation: 1) The record of the RF is unsurpassed and much remains to be done. If progress in the next decade is not better than the period 1960-74, food grain deficits could reach 200 million tons by 1986; 2) major opportunities exist to increase crop and animal productivity, develop marginal and underutilized lands, exploit aquatic resources, and encourage new scientific advances; 3) because of our reputation, we can hope to exert considerable influence on world and national agricultural policies and expenditures.

IV. EDUCATION FOR DEVELOPMENT

Against Continuation: 1) The original intent of the University Development Program/ Education for Development has been accomplished and could be completed by 1983. The model is well established and other assistance agencies could carry on the work; 2) EFD funds could then be reallocated to other programs and divisions for project grants to stable universities in the LDC's; 3) the Fellowship program could be broadened to include candidates from many other universities, and thus markedly improve the quality of Fellows finally selected.

For Continuation: 1) EFD is jointly shared by Health, Agriculture, and Social Sciences and is the major linkage for cooperative endeavors among the three programs and divisions; 2) training and education are fundamental to the development process.

V. INTERNATIONAL RELATIONS

Against Continuation: 1) Policy studies on food, energy and regional conflict are fraught with hazard, and even when done with great sensitivity could result in adverse public perceptions of the RF; 2) it is too much to hope that the program can make a measurable difference; 3) there are research and academic organizations which need general support.

For Continuation: 1) Translation of scientific and technical advances into national and international policies is the central issue facing world stability; 2) systematic and objective analyses of alternative policies and institutional arrangements in the areas of food, energy and regional security should prove invaluable to governments, international organizations and policymakers; 3) the program provides a mechanism for synthesizing the results of other Foundation programs and links their scientific and technical interests to policymaking.

VI. POPULATION AND HEALTH

Against Continuation: 1) Birth rates are declining in many countries and growth of funds for population programs in LDC's have risen from \$20 million to \$308 million between 1965-75; 2) a wide variety of contraceptive techniques is now available and further efforts are not required; 3) the RF work is too "basic" and has ignored delivery systems for rural areas and strategies for direct action; 4) major new programs and sources of funding exist for control of diseases in the LDC's.

For Continuation: 1) Population growth remains the most central problem for humanity and much remains to be done in fundamental and applied research; 2) our funds remain highly significant and there are only three major foundations involved; support for reproductive biology and contraceptive development is declining; 3) we enjoy an international reputation for our interests, and our presence is of symbolic as well as substantial significance; 4) we pursue issues of policy with analysis by nationals in their own countries of the social, economic and cultural variables; 5) the great infectious diseases of the developing world result in tremendous waste of human capital and are a factor in the maintenance of excessively high birth rates; 6) with a modest increase in funding we could enlarge our interest to bring the modern tools of biomedical knowledge to bear on the problems of endemic diseases; 7) an opportunity to influence major health agencies should not be lost.

VII. QUALITY OF THE ENVIRONMENT

Against Continuation: 1) New laws and expanding funds coupled with increased public recognition of the problems have encouraged many others to consider and act on environmental issues; 2) the objectives stated in 1973 have largely been accomplished; an orderly completion of the program would be easily effected; 3) important components of the program can be easily accommodated within other relevant programs.

For Continuation: 1) Environmental concerns combine new and overarching concepts of man's relationship to the ecosphere, encompassing existing disciplines in creative new ways—the discipline of environmental sciences is new and developing; 2) the interrelationship of agricultural and industrial development, mineral and energy resources, health

and nutrition, and aesthetic and physical despoliation of the human habitat is profound—and all in turn are related to the stability of the world—we can scarcely leave the field at the very moment of its most profound development.

OTHER POLICY CONSIDERATIONS

Other important policies which the trustees review annually are: 1) the balance between direct (officers and operations) and indirect (grants and fellowships) functions, maintaining indirect functions above 60 percent of our annual expenditures; and 2) the balance between domestic and international activities. In 1978, we spent roughly 32 percent of Foundation resources outside the United States, most of which was for Education for Development, Conquest of Hunger, and Population and Health. The trend has been to increase our overseas expenditures in the last several years, and this is reviewed annually by the trustees as a matter of policy.

The Foundation Today—As a general principle we believe that the setting of spending guidelines for each program—as well as for total spending—has proved useful. However, such guidelines can become rigid program budgets in the staff's as well as the trustees' minds, thereby reducing our flexibility. There appears to be too little internal competition for funds among programs, too little emphasis on thinking big, and too little recognition of our entrepreneurial and intellectual role.

After extensive deliberation the trustees decided to: 1) continue five programs with revised and sharpened objectives, namely: Conquest of Hunger; Population and Health; Equal Opportunity; Arts, Humanities and Contemporary Values; and International Relations; 2) complete our programs in the Quality of the Environment and Education for Development, with an orderly phasing-out period over the next three to five years and an integration of some of the programmatic interests in our remaining five programs; and 3) enlarge the fund for Special Interests and Explorations to allow the Foundation to respond to opportunities or to initiate activities of major importance to contemporary society which would otherwise not be possible.

The following program descriptions and their objectives and the enlarged Special Fund were approved by the trustees at a special meeting of the Board on February 6, 1978.

CONQUEST OF HUNGER

This program has four major components:

1. ***Increasing Food Production***—by strengthening the international agricultural research and development system.
2. ***Strengthening Agricultural Research***—with special reference to the food legumes, hemoparasitic diseases of animals, aquatic species, and new dimensions of plant breeding, physiology, and disease resistance.
3. ***Utilization of Fragile Environments and Marginal Lands***—such as tropical rainforests, arid lands, and hill areas.
4. ***Food Policy and Development***—in cooperation with International Relations, with specific reference to production, distribution, and nutrition in the developing countries.

Initiated in 1963, the Conquest of Hunger program grew out of the Foundation's activities in agriculture which originated in Mexico in the early 1940's. Over the years, emphasis has been on assistance to developing countries (Mexico, Colombia, Chile, India); improvement through research of the basic food crops and animal species via the Foundation's own efforts and the establishment of a system of international agricultural research centers; advance of problem-oriented science (nitrogen fixation on grasses, crossing of plant species and genera); establishment of research services, colleges of agriculture, and postgraduate centers; training of young people; and the establishment of new international mechanisms to promote cooperation (the Latin American Plant Science Society, the African Association for the Advancement of Agricultural Sciences, the Consultative Group on International Agricultural Research (CGIAR), and the new International Agricultural Development Service). Its major goal has been to increase food production in the poorer countries, not only to help relieve hunger and poverty, but also to buy time for reduction of population growth rates.

While Foundation work on agriculture has been underway for 35 years, recognition of the dimensions and complexity of the world food problem is relatively new, dating for the most part from the mid-1960's. Major new forms of international cooperation, beginning with the CGIAR, are products of the 1970's. Only a start has been made to deal with the world food problem on the scale necessary.

World food grain deficits, which were about 5 million tons shortly after World War II, have mounted. If progress in the next decade is no better than in the period 1960-1974, deficits by 1985-86 could reach 100 to 200 million tons, an amount extremely difficult to manage physically or financially, according to projections of the International Food Policy Research Institute. Absolute numbers of people living in poverty and destitution continue to rise.

Major opportunities still exist to increase food availability and increase standards of living, but great imagination and determination will be required to exploit and expand crop and animal productivity potentials, develop underutilized environments wisely, exploit marine resources and expand agriculture, and encourage new scientific advances.

With major new sources of official financial assistance becoming available for

agricultural development, it is important that the three principal private organizations (Rockefeller Foundation, Ford Foundation, and Canada's International Development Research Centre) remain as flexible, creative entities in this field. Leverage of Rockefeller Foundation activity has never been greater than at present.

Food is the most basic human need. Until population growth has been brought under control and stabilized at an acceptable level, food production will remain one of the most important elements in maintaining world stability.

PROGRAM COMPONENTS

It now is clear that alleviation of hunger on the scale required will necessitate that much of the food be produced in the developing countries concerned. But that is not enough. The hungry must have access to food supplies: this will require widespread increases in employment and income among the poor, for provision of food free or on a concessional basis on an increasingly massive scale is not feasible, financially or physically, for either the poor or the more affluent nations. Primary responsibility for resolution of each nation's food-population-poverty problems necessarily must rest with its own government for only it can set the policies, establish and strengthen the institutions, and reach its own rural people with action programs.

To contribute to the resolution of the hunger problem, and its associated population and poverty aspects, the Foundation will pursue four main lines of work under Conquest of Hunger:

1. *Increasing Food Production*—by strengthening the international agricultural research and development system.

This system has three major components: the national systems of developing countries, the international agricultural research institutes, and the universities and agencies in the more affluent nations.

There are now nine international agricultural research institutes engaged in research, training, and development. They focus on major food crops, some animal species, and on food-producing systems for the tropics and subtropics. The centers, including four originally established and solely funded by the Ford and Rockefeller Foundations, are now supported by a consortium of 28 donor agencies whose total contributions in 1978 will reach \$87 million, up from \$15 million in 1972. The Rockefeller Foundation, like Ford, has been reducing its contributions for routine support (from \$3.9 million in 1972 to a proposed \$900,000 toward 1979 budgets).

The International Agricultural Development Service (IADS) was created in 1975 by the Foundation to help nations establish effective agricultural research and development agencies and programs. It now has several projects of this type in operation with funding provided by USAID, the World Bank, and other agencies.

The International Center for Living Aquatic Resources Management (ICLARM) was created in the Philippines by the Foundation during 1977. It has been organized to establish research and development programs required to increase food production from the aquatic environment, especially in Asia and the Pacific. Foundation support of ICLARM during the first several years of operation will be critical to the development of effective programs and the attraction of support from other donors.

Authorities of developing countries continue to turn to the Foundation for professional counsel in determining research and development options, in part because over a thousand scientists from 48 countries have received advanced-degree training under Foundation auspices, and many others have participated in projects or conferences supported by the Foundation. The officers expect to continue to respond to such requests, primarily through staff work, while IADS is being strengthened.

2. Strengthening Agricultural Research

Because of their wide array of contacts in the agricultural research community, Foundation officers are in a position to encourage important research in the world efforts to alleviate hunger and promote development. Among those to receive priority attention will be:

- food legume species as sources of protein for humans;
- immunity of animals to hemoparasitic diseases;
- aquaculture, with special reference to "seed-stock" production of wild species of fish and to means of increasing productivity of such species in pond culture; and
- new dimensions in fields of plant breeding, physiology, and disease resistance.

3. Utilization of Fragile Environments and Marginal Lands: A New Component

Millions of hectares of land remain totally unused or have been degraded by increasing intensity of primitive slash-and-burn agriculture or by inappropriate efforts to introduce mechanized agriculture. It has been estimated that land of this category in the tropics represents three times the area currently in production. Much of it has been considered nonproductive either because it was unsuited to modern agricultural practices or because conventional cultivation procedures resulted in excessive erosion, soil destruction, or other degradation. The unexploited land resources and those mismanaged and suffering environmental stress in Africa, Asia, and the Americas include fertile alluvial flood plains, such as the Guayas in Ecuador; grassland savannas, such as the llanos of Colombia and Venezuela; and hillsides and rainforests in Asia and Central America. Much of this land has adequate rainfall and sunlight to sustain productive and stable agriculture. New Landsat and similar aerial survey technology is cataloging such lands in the tropics and their potential uses.

Also still unexploited are many species of tropical plants, including legumes and industrial crops (jojoba, guayule, ramie), which may have great economic potential for improving the quality of life in developing countries. These, along with other well-known species, constitute an untapped renewable resource for production systems designed to alleviate environmental stress; broaden production of food, fiber, energy, oils, and other raw materials; maximize use of unexploited land, water, and sunlight; and provide agricultural alternatives, improved nutrition, and real income for rural populations.

Given these resources of unexploited plants, people, land, and climate, the Foundation has a unique opportunity to investigate, organize, and implement low energy-dependent agricultural systems similar to the mixed species situation characteristic of natural tropical plant ecosystems. Emphasis would be shifted from culture of single crops to environmentally sound cropping systems featuring associations of traditional food

crops and livestock (grains, legumes, tubers and animals) with presently established and new shrub and tree species as cash crops. The tree culture would provide protection for soils which decline in fertility when planted to monocultures of annual food crops.

The development of ecologically stable, energy-efficient systems for small-farm agriculture would incorporate three neglected elements of production:

- the integration of animals with cropping systems;
- the introduction and utilization of new crops to supplement traditional ones; and
- the extension of agriculture to underutilized or ignored land masses.

During 1978, the officers will explore opportunities for Foundation contributions to rational utilization of such distinct areas as deforested hillsides, flood plains, the Sahel, tropical rainforests, and the Llanos-Campo Cerrado portions of South America.

4. Food Policy and Development

This will include support, in cooperation with International Relations, of work on food and agricultural policy having specific reference to production, distribution, and nutrition in the developing countries. It is anticipated that the Foundation will continue to provide support for the International Food Policy Research Institute for at least another three to five years. The Foundation will also plan to support selected food and agriculture policy studies in countries or regions where new technology or organizational innovation in input delivery and education is aimed specifically at providing better opportunities for the small farmer.

OTHER SOURCES OF FUNDING

(1) The principal source of grant funds in support of agricultural development, about \$160 million in 1978, is the United Nations Development Programme. The bulk of the funds of this agency are assigned to the developing countries on a formula basis and are used to support projects identified by the countries with advice from UN agency staff specialists. Some UNDP funds are, however, dedicated to regional programs, several of which are operated through the international agricultural research centers. The Food and Agriculture Organization of the UN serves as executing agency for many of the UNDP-funded projects.

(2) In the field of agricultural development the World Bank, which disburses about \$2.3 billion per year, and the three major regional development banks (Asian, African and Inter-American), which together disburse in excess of \$150 million per year, operate primarily on the basis of long-term loans. The purposes of such loans include strengthening of national agricultural research and extension organizations, development of rural infrastructure (irrigation systems, farm-to-market roads), and establishment of supportive credit and marketing agencies. The poorest of the countries can qualify for very low interest rates on a portion of such assistance, but mostly the banks' funds are loaned at international commercial rates.

(3) The largest single source of bilateral assistance is the U.S. Agency for International Development. While the Agency continues to provide some grants to selected countries, most of its support now takes the form of long-term, low-interest-rate loans. These are expected to total about \$590 million in 1978. The other major sources of bilateral assistance are Canada and the non-communist European countries, although the

OPEC countries are also providing some funds on a highly selective basis. In Asia, Japan is a principal donor but much of its assistance is tied in some fashion to its commercial interests. In most cases bilateral assistance is related to political or commercial interests of the donor country. With the exception of USAID, few donors are staffed to provide fully effective technical backstopping during the planning of individual national projects. While there are some factors which limit the effectiveness of bilateral agricultural assistance programs, they are very important to the developing countries.

(4) While there are a number of foundations such as the Agricultural Development Council, Kellogg, and Rockefeller Brothers Fund which contribute to international agricultural development, the major foundation support is provided by Rockefeller, Ford, and the International Development Research Centre (IDRC) of Canada. The Ford Foundation has reduced both the scale and scope of its international agricultural activities, but it continues to make important contributions in the field and now spends about \$10 million per year for this purpose. Ford's activities vary markedly from region to region but it has a major interest in planning national agricultural development through provision of agricultural economists and support for training of local staff. Other programs have focused on rural development and, more recently, on some aspects of environmental protection. IDRC supports a number of commodity development activities and has been the principal international agency interested in the reduction of postharvest losses of food products. Most recently it has initiated an agro-forestry program designed to improve the productivity of areas where the use of trees is essential to ecological stability. This latter program relates directly to the Foundation's interest in the use of fragile environments and will be considered in the development of that program. IDRC's annual expenditures in these fields are approximately \$12 million.

POPULATION AND HEALTH

This program has four major components:

Population

1. ***Research on reproductive biology:*** Strengthening of research both by supporting individuals presently engaged in significant work and by drawing new people of excellence into the field.
2. ***Research on new contraceptive technology:*** Maintenance of strong research efforts in both developed and less-developed countries to develop safer, more effective, and inexpensive methods of fertility regulation.
3. ***Policy studies:*** Improvement of understanding of the determinants of fertility, and of the socioeconomic factors affecting population dynamics and acceptance of contraceptive technology through research and training for the purpose of influencing national policy formation. Work will be done by scholars in both the developed and less-developed countries.

Health

4. ***Great neglected diseases:*** A new thrust, bringing the talents of outstanding scientists at some of the world's leading medical research centers and the techniques of modern biomedical science to bear on these diseases (especially parasitic infections and the bacterial diarrheas) in the less-developed and largely tropical countries of the world.

Although work on population-related problems was established as a major program interest in 1963, the Foundation had actually been supporting projects related to the problem in the U.S. and abroad, especially in demography, for many years prior to that time. Moreover, Population and Conquest of Hunger have often been referred to in Foundation discussions as "twin programs" because (1) a reduction in birth rates was seen to be a necessary prerequisite for resolution of the world food problem and (2) increases in food supplies, it was hoped, were "buying time" for governments in developing regions of the world so that they could deal with their rapidly expanding populations. From 1963 to 1973 the Population program's primary emphasis was on basic research in reproductive biology; since then, however, increasing attention has been directed to social science research and training.

Medicine and health have been concerns of the Foundation since its inception and, in fact, it was in these fields that the Foundation first became widely known and respected. In recent years, work in health has been quite limited, the major activity being the St. Lucia project on the control of schistosomiasis. That project, now entering a phase of orderly termination, has won international recognition as one of the largest and best controlled experiments involving human subjects. In addition, a number of health activities have been carried out by several of the universities supported under the Education for Development program.

Today the Foundation enjoys a unique position and reputation in the fields of both population and health. The officers recommend that efforts be intensified and aimed at the development of new and better means of both fertility and disease control.

POPULATION

In the 1960's, in direct response to the obvious worldwide need for better means to control fertility, reproductive biology and contraceptive development began to assume new importance, receiving steady increases in both attention and funding. Oral contraceptives and intrauterine devices, both of which were seen to have advantages over traditional methods of birth control, became widely available. Many developing countries initiated programs designed to deliver these new contraceptives to the millions of people who, it was believed, needed and wanted them.

As family planning programs were established, it became evident that countries making progress in other aspects of development experienced the highest level of success while in many other countries, particularly the poorest, the programs failed to influence the traditional patterns of high fertility. Worldwide, fertility did fall over the past decade but the braking has been slow. Even if the decline of the past decade continues for the next twenty years, instead of today's 4 billion, the world will have 8 billion people by the year 2000 and growth will be continuing. Moreover, most of the increase will occur in those countries that can least afford the burden at this stage in their social and economic development.

The experience of both effective and ineffective family planning programs has revealed the shortcomings of existing methods of fertility regulation in terms of acceptability and effectiveness. In addition, concern about adverse effects of the pill and the IUD has mounted as these relatively new methods have been studied more comprehensively.

While it is unrealistic to search for a "perfect" method which would meet all the needs of the world's diverse population, it is evident that improvements over existing methods are both necessary and feasible.

PROGRAM COMPONENTS

1. Reproductive Biology

Improvement of contraceptive technology requires a greater understanding of the hormonal, physiologic, and biochemical mechanisms involved in the reproductive system. This field of basic research, although noteworthy for its recent progress, is seriously underfunded. A comprehensive review sponsored by the Foundation in cooperation with the Ford Foundation and Canada's International Development Research Centre, estimated that approximately \$360 million was needed worldwide for research in 1976 while only \$100 million was actually committed. Moreover, the analysis found that the gap between the needs of the field and actual funds available would widen by 1980.

It is therefore recommended that there be stronger Foundation support for research in reproductive biology, primarily at established institutions in developed countries. These grants would go to outstanding scientists already working in the field as well as to new and younger investigators of excellence who would be recruited into this area of research.

2. Contraceptive Development

If we are to have new, safer, more effective, and inexpensive means of fertility

regulation in the future, research support must be made available now for their development. As potential methods for the control of conception are developed in the laboratory, they must be subjected to careful testing and evaluation in the field. These activities must be carried out in both developed and developing countries for the circumstances in each differ, as do the issues that need to be clarified. Genetic, nutritional and cultural factors influence aspects of safety or effectiveness and these factors must be considered as new methods are evaluated.

The Foundation's major instrument for contraceptive development work is the International Committee for Contraception Research (ICCR) of the Population Council. In addition to continuing support for the ICCR, the Foundation will support appropriate work on the safety and effectiveness of existing methods and newly developed methods of fertility regulation. It will also seek opportunities to hasten the transfer of ideas and knowledge from basic science into the applied phase of testing and development of new contraceptive technology. Encouraging this acceleration in technological advance will require a greater interaction between outstanding scientists concerned with fundamental biological phenomena and the mission-oriented programs directed toward development of new methods.

3. Policy Studies

In spite of the fact that studies on the determinants of fertility, mortality rates, migration processes, and their socioeconomic and cultural consequences are needed to provide the basic data required for the formulation of population policies, research in these areas has proceeded very slowly. It is now widely recognized that the dynamics of population growth are greatly influenced by multiple socioeconomic factors. Many of these factors (such as education, employment status, income, cultural practices) and their precise interrelationships are still poorly understood. It is important to apply general social science research to contraceptive introduction in order to determine precisely the key variables which affect the extent of contraceptive use in particular areas.

Decision-making on population and development policies is the responsibility of national governments. Therefore, the Foundation plans to focus its future efforts on improving the level of understanding among government leaders about population growth and socioeconomic development in their own countries, for the purpose of assisting national policy formulation.

Internally, the population portion of the program will be closely linked to the health component and both will be carried out in collaboration with the programs in International Relations and Conquest of Hunger. Externally, these activities will continue to be coordinated with those of the Ford Foundation, the International Development Research Centre, the Agency for International Development, and other national and international agencies working in the field of population.

HEALTH

4. Great Neglected Diseases of the Developing World

The sophisticated biomedical research establishment of the industrialized nations has thus far largely ignored many of the diseases that afflict hundreds of millions of people in

the developing world. These include such conditions as schistosomiasis, hookworm, malaria, sleeping sickness, amebic dysentery, and fatal diarrheas of infants. Highly competent basic and clinical scientists are now developing an interest in this field. The officers therefore believe that the Foundation can render a valuable service by encouraging them to make major commitments of time and energy to research in this area.

At the December 1977 meeting of the Board of Trustees, a proposal to create a network of high-quality investigators to work on the great neglected diseases was approved. This network will include a number of the best medical research institutes, mainly in the developed world, each led by outstanding workers who will attract cadres of excellent students and young investigators. The rapid establishment of up to 12 of these groups should result in the creation of a critical mass of investigators with a high output, both quantitatively and qualitatively. Each of these groups will form a link with an outstanding medical school or research laboratory in the developing world. These new collaborative units will function as research and training centers for national and regional programs and will also provide research opportunities for investigators from developed nations.

A number of international agencies have recently become more concerned about these long-neglected diseases, which they now recognize to be a significant deterrent to both economic planning and acceptance of fertility control measures. However, these agencies are frequently hampered in their activities by political constraints and lack of the necessary medical technology. For example, the World Health Organization has embarked on a Special Programme for Research and Training in Tropical Diseases for which it has now received commitments of \$12 million, largely from European countries. However, WHO must work under several constraints: first, the necessity to distribute its funding on political and geographic bases; second, the limitations of the tropical medicine establishment of the industrialized world; third, the lack of an efficient infrastructure to administer the program; and, finally, the uncertainty regarding sources of future support. Similarly, the World Bank is planning to expend \$120 million over the next 20 years in stop-gap efforts to prevent river blindness in West Africa by insect control. However, little is known about the exact nature of this disease and no effective drugs or vaccines have yet been developed for either its prevention or treatment.

The Foundation is highly respected internationally as a professional organization with substantial credentials in medicine and public health, and thus is well-equipped to make a major contribution to the well-being of mankind by supporting the development of a major program in this field.

This program component will be closely related to population objectives and with the research in the parasitic diseases of domestic animals initiated under Conquest of Hunger.

EQUAL OPPORTUNITY

This program has four major components:

1. ***Urban Problems–Youth Employment:*** A new component, initially exploratory, intended to help clarify underlying causes contributing to persistently high unemployment among minority youth and to develop policies and programs to reduce the causes and incidence of such unemployment.
2. ***Minority-Group Participation in the Development of the Southeast:*** An inter-program component to promote and support the establishment and growth of community-based self-help organizations, and to assist public and private agencies in delivering needed services and assistance to such community-based organizations.
3. ***Leadership Development:*** The training of promising individuals for responsible positions in education and community development.
4. ***Securing and Protecting Basic Rights:*** Research and action on persistent problems of racism; support of advocacy and litigation to secure equal rights for disadvantaged groups, including assistance to selected civil rights organizations; and humanistic studies of issues involving minority groups.

When the Equal Opportunity for All program was initiated in 1963, it focused work in support of minority-group interests on (1) leadership development, (2) strengthening educational institutions for Negroes in the South, and (3) improving the preparation of Negro college applicants. In 1973, the objectives were altered to emphasize community education, leadership development, securing equal and basic rights, and policy-oriented research. A special program in the Southeastern U.S.A. was authorized by the trustees in 1975.

Substantial progress has been made during the last decade in areas related to the Foundation's Equal Opportunity program. However, equality of opportunity remains a dream for many minorities. Unusually high proportions of some minority groups in the U.S. still are denied by actions or inactions of society the full rights of citizenship: access to education, employment, equal distribution of justice, and housing, and are in other ways disadvantaged and mistreated. They lack the political power, the resources, and the trained people to pursue the fair treatment to which they are entitled as citizens. This continues to be a major shortcoming of American society and remedial efforts ought to remain a central concern of the Foundation.

There are relatively few major sources of funds for support of efforts to combat racial discrimination. Most programs have been relatively unstable and ineffective. There is a particular need to support preparation of leaders, to strengthen institutions devoted to resolution of problems of minorities, and to develop policy strategies.

The Foundation's historic role in this field gives its presence symbolic as well as practical significance and imposes a special obligation to continue engagement with the problem.

PROGRAM COMPONENTS

It is proposed that for the next several years, efforts under the Equal Opportunity program continue to concentrate on Black Americans, responding secondarily to prob-

lems of other minority groups including Spanish-speaking Americans and Native Americans. Program components would be:

1. *Urban Problems—Youth Employment*

This new component would be afforded high priority. Initially exploratory, it would seek to find ways to (a) help clarify underlying causes and relationships involved in persistently high unemployment among minority youth, and (b) assist with mobilization of support to develop public policies and programs to reduce the causes and incidence of such unemployment. The program component would be concerned mainly with minority youth unemployment problems of the inner cities.

The officers will be in touch with the Secretary of Labor and his staff, other foundations, and knowledgeable persons to assess the minority youth unemployment situation, with special regard to opportunities for The Rockefeller Foundation. In addition, other actions designed to assist with program development will be undertaken. The officers expect to present a tentative course of action for consideration at the April 1978 meeting of the Board of Trustees.

Though the main responsibility for this program thrust would reside with the Equal Opportunity program, its nature requires the assistance of persons involved in the Arts, Humanities and Contemporary Values and the Population and Health programs and the Social Sciences division.

There are two major federal programs concerned with this problem: the Comprehensive Employment and Training Act (CETA—\$3.4 billion in FY 78) and the Youth Employment and Demonstration Projects Act of 1977 (YEDPA—\$1.0 billion in FY 77). Of the major foundations, the Ford Foundation has been active and is in the process of developing a major new program. In addition, the Clark, Field, and Taconic Foundations are exploring opportunities to work with federal and local agencies in pilot and demonstration projects. At the state and local levels, there are many public and private agencies involved in youth training and employment, including several fairly sizable black organizations operating in a number of large cities.

2. *Minority-Group Participation in the Development of the Southeast*

This program component, approved in mid-1975, has as its objective the improvement of the lives of rural minority-group persons by helping them assume the rights and obligations of citizenship through participation in the affairs and enterprises of the region. Originally, it was intended to complement and supplement ongoing Equal Opportunity projects in urban areas of the Southeast. Because the boundaries between rural and urban areas tend to blur in the Southeast and because of inextricably linked common problems, the program has been enlarged for operational purposes to include both urban and rural areas. The principal thrusts are:

- to promote and support the establishment and growth of community-based self-help organizations;
- to assist public and private agencies and institutions in delivering needed services to local community development organizations and enterprises.

The officers will seek to implement the program mainly through established organizations—public and private. For this thrust, cooperative programs will continue to

be arranged with major national, regional and state organizations, such as the Urban League, the NAACP, the Southern Regional Council, the Alabama Center for Higher Education, and the Federation of Southern Cooperatives. Similarly, institutional support for community and leadership development will be provided primarily to predominantly black colleges. A special target will be the generally well financed and staffed 1890 land-grant colleges. End products of the proposed approach are expected to be improved minority-group leadership, self-reliant communities, and more responsive institutions.

A special feature of this program thrust is its interprogram character, which involves cooperation with the Conquest of Hunger, Population and Health, Arts, Humanities and Contemporary Values, and Education for Development programs.

There are many agencies and organizations, public and private, providing very substantial support for community development and leadership in the Southeast. Few, however, are providing sustained support of the kind and amounts needed by minority-group communities. A principal purpose of this program thrust is to leverage increasingly higher levels of agency and institutional support for minority-group communities. The vast resources of the 1862 and 1890 land-grant colleges of the Southeast provide such an opportunity.

3. Leadership Development

This program thrust will provide selected, promising minority-group individuals with specially arranged study and experience opportunities designed to help accelerate their attainment of leadership positions in the fields of education and community development.

The officers will arrange for and monitor a variety of training experiences—internships, scholarships, fellowships, and in-service training—as may be required and appropriate to prepare and upgrade talented individuals identified for leadership roles. For example, through internships, such persons will be placed in the offices of top officials of educational institutions and other organizations to enable them to acquire the training and experience required to qualify for senior administrative positions. Scholarships and fellowships will be used to prepare persons for service in educational and community development areas where there is a dearth of trained minority-group persons.

There are several foundations, a few corporations, and a number of government agencies (state and federal) that are involved in minority-group leadership development programs. However, in most cases the focus is on legislative processes, governmental operation, and specific institutional objectives. The program component will not duplicate the programs of other foundations or governmental agencies.

4. Securing and Protecting Basic Rights

This program component is designed to provide support for a selected number of organizations engaged in programs and activities which (a) help to secure and protect the basic rights of all citizens, but especially those of minority groups, and (b) seek to overcome the present effects of past racial discrimination. Several approaches will be used:

- support to a limited number of established civil rights organizations engaged in advocacy and litigation,

- support for research and action programs designed to provide possible answers to persistent problems of racism, and
- development of a research and training program which will (a) identify and publicize cultural, social, political, and economic contributions of blacks and other racial minorities, (b) strengthen instruction in the social sciences and humanities in a number of predominantly black institutions, through support of individual scholars, and (c) establish a special fellowship program: "Equal Opportunity Research Program in the Humanities and Social Sciences."

This program component will be implemented in cooperation with the Arts, Humanities and Contemporary Values program and with the Social Sciences and International Relations divisions.

In the field of civil rights, there are many agencies and organizations which have as their objective the solutions to the problems of ignorance, poverty, and racial discrimination. These include public interest law groups, civil rights organizations, and several government agencies. The officers will continue to work closely with such groups.

THE ARTS

This program has three major components:

1. *Support of the Creative Individual*
2. *Increasing International Opportunities for Creative Artists*
3. *Exploration of Issues Involving the Arts and American Society*

The Foundation has been involved significantly in support of the arts, particularly the performing arts, since 1956. It has participated in the establishment of 22 organizations (\$30.6 million), has provided financial support for a wide array of other institutions (\$8.1 million), and has promoted discussion of issues related to the arts through arrangement for or support of 15 conferences since 1973. Recent major activities include the Playwrights in Residence Program; Fellowships for Training Museum Educators; the establishment of experimental centers for the development of video art and documentary production; establishment of a major ballet company; setting up a nonprofit corporation devoted to recording and disseminating American music on a worldwide basis; and an international music competition to promote interest in the works of American composers.

PROGRAM COMPONENTS

1. *Support of the Creative Individual*

The creative person is the central figure in the arts. Dealing with products of the imagination, the creative person is involved in problem creating as much as in problem solving. The artist is the mirror of the values and goals of the culture, and in transmitting those values acts as a force which transforms the culture. As funding for the arts has increased at state and federal levels and is increasing at corporate levels, policies which guide funding have failed to reflect the primacy of the creative person, and instead have stressed support to institutions and organizations which in many cases (museums, symphony orchestras) have little or no relationship to the advance of the living artist. Individual grant programs at the National Endowment for the Arts form 4.2 percent of its total expenditures. The New York State Council on the Arts is prevented by law from making grants to individuals. Creative persons are supported largely through project grants to organizations. One of the Foundation's major contributions in the past has been its support to promising individuals at key times in their careers. There is both a need and an opportunity at this time for the Foundation to turn its attention with greater vigor toward the support of the creative person, since America has now assumed a dominant international position with respect to creativity in all forms and there are few "open" sources of funding available to the artist which do not tie support to specific projects.

The Foundation's interests will be implemented through appropriations and grants in aid for defined fellowship programs such as the Playwrights in Residence Program, informal fellowship programs through grants directly to individuals for their creative work, and grants to institutions on behalf of the creative person. It is expected that minorities will continue to figure importantly in such programs, and therefore there will be an indirect link to the Equal Opportunity program.

The Foundation will encourage funding from other sources for specific programs

when feasible and desirable, and would hope to involve other foundations, national and state agencies, and corporations in support of the creative person.

2. Increasing International Opportunities for Creative Artists

A world market, largely untapped, exists for the work of American artists. Within the United States, an increasingly hospitable environment exists for creative artists from other cultures, particularly those with non-Western and Latin American origins. American experimentation with technologically-based art forms is of particular interest today in Western and Eastern Europe; and Far Eastern modalities in art have become absorbing not only to younger, but also to middle-aged Americans. Opportunities for artists to benefit from and contribute to other cultures are plentiful. However, funds and programs are lacking to bring such artists together with their peers and the general public.

For Americans, invitations to tour are easy to obtain—as is foreign funding—once the visiting artist or troupe is in the foreign country. But these invitations frequently must be turned down because few artists or companies can overcome the initial hurdle of finding travel funds.

The eagerness of foreign countries to have more access to American artists is based on three considerations. First, foreign audiences desire to see American artists and their works. Second, foreign students, especially aspiring artists, are greatly energized by exposure to their American counterparts. And third, foreign creative artists derive considerable benefit from cooperative situations in which they can participate creatively with Americans. Those American artists and artistic groups which have toured abroad have largely undertaken traditional engagements in which the second two considerations were minimal. It is not enough, however, for the artists to play one-night stands. In addition to public performances, workshops involving foreign artists and students would be key to enhancing the process of cultural sharing.

Americans appear to be no less interested in hosting foreign artists and troupes, but few mechanisms exist, either private or governmental, to provide touring arrangements.

The officers plan to approach this new area of involvement in three ways: further study of the field, including the earlier Foundation support for music, dance, and drama in Latin America, Asia, and Africa; grants to selected organizations to initiate programs or workshops involving artists of different nationalities, principally in America at first; and grants for partial support to selected organizations (music, theater, dance, visual arts) to undertake foreign tours based upon agreements that the tours will involve other artists, students, and audiences.

Informal links would be developed between this Arts objective and the Humanities and International Relations programs.

Preliminary talks have led the officers to believe that cooperative funding and other support for aspects of this effort would be available from corporations, other foundations, and government agencies, including the Art Councils of Great Britain. The bulk of touring expenses would be met by host entrepreneurs, in some cases the national governments or other agencies and in others the public through ticket sales. The officers would seek to work largely with and through American organizations, for both Americans touring abroad and foreigners touring here.

Television will also be an important tool. Two initial approaches are being undertaken. The first is a North American-European Public Television Screening Conference, the goal of which is to increase the flow of cultural broadcasting between North America and a number of European countries. The second is a series of programs dealing with foreign cultures being developed by selected artists and two organizations, the Educational Broadcasting Corporation and the Cable Arts Foundation, for broadcast on public television stations.

3. Exploration of Issues Involving the Arts and American Society

As increased attention is directed toward the role of the arts in American society, new attitudes are being formed. What was thought not only implausible but undesirable in the late 1950's, namely, federal support programs in the arts field, is now generally accepted as good. Key areas of interest and understanding have developed in the past decade with respect to the relation of arts institutions to contemporary society. The Museum Services Institute under the Department of Health, Education, and Welfare, established by the Arts, Humanities, and Cultural Affairs Act of 1976, was the first agency created with an exclusive concern for the nation's museums and their operating needs. Other arts groups may receive similar special support. There is no need for The Rockefeller Foundation to lead in this direction.

But from time to time issues emerge of considerable importance to society at large, which because of the absence of an organization to serve as spokesperson may go ignored. For example, under the Foundation's leadership, a number of federal, state, and private organizations were asked recently to examine the role of the arts in institutional settings such as hospitals and prisons. As a result of the Foundation's one-day conference, an organization was formed called the Alliance for Arts and Arts Therapies, that aims to follow recommendations made by representatives of HEW to develop mutually beneficial programs which can be supported federally. It is too soon to report where this will lead, but it could be of benefit to millions of institutionalized Americans and to artists and therapists around the country. Similar explorations will carry out this thrust in the future. Implementation will be primarily through conferences and grants in aid. Other agencies will be heavily involved in this activity as participants but probably not, initially, as funders.

OTHER SOURCES OF SUPPORT FOR THE ARTS

Funding for the arts from private foundations, federal and state arts agencies, and corporations has increased during the past five years. Support from foundations increased from about \$50 million to \$70 million and that from the National Endowment for the Arts from about \$30 million to \$115 million. State arts agencies now exist in every state of the Union, the District of Columbia, American Samoa, Guam, Puerto Rico, and the Virgin Islands. The budgets of these agencies vary in size but together total about \$62 million for 1978, with the New York State Council on the Arts' budget of \$34 million representing more than half. Among the state agencies whose budgets have grown dramatically is the Minnesota State Arts Board, which had a percentage increase last year of 254 percent. Corporate giving during the last five years has risen from \$144 million to

\$222 million. In general, the increases described encompass fluctuations in spending during the five-year period. For example, the Ford Foundation budget for the arts decreased from \$17 million in 1972 to \$4 million in 1977, while Exxon's Educational Foundation increased its spending to \$5 million, most of which underwrites television programs such as "Dance in America" and "Theater in America."

The funding for the arts from all these sources is generally concentrated on institutional or project support. Unrestricted support for the individual creative artist is not available with the exception of artists' participation in Guggenheim Fellowships, modest fellowships provided by the National Endowment for the Arts, and, in New York, the Creative Artist Public Service grants funded by the New York State Council on the Arts, which require public performances of some kind. With its relatively modest expenditures, judiciously spent according to proposed guidelines, The Rockefeller Foundation can have an impact on artistic development well out of proportion to its size.

HUMANITIES

This program has three major components:

1. ***Contemporary Values:*** To clarify the fundamental goals, beliefs, and values of a changing society through support of humanistic research and scholarship with particular emphasis on those values that support the rights of individuals and various social groups.
2. ***Contemporary Issues in Humanistic Perspective:*** To provide an historical, philosophical, and cultural perspective on major issues confronting society now and in the near future, in conjunction with other Foundation programs.
3. ***American Cultural Heritage:*** To enhance the country's pride in its diversity as well as its unity through support of humanistic research on minority groups, especially black Americans, and in such fields as labor history and women's studies, and often using the newer techniques of oral history.

The Foundation has had a long tradition of support for humanistic scholarship here and abroad. From 1929 to 1962 Humanities existed as a separate division, from 1962 to 1970 as a part of Humanities and Social Sciences, and from 1970 to 1973 as a component of Arts and Humanities. It was reestablished as a separate division in 1973, and in 1974 a *Director for Humanities* was appointed.

Because it has been in operation for no more than about five years, the present program is not projected as new in any fundamental sense. The emphasis has been, and remains, on contemporary values. The largest single appropriation will continue to be for individual fellowships for scholars and writers seeking to illuminate the perplexities of contemporary culture and society. Moreover, the program will continue to play a key role in assessing the problems and prospects facing the humanities and humanistic scholarship in the contemporary world.

A comprehensive definition of the humanities would resemble that used in the act that established the National Endowment for the Humanities in 1965. There the humanities are defined as including, but not limited to, the following fields: history, philosophy, language, literature, linguistics, archaeology, jurisprudence, history and criticism of the arts, ethics, comparative religion, and those social sciences employing historical or philosophical approaches, including cultural anthropology, sociology, international relations and political theory. In a general way, the Foundation's program in the humanities, however, does not support formal or traditional work in these disciplines but stresses the relating of humanistic scholarship to contemporary values and issues.

In our complex scientific and technological society knowledge of the humanities and new humanistic research and scholarship are both sorely needed. As in the case of the Arts, the Humanities program serves to balance the Foundation's more purely scientific and technological interests and responsibilities. The program encourages humanists to deepen our understanding of the past, assess the ideals and goals of the world in which we live, explore ethical values, and preserve and revitalize our American cultural heritage. Encouraging an assertive humanism, the program stresses the application of humanistic scholarship to the dilemmas of contemporary culture and society.

PROGRAM COMPONENTS

The Humanities program will focus on the following:

1. ***Contemporary Values***
2. ***Contemporary Issues in Humanistic Perspective***
3. ***American Cultural Heritage***

In addition, there will be a modest effort to support work in television and film for cultural and educational projects related to Humanities objectives.

1. *Contemporary Values*

The program will support humanistic research and scholarship at the deepest conceptual level in order to help clarify the fundamental goals, beliefs, and values of our contemporary society. Creative individuals of all backgrounds will be encouraged to define through their research and writing the fundamental and continuing questions of human and social concern that have long preoccupied reflective human beings, among them, the quality of life, the rights of individuals, and the good society. Special concerns will be the transformation of the idea of progress and ongoing definitions of the concept of human rights—political and socioeconomic. The program will seek to promote a continuing examination of contemporary values and value systems, including the traditional value systems of cultures increasingly affected by modernization.

The objective of this component, as of the second, will be pursued primarily through the Humanities fellowships, which represent the largest single Humanities appropriation each year (about \$600,000). In a public competition, the program directly awards about 35 fellowships annually. The fellowships, now in their fourth year (and structured to avoid duplication of other major fellowship programs) have received wide national attention and have become coveted awards. The competition specifically calls for humanistic research to help illuminate the intellectual, moral, and ethical dilemmas of contemporary culture and society. It has resulted already in book-length manuscripts, some published or about to be published, on a wide variety of subjects, including the Holocaust, the nuclear test-ban debate, Vietnam, and literature written from prison experience. The program asks that all individual research projects be submitted through the fellowship competition although in exceptional cases a few awards are made as grants in aid.

Other major fellowship programs in the humanities are sponsored by the American Council of Learned Societies, the John Simon Guggenheim Memorial Foundation, and the National Endowment for the Humanities. All of these focus generally on more traditional academic research. In 1977, the ACLS provided \$1 million for 91 fellowships (funding provided principally by the Ford Foundation); the Guggenheim Foundation, \$4.5 million for 309 fellowships (about one-third in the humanities); and the NEH, \$3 million for 173 fellowships. The Foundation's fellowships, although smaller in number than the others, remains the only program that explicitly emphasizes humanistic research on contemporary values and on issues and dilemmas of contemporary society.

In addition to its fellowship program, the emphasis on contemporary values (and contemporary issues) will be carried out by the following:

- occasional grants in aid to outstanding individuals;
- grants to institutions that award fellowships to scholars working on contemporary values and issues, such as the Woodrow Wilson International Center for Scholars, the Aspen Institute for Humanistic Studies, the Center for Advanced Study in the Behavioral Sciences, the National Humanities Center, and other organizations;
- grants to individuals and institutions, academic and non-academic, for workshops, seminars, conferences, publications, curricular innovations, and other projects judged to be advancing the objectives of the Humanities program.

2. *Contemporary Issues in Humanistic Perspective*

This component seeks to focus on new ways of studying some of the key issues of our times by providing an historical, philosophical, and cultural perspective on significant problems confronting contemporary society. It will identify major social issues and encourage humanists and non-humanists to work individually and jointly on them. Reinforcing other Foundation programs, it will work with:

- ***Population and Health*** on selected biomedical ethical issues ranging from contraception and abortion to life extending technologies, biological experimentation, and death and dying;
- ***Equal Opportunity*** in exploring the historical and cultural background to problems of racism, discrimination, and barriers to minority employment;
- ***International Relations*** in providing historical and philosophical dimensions to selected world issues, including considerations of human rights on a global scale;
- and with other programs and special Foundation interests as opportunities and needs arise.

The Humanities fellowships program would again be an important element in this component. In addition, the objective would be carried out by grants to appropriate institutions where significant work is in progress, such as the Hastings Center (the Institute for Society, Ethics, and the Life Sciences), the University of California-Santa Barbara program in Public Historical Studies, and the Carnegie-Mellon University program in Applied History and Social Sciences, and various institutes and centers in the growing area of public policy studies.

3. *American Cultural Heritage*

This component seeks to enhance the country's pride in its diversity as well as its unity by encouraging scholarship on the contributions of blacks and other minority groups as well as projects in labor history, women's studies, and oral history. The objective would be carried out through grants to individuals and to academic and nonacademic institutions that foster the study of our national heritage and its cultural pluralism. We shall continue to encourage the exciting and promising new techniques of oral history for various projects, such as recent grants to Smith and Radcliffe Colleges for oral histories of women active in the early birth control movement, to the University of California-Berkeley oral history project on the suffragist movement, to Columbia University's oral history program on distinguished Americans, and to institutions where training in oral history techniques for purposes of serious scholarship is taking place.

An earlier emphasis on white European immigrant groups is being phased out and scholarly research on black Americans will be emphasized. Here, as mentioned earlier, Humanities will work with the Equal Opportunity program in exploring ways and means of supporting humanistic scholarship on the contributions of blacks and other minority groups to American life and in providing a historical and cultural perspective on current social problems of racism, discrimination, and barriers to employment. A new Equal Opportunity Research Program in the Humanities and Social Sciences will encourage research for that purpose by outstanding scholars of all backgrounds. Limited at first to black Americans, it may later be broadened to include Mexican-Americans, Native Americans, and other minority groups.

Humanities will also work closely with the Foundation's Equal Opportunity development program for the Southeastern United States, seeking to strengthen humanistic research and the study of the humanities in predominantly black institutions. Humanities will continue to work with the Arts division within the overall framework of the Arts, Humanities and Contemporary Values program, cooperating in such areas as American art and music history, and other aspects of the American cultural heritage.

TELEVISION AND FILM

In supporting work in television and film for projects relating to Humanities objectives, funding will generally be provided for costs of research, planning, and scripting, but not production. It is estimated that perhaps 10 percent of total expenditures each year will be for this purpose, in each case already calculated into the component. The program will also support the study of television and film as a social and cultural force, and will seek opportunities to elevate levels of television criticism and programming.

CHANGES IN PROGRAM

The major emphasis will remain on contemporary values and issues, with an increased effort in cooperation with other Foundation programs to provide a humanistic perspective on critical issues of contemporary importance. But two changes are to be noted:

- 1) as mentioned earlier, the older ethnic studies' focus on white European immigrant groups is being replaced by an emphasis on the contributions of black Americans and other minority groups (particularly Hispanic), in part through the new Equal Opportunity research program; and
- 2) the Public Humanities component in the older program is being dropped. An ambiguous term, it generally meant a grass roots, regional, ethnic, or community focus on the humanities which could increasingly be assumed by the National Endowment for the Humanities, both at the federal level and by the state-based Humanities Councils. The Foundation will continue, of course, to seek out neglected and untapped sources of creativity wherever they may be found.

HUMANITIES IN THE CONTEMPORARY WORLD

Apart from grant-making functions—the Foundation representing as it does one of the nerve centers of American intellectual life—the Humanities division will continue to play a leadership role in some of the key national issues of the day involving the humanities. As in the past, it will do this through direct officer participation in national committees, the organizing of conferences (such as one in 1975 that resulted in the issue

of *Change Magazine* devoted to "The State of the Humanities"), the publication of working papers (such as *The Contemporary Humanities in an International Context*, *Film and the Humanities*, *Changing Roles of Women in Industrial Societies* and others), and related activities.

Issues currently being explored with direct Foundation participation or support include:

- an ongoing national inquiry into scholarly publication in the United States funded by Ford, Mellon, NEH, and the Foundation;
- the state of foreign language study under the auspices of the ACLS and the Modern Language Association with initial funding by the Foundation;
- the role of the Library of Congress, and problems confronting public and private research libraries in the nation;
- the relationship between government and private funding for the humanities, and the role of the National Endowment for the Humanities in American cultural and intellectual life;
- the role of humanistic scholarship in examining problems of racism, discrimination, and minority unemployment;
- the impact of modernization on traditional value systems in developing societies (a Bellagio conference scheduled for 1978);
- the search for a value consensus in American life and the teaching and dissemination of values at all educational levels;
- the potential role of humanists in all aspects of society and the search for nonacademic opportunities for unemployed or underemployed humanists.

The Foundation is currently formulating plans for a national commission on the general state of the humanities today which would call attention to prospects, problems, and priorities for the humanities for the 1980's. In December 1977, the president of the Foundation and the director for Humanities testified on a bill introduced by Representative John Brademas and Senator Claiborne Pell calling for a White House Conference on the Humanities for 1979, and they plan to work closely with the House and Senate subcommittees in this effort and all that it may involve for raising public consciousness about the significance of the humanities in national life. A Foundation-sponsored national commission might complement the work of the White House Conference by exploring issues free from the political pressures that would inevitably accompany a government-sponsored conference of this kind. Such a commission of distinguished representatives from business, public life, and the academic community would be similar to the one established in 1963 whose report led to the creation of the National Endowment for the Humanities. It could objectively assess the role of the National Endowment for the Humanities after a decade of its existence as well as address itself to a variety of key issues involving the humanities ranging from the state of literacy in the nation to the place of the humanities in undergraduate and graduate education today.

OTHER FINANCIAL SUPPORT FOR THE HUMANITIES

Major national support for the humanities currently comes from the National Endowment for the Humanities, whose budget has grown from \$2 million annually a decade ago

in 1967 to over \$125 million in 1978. The Foundation's program, despite its more limited funds, is able to initiate or encourage many projects with modest grants, which have often been followed by larger funding from the NEH. It also moves with more speed and flexibility than the NEH, which is burdened with lengthier bureaucratic procedures and political pressures. The state-based Humanities Councils in each of the states will be under increasing pressure to support regionally oriented humanities enterprises, and the NEH itself will be under continuing pressure to focus on public programs involving the dissemination of the humanities rather than on scholarship. These developments could make the contributions of the private foundations even more important.

In general, the Foundation has followed a policy of close cooperation with the NEH, trying to stretch scarce dollars for the humanities and to make funding go further in a time of inflation by means of matching grants or by helping to meet challenge grants. The officers serve also in an advisory capacity in many NEH activities. Finally, the public needs to remain alert to the problems inherent in large-scale governmental funding for cultural activities, including possible encroachment on cultural freedom, again an area in which private foundations can play a critical role.

Foundation officers are in close touch with private foundations and other organizations that directly or indirectly support the humanities—Mellon, Carnegie, Lilly, Donner, Guggenheim, Sloan, the American Council of Learned Societies, and Ford (which supports projects in higher education and research but has no humanities program as such). According to a Foundation Center study in 1976, the humanities received about ten percent of the total grants made by private foundations, or about \$81 million. The total amount of money available to support research in the humanities, despite this sum and the \$125 million budget of the NEH, remains minuscule compared to the \$1 billion budget of the National Science Foundation or the total funding available for scientific and technological research which, according to a recent NSF report, amounted to about \$25 billion for 1977.

INTERNATIONAL RELATIONS

This program has three major components:

1. *World energy*
2. *World food and agriculture, in conjunction with the Conquest of Hunger program*
3. *Regional conflicts and security arrangements*

In 1973 the trustees established a new program in Conflict in International Relations, recognizing that interdependence among nations is growing, and that global problems, such as the availability of food and energy, are sources of both international conflict and cooperation.

The objectives of this program were somewhat diffuse. Consequently, following an intensive review, the trustees in April 1977 approved major changes in the International Relations program in order to focus future efforts on core problems in three areas of global importance:

(1) *World Energy*. Energy is a vital and pervasive requirement in every society. The world is in the early stages of a difficult and protracted transition from ample, low-cost supplies of petroleum to reliance on much higher-cost alternative sources of energy and increased conservation.

(2) *World Food* (within the Conquest of Hunger program). Food production and distribution under conditions of rapid population growth will be a continuing world political problem. How issues are resolved in this area will be a matter of life and death for increasing numbers of poor people, and a potent source of tension between rich and poor in the broader struggle to restructure international economic relations.

(3) *Regional Conflict*. The political approaches pursued in regions with high potential for conflict and escalation—by powers inside and outside—have major importance for international security. Peacekeeping and arms control arrangements in such regions are matters deserving high priority.

There are three rationales for the International Relations program. First, systematic and objective analyses of alternative policies and institutional arrangements in the areas of world energy, world food, and regional conflict should prove valuable to governments, international organizations, and policymakers. Second, implementation of scientific and technical advances through national and international policies is a central problem affecting world stability. Third, the program provides a mechanism for synthesizing the results of other Foundation programs and for linking their scientific and technical interests to policymaking.

PROGRAM COMPONENTS

The program is intended to make a constructive contribution to public policy in all three areas, and will therefore aim specifically at the development and evaluation of alternative courses of action and institutional arrangements for dealing with concrete problems in each. Before discussion of the program components, however, it is necessary to describe the two interrelated approaches that will be followed in implementing all of them:

- public policy assessments of specific problems; and
- development of an analytic framework for policymaking.

Specific problems which are determined to have key importance and to be in need of further analysis will be explored in depth. Too often public policy decisions are made without careful analysis of the problem, the alternatives, and the likely consequences of implementing various alternatives.

The main purpose of Foundation-supported assessments of specific problems in relation to world energy, food, or regional security will thus be to contribute to the development and evaluation of courses of action to cope with these problems more effectively. The results of the various studies undertaken will be related to each other and will assist in the elaboration and refinement of a general policy framework.

A policy framework for each area will be developed and improved over time. Such a framework should be a structure for thinking comprehensively and logically about the major factors and issues, and relationships among them and linkages to other areas. This is in itself a major intellectual undertaking that is nevertheless often ignored in public policy processes. An analytic framework should provide a common basis for developing and assessing the potential consequences of specific policy options and institutional alternatives, and for clarifying the underlying interests and values at stake in the decision-making process. Such frameworks will also be generally useful to the Foundation staff and interested persons outside the Foundation in evaluating completed studies, coordinating work under way, and organizing future efforts.

In implementing the program, Foundation officers will invite advice, proposals, and participation by persons in academic institutions, research organizations, citizen interest groups, private business, and public agencies—domestic, foreign, and international. Moreover, they will seek to develop transnational networks of individuals and institutions in countries relevant to the program activity contemplated or under way.

Under the program the Foundation will, as appropriate, initiate and carry out activities itself, request others to carry out activities, and respond to proposals from qualified persons for support of activities within the program guidelines. Since the program will be developed and administered by a small staff, the bulk of the activities will be conducted by others.

1. *World Energy*

Analysis of the world energy situation may embrace: the structure and level of demand; security of supply for consumers and access to markets for producers; price and finance; environmental and social risks and costs, research, and development of new technology; and institutional arrangements such as national and transnational industrial structures (including the role of multinational corporations), intergovernmental relationships, and the role of international organizations. Such questions might be explored with reference to the political world map and the fuel cycles for each primary energy resource, including oil, natural gas, coal, hydro, nuclear fission, nuclear fusion, geothermal, solar, wind, and biomass.

Environmental policy and resources management implications of energy production and use are a major program concern, and, over time, a portion of the Quality of the

Environment program interests may be added to the International Relations program. Also contemplated is a training program for energy policy planners in the developing countries, which would draw in part upon resources from the Education for Development program. Current and planned areas of analysis include:

- international energy supply policy studies;
- problems of the energy-deficient developing countries;
- international nuclear policy studies;
- solar energy policy studies; and
- assessment of energy policy analytic methods.

2. *World Food and Agriculture*

Analyses of the world food situation may be concerned with: the composition of world demand for various foods; security of supply from the perspectives of both consumer and producer countries; pricing and financial policy; environmental policy affecting agricultural development; the role of energy in various food production, processing, and distribution systems; the role of multinational agribusiness; the role of futures markets; trade in agricultural products; food aid; and the role of international organizations.

Policy analysis in this area is well-developed but fragmented and diffuse. The International Food Policy Research Institute, in which the Foundation is playing a leading role, is a major effort to bring about coherence, emphasizing the economic aspects of policy and focusing on the food needs and agricultural development potentials of the developing countries. A major additional Foundation effort that will build upon and supplement the Institute's program is expected to yield substantial results. International Relations' leverage in this area will be increased substantially through close coordination with activities in the Conquest of Hunger program (COH) and with aspects of the Population and Health program. Current and planned areas of analysis include:

- world food supply stabilization (jointly with COH); and
- U.S. food and agriculture policy for the 1980's (jointly with COH).

3. *Regional Security*

Systematic analysis of evolving regional security problems may include military, political, and also relevant economic factors. Arms control, methods for peaceful settlement of disputes, peacekeeping techniques, and means to reduce the risk of escalation in the event armed conflicts occur will be studied in specific regional contexts. Important transnational and domestic political issues and relationships may be explored, as well as intergovernmental matters. While the structure of the inquiry will be determined largely by the circumstances pertaining in the specific region concerned, general insights regarding regional conflict avoidance and crisis management may well emerge.

Since policy research in energy and food will yield important dimensions to solutions for regional security problems, this program component is expected to build up gradually, as a fraction of the total. In the interim, specific projects will be launched in regions of critical importance. Current and planned efforts include:

- a National Commission on U.S. Policy toward Africa;
- U.S.-Mexican relations;
- regional cooperation in the Persian Gulf/Indian Ocean;

- Japan's role in northeastern Asia and the western Pacific; and
- North/South arms control problems.

The field of international economics is undergoing special review and more substantial interest by the Foundation may result.

ACTIVITIES OF OTHER MAJOR INSTITUTIONS

Among an estimated 24,000 foundations in the United States, approximately 15 have international programs and about half of these 15 allocate \$500,000 or more annually to support work in the international relations field. It is difficult to assess the exact nature and extent of other sources of support in this area because the term "international relations" is imprecise and encompasses a wide array of activities, including diplomatic history, international law, international economic relations, foreign policy studies, comparative government, area studies, and world order studies. Traditionally, those foundations with an interest in international affairs have concentrated on assisting training, basic research, institutional development, and public education programs. They have not been primarily concerned with policy research and analysis.

The Ford Foundation remains the biggest private contributor, but its level of support has declined sharply over the past ten years. During the 1960's, Ford spent more than \$100 million annually on its international activities, with approximately \$22 million per year for "international studies" (primarily centers of advanced research and training in foreign area studies at American universities). By 1977, however, Ford's international budget had dropped 50 percent to around \$50 million, while "international studies" had shrunk 85 percent to \$3.2 million. Ford has developed a new funding category called International Affairs and World Problems, which in 1977 involved \$7.7 million, but \$4 million of that is a terminal grant to one institution. Other private foundations' programs in international relations are generally very small. Moreover, only a fraction of total private foundation support is aimed directly at international policy issues.

Most federal government policy analysis in international relations is conducted internally by policy planning staffs, with additional directed research contracted to consultants. Without exception, policy research sponsored by the U.S. government (at universities and research institutions such as Rand, Brookings, the Stanford Research Institute, and the American Enterprise Institute) is focused on U.S. interests, and is used to support U.S. foreign policy development.

Federal government support for academic research on foreign affairs has declined substantially in the past decade. While budgets of the National Endowments for the Arts and the Humanities have reached \$100 million, funding for the National Defense Education Act is around \$10 million. An informal State Department survey revealed that total federal support for research by nongovernmental entities on international problems—including defense contracts, the National Science Foundation, and the Smithsonian—dropped from over \$50 million in 1966 to around \$32 million by 1976.

World Energy. Support for nongovernmental work on world energy from an international perspective has been very limited. Thus far, the largest project originated in the United States has been the Workshop on Alternative Energy Sources (WAES), based at MIT and launched by an initial grant from the Foundation. The Mellon, Clark, and Stern

Foundations, along with the Rockefeller Brothers Fund, eventually joined in supporting this project. The Ford Foundation's Energy Policy Project, as well as its Nuclear Energy Policy Study and forthcoming work in the field of coal policy, have all been focused primarily on U.S. policy issues. The only others working in this field are corporate foundations, and they support work that is domestic and largely technical.

The scope of federal government international energy policy analysis is difficult to estimate because the plans of the new Department of Energy have not yet been made clear. However, the vast bulk of DOE support will surely be focused on research, development, and demonstration of new energy technologies for the U.S. Outside of the United States, intergovernmentally sponsored research and analysis of energy problems is being done at the International Atomic Energy Agency and as part of the large OECD-linked Interfutures Project and at the International Institute of Applied Systems Analysis, but this work is not primarily policy-oriented. For political reasons the specialized agencies, such as the International Atomic Energy Agency and other organs of the United Nations, are not likely to be heavily engaged in international energy policy analysis, although the UN Center for Natural Resources, Energy, and Transportation sponsors some research and technical assistance.

World Food and Agriculture. In the area of world food and agriculture, numerous major institutions in this country and abroad have been involved in international work. Among U.S. foundations the list of contributors remains quite small; the most significant are Rockefeller, Ford, Lilly, Kellogg, the Rockefeller Brothers Fund, and the Agricultural Development Council. Most international programs, including those funded by governments individually or through international organizations such as the Food and Agriculture Organization, support scientific research aimed at increasing yields, or work in a particular country on problems of agricultural development. Until the establishment of the International Food Policy Research Institute two years ago, private philanthropy had contributed relatively little for policy analysis and research. Since 1974 several projects have been launched on food policy issues from an international perspective, but nothing has been undertaken comparable in magnitude to the Workshop on Alternative Energy Strategies energy project. The Ford Foundation plans to increase its support for socioeconomic research, analysis, and public policy in food and agriculture, focusing on rural social sciences and assistance in national policy planning in developing countries. At the international level, Ford's main contribution is expected to be through IFPRI. The most comprehensive policy-relevant assessment of the world food situation from a U.S. perspective is the 1967 report of the President's Science Advisory Committee, a report that was largely ignored.

Regional Conflicts and Security Arrangements. The area of regional conflicts and security arrangements engages the interests of approximately 25 American foundations and several foreign philanthropies such as the Japan Foundation, the Volkswagen Foundation, and the Nuffield Trust. Many institutions in Europe, like the Council on Foreign Relations in the United States, sponsor conferences and discussion meetings on various problems in international and regional security affairs. There are numerous more or less independent and specialized research institutes established in the industrial countries, such as the Royal Institute of International Affairs and the International

Institute of Strategic Studies in London, the International Peace Research Institute in Stockholm, and the Stiftung Wissenschaft in Munich, and a handful, such as the Nigerian Institute of International Affairs, in developing countries. Funds from the U.S. government, although substantially smaller than in the past, do support policy-relevant conflict studies and security assessments by institutions such as the Rand Corporation, Brookings, the Stanford Research Institute, and the American Enterprise Institute. Much of this policy analysis, however, relates to an assessment of near-term options and does not seek to analyze alternative courses of action from an international perspective.

SPECIAL INTERESTS AND EXPLORATIONS FUND

Beginning in 1978, as suggested by the trustees, the Special Interests and Explorations Fund (SIE) will be increased and used for three purposes:

- (1) Foundation explorations, including commissions and grants to other organizations, to examine opportunities or support activities of importance not covered by existing Foundation programs;
- (2) Support of unusually significant activities, involving one or more Foundation programs and requiring substantial short-term investment, that could not otherwise be undertaken because of the constraints of the program guidelines; and
- (3) Expenses of the Archives, the John D. Rockefeller 3rd Youth Award, and the Bellagio Study and Conference Center.

Decisions to undertake activities under SIE will be considered by the Foundation's Program Committee, comprising the president, the vice-presidents, the secretary, and the directors and program chairmen.

Existence of this fund will permit rapid officer response in any area of interest identified as important by the trustees or the officers.

Special Interests and Explorations replaced the former Allied Interests budget category in 1973. The stated purposes have been as follows:

The Special Interests and Explorations category permits the Foundation to preserve and foster pluralistic responses, and at the same time provides a fund for investigation and support of new ideas. Special interests are projects outside of existing program areas but of interest to the Foundation as a whole. Special explorations are designed to improve the Foundation's mechanism for moving from the identification of important new issues to their institutionalization as new programs. They involve funding of rapid research efforts directed to keeping abreast of major social, scientific, and cultural issues, and, in certain instances, to deeper explorations of problem areas identified as especially promising.

SIE has had an annual spending guideline of about \$1 million. In recent years, support of ongoing special Foundation activities (Bellagio, the Archive Center, and the JDR 3rd Youth Award) has consumed most of the available funds. After funding these three activities in 1977, only \$110,000 was available for grants to other organizations under SIE.

In accordance with the trustees' decision in December 1977, it was recommended that the SIE Fund be increased in 1978 and used for the following three purposes:

- (1) Foundation explorations, including commissions, and grants to other organizations, to examine opportunities for support of activities of importance not covered by existing Foundation programs. These explorations may be initiated and organized by the Foundation or may be responsive to requests from other organizations or individuals. Among those that may be actively explored in 1978 are unemployment, international monetary problems, and human rights.

Unemployment. As suggested by the trustees, the officers will determine what courses of action might enable the Foundation to contribute significantly to alleviation of this problem which confronts not only the United States but other industrial nations as well.

(The problem in somewhat different form is of staggering magnitude in the less-developed countries also.) This effort will be in addition to a new component of the Equal Opportunity program dealing specifically with minority youth unemployment in urban areas. The officers will in early 1978 seek guidance from an advisory group to begin to identify the basic causes of high levels of unemployment, particularly but not exclusively of youth, and of possible remedial actions. On the basis of their findings, the officers expect to recommend further steps for consideration by the trustees.

International Monetary Problems. The Foundation has provided limited support to The Brookings Institution for studies of monetary problems, including inflation, but lack of a program mandate and funds has limited activity. In 1978 the Foundation will seek the advice of specialists on the international monetary system, both scholars and active participants, to learn if the Foundation could make significant contributions in this area.

Human Rights. Foundation officers, especially in the Humanities and International Relations divisions, are actively investigating opportunities for the Foundation in the human rights area. Some important human rights already are being addressed through the Foundation's existing programs, particularly those dealing with security, food, health, even the right of survival. Other activities, particularly in Equal Opportunity, address civil rights of minority groups in the United States. Humanities is supporting work on clarification of concepts and definitions of rights, and on historical perspectives. The Foundation will arrange for an evaluation of its past and current activities related to human rights, including civil rights, and will seek specific opportunities for further contributions.

(2) Support of unusually significant activities involving one or more Foundation programs and requiring substantial short-term investment that could not otherwise be undertaken because of the constraints of the program guidelines.

The program spending guidelines established in 1968 have been helpful to Foundation directors in that they permit a degree of planning of expenditure not previously possible. Guidelines have drawbacks, however. There is a tendency for divisions or program committees to use the guidelines as budgets, to commit funds to the last dollar each year, and to finance activities of other organizations with series of annual or two-year grant installments—in effect, mortgaging their future. This can quickly lead, and it has, to forward commitments which leave little financial leeway in future years for support of large or innovative activities, whether within programs or on an interprogram basis.

In an effort to retain the strengths and correct the weaknesses of the guidelines, each program will in 1978 be given a spending guideline as before, rounded to remove illusions of precision of estimates of program requirements or of program rights to specific amounts of money. In addition, the SIE Fund will be available for use for unusually promising activities, either within programs or interprogram, which could not otherwise be accommodated because of the program guidelines. The use of funds from this source would be short-term in the sense that the project (a) could be implemented in one or two years or (b) might demonstrate within that time period a significant new program thrust that should be continued with support from an increment in the regular guidelines for one of the programs.

It is believed that this system will improve both operations and quality of grants by preserving the ability of directors to plan ahead, by retaining flexibility needed for response to new and larger opportunities, and by encouraging staff to seek out those opportunities and to compete for use of these funds.

(3) Expenses of the Archives, the John D. Rockefeller 3rd Youth Award, and the Bellagio Study and Conference Center.

The Foundation's Program Committee will administer the SIE Fund and be responsible for decisions to recommend actions to the trustees for the three purposes stated above.

EDUCATION FOR DEVELOPMENT

In December 1977 the trustees, believing that the Foundation had accomplished the goals of the program, agreed to complete Education for Development as a separate program within a period required for orderly and responsible termination. Our objective had been to assist in the development of stable universities, with good training and research capacities, that are responsive to national needs. Trustees and staff believe that such institutions now exist in many LDC's, and that it is now desirable for the Foundation to maintain with them relationships no different from those shared with U.S. universities. In the future, activities at universities in developing countries will be supported through other Foundation programs. The original objectives of the University Development/Education for Development program will largely have been realized with the completion by the end of 1983 of support for three major university projects now at the mid-point of the planned period of cooperation. At that time the program should stand as a major, two-decade achievement on the record of the Foundation.

Early in its history, the Foundation chose to concentrate substantial efforts in support of scholarship and research. A review of the Foundation's overall program during its 50th anniversary year (1963) led to the institution of the University Development program, later to be named the Education for Development program. Basic to the program was the premise that the training of future leaders was of the greatest importance to steady progress for developing countries, many of them newly independent. Further, there was a serious lag in making available to all people the vast fund of knowledge of mankind.

The poor countries had been slow to share in the benefits of the scientific and industrial revolution. Major reasons for this lag included a weak scientific base and a lack of trained people in the countries concerned. Yet an indigenous problem-solving capacity was essential. Consequently, the Foundation focused its attention on a few universities as institutions deemed likely to accelerate social change and national development. The University Development program had as its major objective the creation or strengthening of institutions in the developing world, staffed by indigenous scholars engaged in teaching and research relevant to national and regional needs.

At each university in the program, the Foundation has followed a common strategy with a number of basic interlocking features:

- (1) indigenous staff training through fellowships for advanced degrees, postdoctoral experiences, or special training efforts;
- (2) provision of high-quality visiting staff for leadership positions while local staff members are trained;
- (3) assistance with institutional changes (such as the creation of multidisciplinary institutes) which will make the university more effective in dealing with urgent problems of development;
- (4) support for research related to development objectives;
- (5) encouragement of university involvement in development activities;
- (6) preparation of relevant teaching materials; and
- (7) assistance by New York-based Foundation staff to programs receiving Foundation support.

While there have been some disappointments in the EFD program, primarily because of political developments, the effort in general is considered a success. A review and evaluation of the program was conducted in 1975-76 by Foundation officers. In accepting the report, a Trustee Committee headed by Clark Kerr noted: "The past programs of UDP/EFD have been well worth the investment both of time and funds The Rockefeller Foundation should maintain its interest in higher education in the LDC's—the research and training capacities of the universities will remain critically important in the world for the foreseeable future The Rockefeller Foundation has had a unique experience, has established a network of interested institutions and individuals around the world, and enjoys a residue of good will that should not be lost."

During the life of the UD/EFD program, the following university centers have been the principal recipients of assistance (date of the first appropriation in parentheses):

Universities in East Africa: Makerere, Nairobi, and Dar es Salaam (1961)

University of Ibadan, Nigeria (1961)

University of the Philippines (1962)

Universidad del Valle, Cali, Colombia (1963)

Universities in Bangkok, Thailand: Kasetsart, Thammasat, and Mahidol (1963)

Gadjah Mada University, Yogyakarta, Indonesia (1971)

National University of Zaïre (1972)

Federal University of Bahia, Brazil (1973).

Some of the specific successes are cited below:

(1) *Medical program at Universidad del Valle*. This program, now a model for Latin American institutions in the areas of delivery of health care and training tied to national health needs, is widely respected and copied.

(2) *Thammasat, Kasetsart, and Mahidol Universities*. This effort has been judged an overall success, given the objectives set for each of the three institutions. The Faculty of Economics at Thammasat is now strong and its master's degree program, developed according to plan, is serving as a regional training program. At Kasetsart there has been increasingly effective interaction between faculty members and the Ministry of Agriculture. Also, with assistance provided by a Foundation staff member as Vice Rector for Planning, its new campus has been established. The basic medical science departments at Mahidol have achieved international standards of excellence.

(3) *University of the Philippines*. The School of Economics is now the leading economic research and training center in Southeast Asia.

(4) *University of Nairobi and University of Dar es Salaam*. The Veterinary Faculty and the Department of Economics, University of Nairobi, are becoming major regional research and training centers. The Institute for Development Studies at Nairobi and the Economic Research Bureau and the Bureau of Resource Assessment and Land Use Planning at Dar es Salaam are now effectively assisting their respective governments in planning and implementing national development programs.

(5) *University of Ibadan*. Important progress has been made in the development of the master's degree program in agricultural economics and strengthening of the Faculty of

Agriculture, the School of Veterinary Medicine, and graduate programs in the social sciences and humanities.

The Foundation will also commission a comprehensive evaluation of the Foundation's \$125 million investment in this program over two decades, the strategies and techniques for educational development that have been tested, and the degree to which a model has been effectively demonstrated for other LDC universities and funding agencies.

***CONTINUATION OF INTEREST IN EDUCATION FOR DEVELOPMENT BY
TRANSFER OF SPECIFIC RESPONSIBILITIES TO OTHER PROGRAMS***

The Foundation will continue to work with universities and other educational institutions in developing countries as program objectives are implemented. The officers believe that support for selected centers of graduate education in developing countries should receive special consideration in the future, with particular attention to strengthening capabilities in population and health, socioeconomic development, and agriculture.

The Population and Health program has received approval to move ahead with a major research program on the Great Neglected Diseases of Mankind; selected universities in developing countries will be included in the network of research institutions participating in this effort. Grants have been approved, or are projected, for research and training programs in social science aspects of population problems in developing countries. A network of institutions to work on contraceptive research which will include universities in developing countries is also planned.

The International Relations program is especially interested in working with universities in developing countries to increase their capacity for policy analysis in specific areas, such as food and energy policy. In addition, it expects to explore ties with these universities in joint policy research efforts. It is also anticipated that an expanded Special Interests and Explorations program will utilize scholars and institutions in developing countries for its new research efforts.

When the EFD program is concluded in about 1983, the Foundation will have completed a two-decade, \$125 million contribution to the development of such an advanced educational capacity in several developing countries. Throughout the developing countries, excellent and mature universities now exist that no longer require the type of generalized institutional support that has been characteristic of the EFD program. The Foundation can now look to these educational and research institutions as a means of carrying out regular ongoing programs in areas such as agriculture, population and health.

As the EFD program is phased out, a special effort will be made to increase the international dimension of other programs with special emphasis upon educational institutions in the developing countries. As fellowship awards decline in the EFD program, funds will be transferred to permit increasing fellowship awards under other program interests and objectives in order to continue the critical function of identifying and training future leaders in the developing countries. By selecting fellowship candidates from a much wider range of institutions, the Foundation expects to identify and support even more talented and outstanding young men and women than has previously been possible because of the EFD program's concentration on a very few educational institutions.

QUALITY OF THE ENVIRONMENT

Although the Quality of the Environment program will be terminated effective June 30, 1978, activities already under way as a result of earlier Board appropriations and those recommended for action in early 1978 will require attention over the next three years to permit monitoring and final evaluation of each project.

The program has contributed significantly to the amelioration of critical environmental problems in this country and abroad. It is well known and respected by the research and academic institutions of this nation. It will be important to effect this termination of activities and distribution of interests in a manner which will do continued credit to the Foundation and to the institutions we are assisting. We expect to honor all present commitments, assuring that project support in each case is brought to orderly termination without undue hardship to the institutions or individuals presently being assisted.

HISTORICAL BACKGROUND

The Quality of the Environment program was established by the trustees in December 1969. Progress toward its objectives was reviewed by the trustees in 1972-73 and in 1975. In 1976 a trustee-staff committee again reviewed progress and recommended changes in objectives. Program expenditures have averaged about \$3 million per year.

The staff divisions in existence in 1969 initially implemented the QE program and focused it on environmental issues associated with other major programs of the Foundation. In 1971 the Natural and Environmental Sciences (NES) division was established and given primary responsibility of the QE program. However, the original focus and close collaboration with the other divisions were maintained, resulting in cooperative projects addressing environmental problems related to agricultural production, economic development, water quality management with emphasis on protecting human health, and, to a lesser degree, urban minorities. The NES division also launched a few highly entrepreneurial projects designed to test alternative approaches to comprehensive regional environmental planning and management. Over the past three years cooperative projects with the Foundation's Conflict in International Relations program, which was established in 1973, led to increased QE program support of research on international and global environmental problems. This focus on environmental issues related to the Foundation's other programs has led to highly successful individual projects and strengthened the cohesiveness of the Foundation's total effort.

SYNOPSIS OF RECENT ACTIVITIES

Major accomplishments of the past five years have resulted from concentrated efforts on four program activities:

Water Quality Management. A series of grants in support of research on water quality management, with emphasis on contamination of ground and surface water by fertilizer application and agricultural runoff, has yielded important results. These include new policies and improved practices with regard to nitrogen fertilizer usage in the Midwest and the publication of a definitive text that has influenced practices and regulations concerning agricultural and waste material disposal in the Northeast. These results were successfully accomplished by the University of Illinois and Cornell University, with the

collaboration of other institutions in the U.S. Support was provided jointly by the Foundation's Natural and Environmental Sciences and Agricultural Sciences divisions.

Wastewater Management. The wastewater management programs at the University of Florida, Woods Hole Oceanographic Institute, Michigan State University, the University of California at Los Angeles, Associated Universities' Brookhaven Laboratory, and the City University of New York have successfully demonstrated the value of biological approaches to wastewater management and recycling. Improved practices and official state guidelines are now in use in Florida. New techniques are gaining professional and public acceptance. Considerable emphasis was placed in all projects on control of human enteric bacteria and viruses. These activities involved close collaboration between the Health Sciences and the Natural and Environmental Sciences divisions.

Regional Environmental Planning. Support has been provided for successful environmental planning and management projects in the Hudson Basin region, the State of Oregon, and the Rocky Mountain region. The New York State Department of Environmental Conservation is following up vigorously on the findings of the Hudson Basin Project. The findings of the Oregon State University work were quickly implemented through development of a statewide energy policy. Initiatives undertaken by the Rocky Mountain Institute have contributed to the reorganization of agencies throughout its eight-state region. Activities concerned with coastal zone management have also produced useful and promising results.

Alternatives to Highly Toxic Pesticides. Through its Quality of the Environment and Conquest of Hunger programs, the Foundation has supported research on alternatives to persistent pesticides. Remarkable breakthroughs have resulted, including the development of a series of biodegradable analogs of DDT and the discovery of pheromones and juvenile hormones that are of demonstrated effectiveness in the management of agricultural pests and human disease vectors.

Fellowships. The Rockefeller Foundation Fellowships in Environmental Affairs are providing opportunities for independent research, leadership development, and public service to unusually gifted young men and women. Publications and activities of the Fellows are contributing directly to the resolution and improved understanding of major environmental concerns.

INCORPORATING ENVIRONMENTAL INTERESTS INTO OTHER PROGRAMS

It is anticipated that officers concerned with the Quality of the Environment program will collaborate closely with those of Conquest of Hunger in developing projects related to fragile environments, marginal land management, and selected water resource development. Continued work under Conquest of Hunger will provide for environmental considerations.

The management of natural resources, especially those related to energy, will undoubtedly produce opportunities for the International Relations program to become more concerned with a number of environmental issues. International efforts to resolve global environmental problems also present particular opportunities which might well be developed within the International Relations division. As mentioned earlier, continued

support for global environmental monitoring and assessment activities presents a particularly attractive opportunity in the immediate future. The shared and common resources of the world's oceans represent another set of problems and issues which may attract the International Relations division into work with significant environmental components.

Little has been said in this document concerning future activities related to the Population and Health program. However, as work on the great neglected diseases proceeds, it would be surprising indeed not to encounter challenging opportunities on closely related environmental problems. Much that has been learned via the wastewater management programs supported by QE could well be of particular significance to the Population and Health program in the future. This includes experts identified and young scholars trained.

A number of environmental problems considered by the QE program may not be addressed in the future because they fall completely beyond the present guidelines of other continuing Foundation programs. Domestic problems of coastal zone management and highly toxic chemical compounds in air, water, and land will in all likelihood not be covered in the future. Support for comprehensive approaches to regional environmental planning and management also cannot be handled under other Foundation programs. This last interest, together with natural resource management and the Fellowships in Environmental Affairs are, in the officers' opinions, the most critical general areas which will not receive attention by the Foundation in the future.

I believe that we have a useful function to serve in this world, that we are focused on major issues, and that we can accomplish something of value for our country and for those countries struggling with their own development. We have a fine staff and a fine Board of Trustees and we enjoy the respect and friendship of many organizations and individuals devoted to the same cause—that of doing our best to meliorate human misery and enhance the quality of life. Our reach will forever exceed our grasp but this is as it should be.

April 1978

John H. Knowles, M.D.

GRANTS

AND

PROGRAMS

CONQUEST OF HUNGER

The Foundation's programs to improve the ability of developing nations to produce the food required by their peoples reach back to 1943. Over a span of 35 years, the work evolved from projects initiated in Mexico to a program with worldwide implications which emphasizes the building of the institutional, technological, and policy bases for agricultural development in the poor countries of the world.

Since 1971 the program has focused on six areas:

- Diversification and strengthening of the world network of international institutes.
- Improvement of the nutritional quality, as well as the yields, of selected food crops; improvement of animal health and production.
- Exploratory research to broaden the food production base.
- Assistance to nations to strengthen agricultural institutions promoting rural development.
- Strategies to improve the quality of life of the rural poor.
- Socioeconomic analyses of food production and distribution.

THE INTERNATIONAL CENTERS

The system of nine international agricultural research centers is based on the experience gained by the Foundation in earlier national programs. The first of these centers, the International Rice Research Institute, was established in the Philippines in 1960 and served as the model for the present worldwide network. These centers are engaged in research, training, and development focused on the major food crops and food production systems of the tropics and subtropics. Since 1971 the system has been supported by an informal group of governments, assistance agencies, and foundations known as the Consultative Group on International Agricultural Research, chaired by the World Bank. In 1977 the Group provided \$79.3 million for operational and capital costs of the centers.

The International Food Policy Research Institute was established in 1975 to further the adoption of national and international food policies that will provide for increased production and more equitable distribution of food within and among countries. It is jointly supported by the Ford and Rockefeller Foundations and Canada's International Development Research Centre.

More recently the International Center for Living Aquatic Resources Management was established through the initiative of this Foundation in the Philippines in early 1977. It is designed to conduct research, training, and development programs to assist the poor nations to increase food production from the aquatic environment. In addition, it has begun to explore possibilities of seeding the Antarctic with salmon, following systems developed in the northern hemisphere oceans.

GRANTS:

International Food Policy Research Institute

Washington, D.C.

The Institute, established in 1975, conducts research on selected policy problems affecting the production and consumption of food-stuffs throughout the world and disseminates the results in ways that assist decision-makers in choosing among alternative policies.

\$300,000

International Rice Research Institute (IRRI)

Los Baños, Philippines

International Maize and Wheat Improvement Center (CIMMYT)

Texcoco, Mexico

International Institute of Tropical Agriculture (IITA)

Ibadan, Nigeria

International Center for Tropical Agriculture (CIAT)

Palmira, Colombia

International Laboratory for Research on Animal Diseases (ILRAD)

Kabete, Kenya

The network of international agricultural research institutes continues to be one of the most effective modern day operations in international cooperation and plays a vital role in meeting world food needs.

\$1,600,000

MORE AND BETTER FOOD

The high level of world production of food and feed grains in 1976 should be ample evidence that the world's farmers can meet the challenge of increased food production, given the proper incentives and support to do so. Global data, however, obscure the real disparities among nations—many that are small, or lack adequate resources, trained people and effective institutions, to effectively address the problem of agricultural development. Until national capabilities are achieved, many countries depend upon the international community to aid in the solution of food and agricultural problems.

To that end the Foundation has given priority emphasis to the formation and strengthening of the global problem-solving network. That network comprises institutions of advanced nations, the international agricultural research centers, institutions of the developing nations themselves, and, importantly, the farmer himself. A constant flow of new technology is vital if farmers are to get maximum productivity at economic rates from their land. Thus it becomes imperative to support research relevant to increasing yields, providing better disease and insect protection, and improving the institutional delivery system.

GRANTS:

International Centre of Insect Physiology and Ecology (ICIPE)

Nairobi, Kenya

Research on the salivary physiology of the tsetse fly is a crucial phase in the hoped for development of a practical vaccine against trypanosomiasis.

\$51,445

Oregon State University

Corvallis, Oregon

Oregon State University, exceptional in its expertise in small grain breeding techniques, is integrating more extensive graduate training in plant breeding into its research program so as to help meet the needs of graduate students from the developing countries.

\$63,000

GRANTS IN AID (\$35,000 or under):

ASIAN VEGETABLE RESEARCH AND DEVELOPMENT CENTER, Shanhua, Taiwan, for the First International Symposium on Mungbean.

\$2,150

HOKKAIDO UNIVERSITY, Sapporo, Japan, for use by the Laboratory of Plant Nutrition, for a research project on comparative studies of the physiology of potential productivity among field crops.

\$35,000

IOWA STATE UNIVERSITY, Ames, for research on mass selection for photosynthesis in maize.

\$11,202

PENNSYLVANIA STATE UNIVERSITY, University Park, for use by the Department of Plant Pathology for research on methods for plant disease management.

\$25,000

RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY, New Brunswick, for development of new methods of crop protection against the yellows type of diseases that affect corn, legumes, and other crops.

\$12,500

SOUTHEAST ASIAN REGIONAL CENTER FOR GRADUATE STUDY AND RESEARCH IN AGRICULTURE, College, Laguna, Philippines, for a workshop/seminar and public forum on developing the potential of the winged bean.

\$20,000

UNIVERSITY OF GEORGIA, Athens, for use by the Department of Entomology for a research project on chemical bases of aggressive behavior in Africanized, African, and Italian honey bees.

\$17,020

WASHINGTON STATE UNIVERSITY, Pullman, for use by the Department of Animal Sciences for research on the nutritional evaluation of dry beans (*Phaseolus vulgaris*).

\$15,000

PIONEERING RESEARCH

A considerable research effort is required just to maintain existing levels of productivity of food crops and animals. The biological and cultural systems under which food is produced are in a state of change. New or changing pests and pathogens require constant efforts by researchers to anticipate and circumvent their potential devastating effects. Plant breeders must search for new combinations of genetic material which enable crops to perform under variable conditions of environment.

Basic research must be pursued to provide the tools which will unlock more of nature's secrets and enable scientists and farmers to further enhance yields and reduce production risks.

Broadening the food production base through conventional approaches is not sufficient. Pioneering efforts are essential if the world's population is to be adequately fed. Workers at Oregon State University, with RF support, have been investigating how the nitrogen-fixing bacteria *Rhizobia* can assist plants to manufacture their own fertilizer. Common strains of these bacteria normally found in soybean root nodules waste almost half the energy supplied to them as sugar by the plant leaves, but certain efficient strains of these bacteria can increase soybean plant yield ten percent or more. The successful crossing of wheat and rye for improving yields and for developing a crop plant with great tolerance to cold weather has prompted other crosses in different genera to achieve similar results. The development and application of new technologies—combined with many traditional management systems—for increasing the productivity of aquatic resources are receiving renewed attention by the Foundation (see International Centers).

GRANTS:

International Center for Living Aquatic Resources Management (ICLARM)

Metro Manila, Philippines

ICLARM's objective is to develop small-scale, labor-intensive fisheries and aquaculture systems adaptable to local environments and traditions as a way to improve health and nutrition in the Pacific Basin region.

\$457,000

Rockefeller University

New York, New York

University researchers are conducting immunological studies directed at control of Chagas' disease, a form of trypanosomiasis common to parts of South America.

\$20,000

University of Glasgow

Glasgow, Scotland

The Glasgow research team continues to study the genetic resistance of animals to trypanosomiasis and to develop and test potential field vaccines for African cattle.

\$27,876

Yale University

New Haven, Connecticut

Foundation funding supports continuing antigenic variation studies on trypanosomiasis, a disease which causes great livestock herd losses in the tropics.

\$1,205

GRANTS IN AID (\$35,000 or under):

BOYCE THOMPSON INSTITUTE FOR PLANT RESEARCH, Yonkers, New York, for research on the development of plant resistance to pathogens.

\$32,670

CONNECTICUT AGRICULTURAL EXPERIMENT STATION, New Haven, for research on improving crop photosynthesis through tissue culture and cloning crop plant DNA.

\$35,000

CORNELL UNIVERSITY, Ithaca, New York, for research on phytoalexins.

\$35,000

NATIONAL INSTITUTE FOR ANIMAL RESEARCH (INIP), Palo Alto, Mexico, for a joint study with the University of Illinois on hemotropic diseases of cattle with emphasis on babesiosis.

\$10,000

NEW YORK UNIVERSITY MEDICAL CENTER, New York, for use by its Division of Parasitology for research on the potentiation of the immune response to plasmodia (malaria) and trypanosomes (sleeping sickness and Chagas' disease).

\$16,125

OREGON STATE UNIVERSITY, Corvallis, for use by the Department of Agronomic Crop Science for a research project on triticale improvement.

\$35,000

UNIVERSITY OF COLORADO, Boulder, for an investigation of the biochemical determinants of symbiont-host selectivity between nitrogen-fixing bacteria and plants.

\$35,000

UNIVERSITY OF COLORADO, Boulder, for research on phytoalexins.

\$35,000

UNIVERSITY OF MASSACHUSETTS, Amherst, for studies on the role of insect pheromones in the biology of insect pests.

\$10,900

UNIVERSITY OF WISCONSIN, Madison, for research on plant lectins.

\$35,000

WASHINGTON STATE UNIVERSITY, Pullman, for immunological studies of the role of proteinase inhibitors in the nutritional quality and disease resistance of potato tubers.

\$12,500

STRENGTHENING NATIONAL AGRICULTURAL INSTITUTIONS

In the face of more intensive demands on the food producing capacity of most countries of the world, it has become increasingly evident that nations individually must accelerate their rural development efforts. An increased food supply is but one aspect of the changes needed to alleviate poverty and malnutrition and to improve the general quality of life of many rural people. Building on the experience of earlier programs, the Foundation is pioneering new efforts to more effectively develop comprehensive approaches reaching the level of rural dwellers.

To this end, in 1975 the Foundation moved to establish the International Agricultural Development Service, an autonomous, nonprofit, technical assistance agency. IADS specializes in participating with developing nations in long-range cooperative production programs, or in agricultural research, education, or development efforts that are production-oriented. In addition, the agency seeks to facilitate and improve cooperation between donor agencies and country needs for more effective contributions to the alleviation of the world's food problems.

The Mid-East Wheat Research and Training Program was begun in 1969 under a cooperative agreement between the RF and the Turkish government. In 1976 with the achievement of all-time records in national yields, proven national research capacity, and a farmer-oriented extension organization, the direct participation of the RF—and of CIMMYT and Oregon State University, partners in this effort—has been reduced as planned. Turkish scientists and technicians—most trained at CIMMYT and OSU—have now taken the place of visiting scientists to carry on the task of making Turkey self-sufficient in wheat production.

With a relatively small investment in both staff and budget (three man years plus \$115,000), the RF's three-year experimental Central American Agricultural Project achieved substantial progress toward the goal of establishing accelerated country production programs based on higher yields and better farming practices on small farms. For example, the directors of the research institutions of the Central American countries have agreed to work together with regional crop coordinators to develop ways and means for bringing about closer cooperation among the six nations of the region in order to improve basic food crops. The Centro Agronómico Tropical de Investigación y Enseñanza (CATIE) has ap-

pointed a new director who promises to give CATIE strong leadership. And agricultural research leaders from Central America have proposed the creation of a training program for experiment station managers to be offered at the Technological Institute of Monterrey.

The Instituto de Ciencia y Tecnología Agrícolas (ICTA) in Guatemala was established in 1973 to generate and promote agricultural technology. Emphasis has been on the basic grains and the small and medium farm sector. In order to meet the challenge of generating technology for the small, traditional farmer, ICTA is developing a multidisciplinary methodology in which the social sciences play an integral role. An agricultural economist on the RF's field staff is currently serving as coordinator of rural sociology programs at ICTA.

GRANTS:

Association for the Advancement of Agricultural Sciences in Africa *Addis Ababa, Ethiopia*

The AAASA, created in 1968, is the only organization that provides a communication link among agricultural scientists in French- and English-speaking Africa. It serves as a forum where scientists meet to deal with practical problems of agricultural development, regional in scope and of a policy nature, and to influence administrators and academics to bring scientific expertise to bear on the problems of farmers.

\$50,000

International Agricultural Development Service (IADS) *New York, New York*

IADS assists interested developing countries, individually and collectively, to accelerate agricultural production and rural prosperity while strengthening their indigenous agricultural, educational, and development institutes.

\$1,780,000

International Center for Tropical Agriculture (CIAT) *Palmira, Colombia*

CIAT provides major support and training services to the Instituto de Ciencia y Tecnología Agrícolas (ICTA), Guatemala, an agency assigned countrywide responsibility for dealing with production of all major commodities, particularly at the small farmer level.

\$12,443

Mid-East Wheat Research and Training Program *Ankara, Turkey*

The wheat improvement program initiated by The Rockefeller Foundation

in collaboration with national agencies is not only increasing wheat production in Turkey, but is also strengthening the agricultural research capabilities of the region where wheat originated thousands of years ago.

\$23,103

GRANT IN AID (\$35,000 or under):

INTERNATIONAL CENTER FOR TROPICAL AGRICULTURE (CIAT), Cali, Colombia, for its Seed Training, Outreach and Research Unit.

\$23,400

RURAL DEVELOPMENT

Improving the quality of living of the rural poor depends not only upon the application of agricultural technology and sound agricultural policies at international and national levels, but also on the development of administrative structures able to adapt and link these systems and policies with existing local-level organization, technologies, needs, and values. The Foundation recognizes this multiple challenge and will continue to seek working solutions through a series of carefully selected organizational experiments in agricultural and integrated rural development. In addition, certain other important aspects blocking the process of adaptation and linkage within the system have been targeted for attack to gain a better understanding of the key components in successful rural development. The role of women, off-farm employment, service and political organizations are all vital ingredients in this effort. The extent to which these can be understood and changed remains a challenge.

GRANTS IN AID (\$35,000 or under):

INTERNATIONAL COUNCIL FOR EDUCATIONAL DEVELOPMENT, New York, New York, for its project, "Helping Practitioners to Help the Rural Poor."

\$30,000

UNITED NATIONS ECONOMIC COMMISSION FOR AFRICA, Addis Ababa, Ethiopia, for an agricultural consultant for its African Training and Research Centre for Women.

\$21,318

UNIVERSITY OF CALIFORNIA, Berkeley, for use by its Department of Agricultural and Resource Economics for a study of rural development in Latin America.

\$15,000

UNIVERSITY OF MINNESOTA, Minneapolis, for use by the Department of Political Science for the development of a research design and investigation of rural development in Morocco.

\$7,196

SOCIOECONOMIC INVESTIGATION

As a part of its efforts to increase the production of food and to achieve a more equitable distribution of food within and among countries, the Foundation has sought to identify creative social scientists for additional training and other assistance so that they may apply their research methods and insights to the practical problems of agricultural and rural development. Research has focused on the analyses of government policies affecting agricultural and rural development, international food availability, and the interacting effects among policies, available technologies, rural conditions and organizations—both generally and for distinct sub-groups of a rural population.

GRANTS IN AID (\$35,000 or under):

INSTITUTE OF NUTRITION OF CENTRAL AMERICA AND PANAMA (INCAP), Guatemala City, Guatemala, for a workshop on the interaction among agricultural production, food technology, and nutrition.

\$10,000

INSTITUTO DE CIENCIA Y TECNOLOGIA AGRICOLAS (ICTA), Guatemala City, Guatemala, for staff development of its Socioeconomic Unit.

\$3,000

INTERNATIONAL RICE RESEARCH INSTITUTE (IRRI), Los Baños, Philippines, for publication of the proceedings of a workshop on interface among agriculture, nutrition, and food science.

\$10,000

NATIONAL ACADEMY OF SCIENCES, Washington, D.C., for a symposium on the complementary role of plant and animal products in the U.S. food system.

\$5,000

BARRY M. POPKIN, Chapel Hill, North Carolina, for a study on the consequences of malnutrition in the Philippines.

\$8,475

RAMON MAGSAYSAY AWARD FOUNDATION, Manila, Philippines, for a Food Crisis Workshop.

\$5,000

UNIVERSITY OF FLORIDA, Gainesville, for use by its Institute of Food and Agricultural Sciences for assignment of Dr. Robert W. Werge to the Socioeconomic Unit of the International Potato Center, Lima, Peru.

\$31,235

UNIVERSITY OF MINNESOTA, St. Paul, for a review and synthesis of economic research on grain reserves.

\$12,600

UNIVERSITY OF PENNSYLVANIA, Philadelphia, for an econometric study of the international rice economy in Asia.

\$10,186

POPULATION AND HEALTH

THE POPULATION PROGRAM

Although the control of population growth was only defined as a major program objective in 1963, the Foundation had actually been supporting work in demography, in the U.S. and abroad, for many years prior to that time. In 1963, in response to the growing recognition of the multiple problems posed by rapidly increasing numbers of people, a formal Population program was begun. From 1963 to 1973, primary emphasis was placed on basic research in reproductive biology. In the last five years, however, increasing attention has been directed to the social science components of the program with support aimed at strengthening social science research and training in population, particularly in developing countries. Recently, the safety of current fertility regulation techniques has been questioned, necessitating major attempts to find new, safer, and more effective contraceptive methods. Therefore, greater emphasis is once again being given to the biomedical aspects of the Population program.

CURRENT TRENDS

In the 1960's, in direct response to the obvious worldwide need for better means with which to control unwanted fertility, reproductive biology and contraceptive development began to assume new importance, receiving steady increases in both attention and funding. As a result, oral contraceptives and intrauterine devices, both felt to be very close to ideal techniques, were developed. In the 1970's it was frequently claimed that all that stood between mounting population pressures and the solution to this problem was the development of an infrastructure designed to deliver these new contraceptives to the millions of people who both needed and wanted them.

On the funding side, in 1963, \$5 million was committed to research, training, and service programs, almost all of it coming from private sources, principally the Ford and Rockefeller Foundations, the Population Council, and individuals. In 1975, the total amount had grown to about \$200 million, almost all of it coming from governmental agencies in the U.S. and abroad. As family planning programs were established, birth rates started to drop, albeit very slowly, and concern about the world's still expanding population gradually began to abate. Consequently, the once-rapid increase in funding for the fields of reproductive biology and contraceptive development leveled off and then started to decrease.

It is now realized, however, that the population problem is far from being solved. In addition, concern about the safety and efficacy of our current methods of fertility regulation has grown steadily as reports on their adverse effects have

been widely disseminated by the news media, causing thousands of people all over the world to abandon their use and discouraging many others from starting.

Today, the main thrusts of the Foundation's program in population are the support of:

- **Research on reproductive biology:** strengthening of research both by supporting individuals presently engaged in significant work and by drawing new people of excellence into the field.
- **Research on new contraceptive technology:** maintenance of strong research efforts to develop safer, more effective and inexpensive methods of fertility regulation.
- **Policy studies:** improvement of the understanding of the determinants and consequences of population dynamics.

SOCIAL AND ECONOMIC CONSIDERATIONS

Stabilization of the world's population growth requires not only safer and more efficient methods of contraception but also economic, social, and legal conditions conducive to reductions in family size. Cultural and behavioral factors influence attitudes toward and utilization of family planning techniques. While it is generally accepted that the dynamics of population growth are greatly influenced by multiple socioeconomic factors, precise interrelationships and policy responses are still poorly understood. Thus, studies on the socioeconomic determinants and consequences of fertility, mortality, and migration are needed to provide the basic data required for the formulation of appropriate population policies.

Decisions on national population and development policies should be based on a clear understanding of population trends in a particular country. Therefore, major emphasis has been placed on identifying those factors which will have the greatest impact on both population growth and socioeconomic development. Support of research in these areas, particularly when conducted by indigenous social scientists, is one means of helping governments to formulate relevant national policies.

Toward these goals, the following grants were made in 1977:

GRANTS:

Council for Asian Manpower Studies

Quezon City, Philippines

This regional organization of economists, demographers, sociologists, and other scholars promises to emerge as the authoritative source of applied, policy-oriented research on problems of population growth, employment, and manpower development for all of South and Southeast Asia.

\$90,500

Population Council

New York, New York

The Council, newly reorganized, will place major emphasis on the interrelated demographic and development problems of the world's poorer countries and peoples.

\$500,000

Population Resource Center

New York, New York

PRC is an agency which successfully links existing population organizations to public and private sources of financial support.

\$200,000

Rockefeller Foundation and Ford Foundation Research Program on Population and Development Policy

In 1970 the Rockefeller and Ford Foundations initiated a competitive research program in the field of population policy in order to promote the study of the determinants and consequences of population behavior. During the past seven years, 202 scholars, representing a range of disciplines and countries, have been supported under this program. In 1977 the trustees appropriated \$425,000 for this program. The following individuals were selected for RF awards:

AKBAR AGHAJANIAN, Duke University: "Fertility and Economic Value of Children: A Pilot Study in Rural Communities of Iran."

SARA S. BERRY, Boston University: "Rural-Urban Linkages in Western Nigeria: The Uses of Agricultural Income."

NOAH CONTEH, Ministry of Health, Sierra Leone, and THOMAS DOW, State University College of New York, Purchase, and TOMA J. MAKANNAH, Central Statistical Office, Sierra Leone: "Levels and Determinants of Mortality in Sierra Leone: Patterns and Policy Implications."

LORRAINE CORNER, Macquarie University, Australia: "The Impact of Rural Migration: Labor Supply and Cultivation Techniques in a Double-Cropped Padi Area, West Malaysia."

CHAN-ONN FONG, University of Malaya, Malaysia: "Analysis of Resource Allocation in Family Planning Programmes in Malaysia."

S. K. GAISIE, University of Ghana: "Estimating the Patterns of Mortality in Tropical Africa."

IRMA OLAYA GARCIA-GARMA, University of Pennsylvania: "Fertility Determinants in Rural Mexico."

NORA LAN-HUNG CHIANG HUANG, National Taiwan University: "Spatial and Behavioral Aspects of Rural-Urban Migration—The Case of Female Mobility in Taiwan."

MEHTAB KARIM, Cornell University: "Age at Marriage and Fertility in Pakistan."

MICHAEL KEARNEY, University of California, Riverside: "A Case Study of the Socioeconomic Impact of Illegal Immigration to the U.S. from Mexico."

HYO CHAE LEE and CHA-WHAN CHUNG, Ewha Women's University, Korea: "Marriage and Women's Labor Force Participation in Korea."

R. PAUL LIGHTFOOT, University of Hull, United Kingdom, and THEODORE D. FULLER, University of Michigan: "Affecting Spatial Patterns of Rural to Urban Migration in Thailand."

PETER F. MCDONALD, Australian National University, and KASTO and SOPHAN EFENDI, Gadjah Mada University, Indonesia: "Marriage and Divorce in Indonesia: The Interaction of Customary Law and Modern Ideas."

ZULMA RECCHINI DE LATTES, Centro de Estudios de Población, Argentina: "Women's Work in Argentina, 1950-1970: A Short Analysis of Key Sociological, Demographic, and Economic Characteristics."

University of the Andes

Bogotá, Colombia

The graduate training program in economics developed with Foundation assistance is now being expanded to offer a specialization in population studies, including short-term courses for government officials.

\$225,000

GRANTS IN AID (\$35,000 or under):

ALAN GUTTMACHER INSTITUTE, Washington, D.C., for a study on the impact of the restriction of Medicaid funding for abortion.

\$25,000

ASSOCIACAO BRASILEIRA DE ESTUDOS POPULACIONAIS (ABEP), Rio de Janeiro, Brazil, for general program costs.

\$35,000

HAROLD BANQUERO, Chapel Hill, North Carolina, for completion of his dissertation research on socioeconomic determinants of fertility in Colombia.

\$7,000

BRANDEIS UNIVERSITY, Waltham, Massachusetts, for research on the effects of childcare experience on the attitudes of separated fathers to remarriage and future parenthood.

\$11,040

BRIAN FLAY and ESTHER MELCHER, Evanston, Illinois, for an analysis of factors affecting fertility decisions in Germany.

\$5,450

INSTITUTO TECNOLOGICO DE SANTO DOMINGO, Dominican Republic, for research on the dissemination of the Dominican National Fertility Survey to government policymakers and its impact on population policies.

\$9,625

INTERNATIONAL UNION FOR THE SCIENTIFIC STUDY OF POPULATION (IUSSP), Liège, Belgium, to enable representatives from developing countries to participate in the Union's XVIII General Conference in Mexico City.

\$18,000

LATIN AMERICAN SOCIAL SCIENCE RESEARCH COUNCIL (CLACSO), Buenos Aires, Argentina, for use by its Commission on Population and Development for the program of the Working Group on Human Reproduction.

\$18,000

LATIN AMERICAN STUDIES ASSOCIATION (LASA), Gainesville, Florida, for its Seventh National Meeting.

\$5,000

ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT (OECD), Paris, France, for use by its Development Centre for a study to determine the effectiveness of dissemination methods for demographic research in Brazil.

\$12,200

PLANNED PARENTHOOD ASSOCIATION OF MARYLAND, Baltimore, for its program in population and family planning education in collaboration with the Baltimore City Public Schools.

\$14,560

POPULATION COUNCIL, New York, New York, for a publication and national seminar program for its International Committee on Applied Research in Population.

\$35,000

ROGER BALDWIN FOUNDATION OF ACLU, Chicago, Illinois, for litigation on the constitutional issues involved in the Illinois Abortion Law of 1975.

\$13,500

TRANSNATIONAL FAMILY RESEARCH INSTITUTE, Bethesda, Maryland, for support of its International Reference Center for Abortion Research and publication of *Abortion Research Notes*.

\$10,000

UNIVERSITY OF MICHIGAN, Ann Arbor, for a postdoctoral research position in the Department of Population Planning.

\$23,000

UNIVERSITY OF TEXAS, Austin, for initiation of research and coordination costs of the Mexico-United States Border Research Program.

\$35,000

UNIVERSITY OF TEXAS, San Antonio, for a study of the acceptability of reversible vs. permanent female surgical sterilization at its Health Center at San Antonio.

\$16,000

DR. MARIS VINOVSIS, Ann Arbor, Michigan, for a study on voting behavior in the 94th Congress on population policy.

\$3,200

ZERO POPULATION GROWTH FOUNDATION, Washington, D.C., for its Population Education Project.

\$25,000

BASIC RESEARCH IN REPRODUCTIVE BIOLOGY

Unfortunately, at a time when existing contraceptive techniques are being found to be far from perfect, few new ideas are flowing from research in reproductive biology. Furthermore, although it was estimated that approximately \$360 million were needed for research in 1976, only \$102 million were actually committed. In addition, it is estimated that a two- to three-fold increase in support

will be necessary by 1980 in order to meet the financial requirements of the field.

In the past a major portion of the Foundation's funds designated for the population program has been in the form of assistance to major U.S. centers for research and training in reproductive biology. Such centers typically include a group of senior investigators working with postdoctoral and graduate students in an integrated research program. Multiple grants have also been made to smaller groups in single university departments, particularly when a good opportunity was found to add reproductive research to laboratories of high quality which were working in other areas.

There is general agreement today that better methods of fertility control are needed if stabilization of population growth is to be achieved. It is further agreed that support of basic research in reproductive biology is essential if we are to gain a more complete understanding of the complex events involved in the reproductive process. Thus, sufficient funds must continue to be made available for basic research, otherwise it is unlikely that safer and more effective birth control methods will ever be found. For this reason, the Foundation made the following grants in reproductive biology in 1977:

GRANTS:

Baylor College of Medicine

Houston, Texas

The Foundation is continuing support for a basic science research position in reproductive biology at Baylor where encouraging progress is being made in its research program on ovum and blastocyst biology.

\$80,000

Harvard University

Cambridge, Massachusetts

Investigators at the Laboratory of Human Reproduction and Reproductive Biology are working to identify more clearly basic mechanisms involved in the reproductive processes of both men and women, a necessary step in the development of improved contraceptive techniques.

\$550,000

Mahidol University

Bangkok, Thailand

The Reproductive Biology Group at Mahidol University continues to provide information on the basic mechanisms of the male reproductive system, information essential to the development of new and effective contraceptive methods for men.

\$75,000

Sloan Kettering Institute for Cancer Research

New York, New York

The current Foundation grant continues support for a small research group carrying out studies in a new area of reproductive immunology—the definition and analysis of antigens on the surface of the sperm cell.

\$300,000

University of Texas

Austin, Texas

Research in reproductive endocrinology continues at the Institute for Biomedical Research, with emphasis on the precise role of certain releasing and inhibiting hormones.

\$135,000

GRANTS IN AID (\$35,000 or under):

CORNELL UNIVERSITY, Ithaca, New York, for research in synthesizing and developing analogues of gonadotropins and characterization of preimplantation gonadotropin, to be conducted by the Department of Medicine of its Medical College.

\$35,000

GEORGETOWN UNIVERSITY, Washington, D.C., for the reproductive biology program in the Department of Anatomy.

\$10,000

INTERNATIONAL DEVELOPMENT RESEARCH CENTRE, Ottawa, Canada, for a conference on public sector involvement in reproductive science and contraceptive research.

\$8,213

MOREHOUSE COLLEGE, Atlanta, Georgia, for research on neurophysiological correlates for control of reproduction.

\$5,000

**APPLIED DEVELOPMENT RESEARCH IN
CONTRACEPTIVE TECHNOLOGY**

Once a potential method for the control of conception has been developed in the laboratory and its general safety and efficacy established, it must be subjected to careful evaluation in a variety of geographic, socioeconomic, and medical settings. Only in this way can informed decisions be made as to its possible future role in family planning programs. In addition, studies must be instituted in order to provide the critically important long-term surveillance needed to establish the presence or absence of delayed adverse side effects.

In order to provide definitive answers as to which leads are promising enough for worldwide use to warrant further exploration, the Foundation made the following grants in 1977:

GRANT:

Population Council

New York, New York

A major international program of applied laboratory and clinical research tests the effectiveness and safety of potential new contraceptive methods and determines their suitability for large-scale use.

\$500,000

GRANTS IN AID (\$35,000 or under):

ASSIUT UNIVERSITY, Assiut, Egypt, for studies on adaptation of contraceptive technology for local use.

\$24,940

JOHNS HOPKINS UNIVERSITY, Baltimore, Maryland, for a study of the association of oral contraceptive usage with fatal stroke in Taiwan.

\$25,000

PIACT DE MEXICO, A.C., Mexico, D.F., for its program for adaptation of contraceptive technologies for local use.

\$35,000

THE HEALTH PROGRAM

In keeping with its traditional interest in health on a global level, the Foundation has recently launched a new program entitled the Great Neglected Diseases of Mankind (see President's Review). Examples of these diseases, which afflict hundreds of millions of people in the developing world, are schistosomiasis, hookworm, malaria, sleeping sickness, amebic dysentery, and fatal diarrheas of infants. In the face of a veritable explosion in biomedical research over the past three decades, these major diseases of mankind have been virtually ignored by the top scientific establishment. The purpose of the present program is to proselytize among outstanding clinical and basic investigators to develop units for research on these diseases in medical schools and major research institutes with an emphasis on medicine, pharmacology, and immunology. A critical mass of such units will be organized into an international network. Some of these units will be in the developing world and all will be encouraged to do clinical and epidemiological research in collaboration with colleagues in the endemic areas. The network program will be supplemented with grants in aid and fellowships. This development stems from the continued interest of the Foundation in tropical medicine as exemplified by the highly successful program on the control of schistosomiasis on the island of St. Lucia, a major appropriation to Case Western Reserve University

to establish a Division of Geographic Medicine in the Department of Medicine, and a series of small grants and fellowships.

GRANT:

Case Western Reserve University
Cleveland, Ohio

The Division of Geographic Medicine, created within the Department of Medicine in 1974, offers an exceptional program of teaching, research, and field work in tropical medicine, an area long neglected by U.S. medical schools.

\$300,000

GRANTS IN AID (\$35,000 or under):

BAYLOR COLLEGE OF MEDICINE, Houston, Texas, for intensive short-term instruction in infant nutrition techniques for Dr. Cutberto Garza.

\$5,250

CASE WESTERN RESERVE UNIVERSITY, Cleveland, Ohio, for a research analysis of population literature.

\$15,000

CASE WESTERN RESERVE UNIVERSITY, Cleveland, Ohio, for research on giardiasis to be carried out in the Department of Medicine.

\$25,000

CASE WESTERN RESERVE UNIVERSITY, Cleveland, Ohio, for research on the mechanism of infection and immunity in experimental schistosomiasis, to be carried out in the Department of Anatomy.

\$24,500

CASE WESTERN RESERVE UNIVERSITY, Cleveland, Ohio, for use by its School of Medicine for research on the immunology of schistosomiasis to be carried out in the Division of Geographic Medicine.

\$25,000

DONATO CIOLI, M.D., Rome, Italy, for studies of the immunology of schistosomiasis.

\$17,000

COLUMBIA UNIVERSITY, New York, New York, to enable Dr. John H. Bryant to undertake a study of health issues and trends in developing countries.

\$23,000

CORNELL UNIVERSITY, Ithaca, New York, for use by David Gibbs, to enable him to participate in the programs of the Center for the Study and Control of Communicable Diseases (CSCCD) in Salvador, Bahia, Brazil.

\$21,354

HARVARD UNIVERSITY, Cambridge, Massachusetts, for research at the Center for Applied Sciences on the linkages among nutrition, health systems, and agriculture in determining the health of populations.

\$17,000

JOHNS HOPKINS UNIVERSITY, Baltimore, Maryland, for studies of onchocerciasis to be carried out under the direction of Dr. Maurice E. Langham, Director of the Ophthalmological Research Unit of the Wilmer Institute of the School of Medicine.
 \$35,000

JOHNS HOPKINS UNIVERSITY, Baltimore, Maryland, to enable Dr. Shahjahan Kabir to receive training in research on diarrheal diseases in preparation for his appointment as head of the immunological sciences section of the Cholera Research Laboratory, Dacca, Bangladesh.
 \$23,200

LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE, England, for statistical studies of the St. Lucia schistosomiasis project.
 \$18,000

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, for research at the Center for International Studies on the impact of a community health program on the nutritional status of the population of the Kanyakumari District, Tamil Nadu, India.
 \$20,000

MICHIGAN STATE UNIVERSITY, East Lansing, for research on taeniasis to be carried out in the Department of Pathology.
 \$10,685

PAN AMERICAN HEALTH AND EDUCATION FOUNDATION, Washington, D.C., for the publication of a book based on the anecdotal reminiscences of Dr. Fred L. Soper, former RF staff member.
 \$10,000

RESEARCH AND CONTROL DEPARTMENT, Castries, St. Lucia, for a study on the role of the HLA system in the pathogenesis of hepatosplenic schistosomiasis.
 \$7,000

DR. FREDERICK C. ROBBINS, Washington, D.C., for participation in the Anglo-American Symposium on Tropical Medicine.
 \$1,000

ROCKEFELLER UNIVERSITY, New York, New York, for immunological research related to trypanosomiasis.
 \$20,000

ROYAL SOCIETY OF MEDICINE FOUNDATION, New York, New York, for publication and distribution of the proceedings of a symposium on tropical diseases sponsored by the Foundation and the Royal Society of Medicine, London.
 \$6,000

UNIVERSITY OF CALIFORNIA, Davis, for studies to determine the possibility of using various non-human primate species for experimental work on onchocerciasis.
 \$5,000

UNIVERSITY OF FLORIDA, Gainesville, for an evaluation of the nutritional status of elderly low income people in Dade County, Florida, to be conducted by the Institute of Food and Agricultural Sciences.
 \$25,000

EDUCATION FOR DEVELOPMENT

A university can be a powerful force for social and economic development, provided it is structured as an institution responsive to the needs of society and not as an end in itself.

The University Development program—later to be named the Education for Development program—has since its inception had as its major objective the creation or strengthening of institutions in the developing world, staffed by indigenous scholars engaged in teaching and research relevant to national and regional needs. The main thrusts of the current program are fourfold:

- To strengthen indigenous faculties;
- To develop curricula appropriate to local needs;
- To encourage research relevant to national needs;
- To help structure outreach programs that address themselves to fundamental national deficiencies, particularly in rural life.

After more than a decade of close working relationships with the universities that came under the original program—Makerere University, Kampala, Uganda; University of Nairobi, Kenya; University of Dar es Salaam, Tanzania; University of Ibadan, Nigeria; University of the Philippines; Universidad del Valle, Cali, Colombia; and Thammasat, Kasetsart, and Mahidol Universities in Bangkok, Thailand—the Foundation has virtually phased out its financial support for “institution-building.” However, the Foundation maintains close ties with these institutions and, as will be seen below, has provided support for several of their research and training efforts under the EFD and other Foundation programs.

Between 1971 and 1974, three new institutions were added to the program.

INDONESIA

Gadjah Mada University in Yogyakarta is the oldest of the universities established by the Indonesians themselves and thus the source of considerable national pride. In 1971 The Rockefeller Foundation and Gadjah Mada joined in a cooperative effort to strengthen the University.

In the area of health sciences, teaching and research are being directed primarily toward community medicine with the assistance of two Foundation specialists. A maternal/child health program is also operational.

The agricultural complex now provides new agricultural research and development station facilities for training in adaptive research and extension work with small farmers. The Foundation has contributed an animal scientist and a plant scientist to the agricultural team.

The social science complex at Gadjah Mada has been a significant influence in creating a system of higher education responsive to national and regional needs through appropriate teaching, research, and outreach programs. In the past several years, two special institutes have been created to this end: the Institute of Population Studies, which has an interdisciplinary staff under the leadership of a highly regarded Indonesian scholar; and the Institute of Rural and Regional Studies, devoted to improving the quality of life for all Indonesians. Three Foundation field staff—two in the Faculty of Economics, one in the IRRS and the Faculty of Social and Political Sciences—are currently assigned here.

ZAIRE

In 1971 Zaïre set for itself the task of reorganizing its entire system of higher education. With the aid of Foundation field staff and support funds, the National University of Zaïre has embarked on an ambitious plan, calling for a complete departure from the colonial university system, the introduction of a solid, practical component into the curriculum, and a drastic reduction of the wastage that characterized the previous system.

In the Faculty of Social Sciences and the Center for Social Research the top leadership is now completely Zairian. Most specialized positions are occupied by Zairians who have returned from doctoral programs; many of these younger faculty members were supported in their advanced studies by the Foundation. Progress has also been made in the creation of a well organized undergraduate reading library.

The Agricultural Sciences Faculty is in the process of structuring a program that has the potential for producing a competent cadre of agronomists and other agricultural scientists capable of applying the principles of modern agriculture to local conditions and enabling farmers to raise food crop production levels.

Special programs for advanced study outside Zaïre and regular Foundation fellowships are also accelerating staff development.

BRAZIL

The Federal University of Bahia is the most recent addition (1973) to the institutions assisted under the Foundation's Education for Development program. Through its innovative Program of Research and Education for Development (PROPED), substantial progress has been made in collaborative, developmental efforts between the University, the State of Bahia, the City of Salvador, and appropriate Brazilian federal agencies. Research and extension projects established under PROPED focus on the five critical areas of agriculture, health, economics, management, and education.

NEW INITIATIVES

During 1977, several new approaches under the EFD program were initiated in the developing countries directed toward the identification and training of individuals who can be expected to play significant roles in specific development activities. Two such efforts build on the research, teaching, and evaluation capabilities developed at institutions of higher education assisted by the Foundation over the past decade.

Strengthening Educational Research and Evaluation Capacity in East Africa

In most developing countries the demand for wider access to education continues to grow. At the same time, the quality, relevance, and equity of much of the education now being provided is open to serious question. Given the enormous costs of educational systems, it is essential that countries develop local capacity for evaluating existing educational practices and assessing the utility of alternative systems and suggested innovations. With Foundation assistance, selected institutes and departments in the national universities of Kenya and Tanzania will train and deploy individuals who could apply social science techniques and perspectives toward the solution of educational problems in the two countries—in particular at the primary and secondary school levels. One grant was made in 1977 to the University of Nairobi.

Pest Management on Small Holdings in East Africa

Effective plant pest and pathogen control is more difficult to achieve in small but complex agroecosystems of traditional agriculture than in large-scale systems of monoculture. Yet such control is essential on small holdings if increased production of basic food crops and the alleviation of hunger are to be attained. The Faculty of Agriculture at the University of Nairobi, Kenya, with Foundation assistance, is establishing a program in pest management that involves collaborative efforts bridging departmental lines, research on specific problems of integrated pest management in traditional agricultural systems, and building lines of communication from the Faculty through the Ministry of Agriculture to the farm population. The entire effort is directed toward presenting farmers on small holdings with practical solutions to the problems of holding pests and pathogens below economic thresholds of damage.

Training for Public Sector Management in Developing Countries

While the challenge of training managers for public sector responsibilities confronts most nations, it is especially severe for those countries that are least

advanced. Inadequate management is now emerging as a critical constraint in some development sectors. There is a clear need for a diversity of programs. Besides professional degree management curricula, for example, it is essential that intensive, short-term courses be available for both professional managers wishing to upgrade their skills and individuals who will be assigned management responsibilities after earning academic degrees in the agricultural sciences, medicine, education, and other fields.

The Panafrican Institute for Development (PAID) concentrates its efforts on the rural sector of the African society and economy through interventions involving coordinating of training, research, and support for development projects. The Foundation is assisting PAID with the "training of trainers" element at its newly established institute for the Sahelian region located in Ougadougou, Upper Volta.

GRANTS:

Federal University of Bahia

Salvador, Bahia, Brazil

Since its initiation in 1973, the collaborative effort between the Foundation and the Federal University of Bahia has evolved into an innovative program, combining teaching and research relevant to the State of Bahia and northeast Brazil with extension activities geared to the region's needs.

\$12,000

Fundación para la Educación Superior (FES)

Cali, Colombia

The Foundation for the Application and Teaching of Science (FUNDAEC), an experiment in educational and rural development underway since 1974, was devised to produce professionals who can deal directly with the problems of rural families of a given region. An innovative curriculum, which divides into three stages of two years each, is composed of elements sifted from secondary school instruction, university level courses, and appropriate areas of graduate study.

\$150,000

Gadjah Mada University

Yogyakarta, Indonesia

Gadjah Mada is developing programs in the health sciences, the agricultural sciences, and the social sciences to help Indonesia meet national goals, particularly in the area of rural development.

\$357,708

Kasetsart University

Mahidol University

Thammasat University

Bangkok, Thailand

The Thailand cooperative effort, which began in 1963 and which has since

evolved into one of the largest and most complex undertakings of the current Education for Development program, has resulted in a strong university system with a nucleus of highly qualified scholars engaged in teaching and research directed to national and regional needs.

\$306,548

National University of Zaïre

Kinshasa, Zaïre

The University is engaged in active development of academic and administrative staff, intensive curricula reforms, and important research on immediate problems of development.

\$155,000

Panafrican Institute for Development

Geneva, Switzerland

The Institute, which maintains its African base in Douala, Cameroon, has thus far trained more than 1,500 African executives in Africa in the management of integrated social and economic development in rural areas, with emphasis on a dynamic, pragmatic, and consolidated approach to problems and needs.

\$100,000

University of Dar es Salaam

Dar es Salaam, Tanzania

University of Nairobi

Nairobi, Kenya

With Foundation support, these major national universities of East Africa have now established competent indigenous faculties, sound undergraduate teaching programs, and applied research programs attuned to national and regional development needs.

\$112,249

University of Ibadan

Ibadan, Nigeria

The Foundation is contributing to the support of a Chief Planning Officer for its Planning and Research Unit and to the support of doctoral studies in political science for Fred Onyeoziri, a former RF fellow who will be returning to a teaching position at the University.

\$30,800

University of Nairobi

Nairobi, Kenya

As part of a broader program designed to develop local capacity for social science research and evaluation of educational problems in Kenya and Tanzania, the Foundation is providing support for the training of two MA students in the sociology of education and development at the University of Nairobi's Department of Sociology.

\$20,200

GRANTS IN AID (\$35,000 or under):

MOSES ABRAMOVITZ, Stanford, California, for a program of lectures and seminars in Southeast Asia.

\$6,626

GOREN HYDEN, Dar es Salaam, Tanzania, to enable him to prepare teaching materials on rural development in East Africa.

\$6,500

MICHIGAN STATE UNIVERSITY, East Lansing, for the African research and graduate training programs in its Department of Agricultural Economics.

\$11,488

NORTHEASTERN UNION FOR ASSISTANCE TO SMALL ORGANIZATIONS IN BAHIA (UNO), Salvador, Bahia, Brazil, for expansion of an innovative program of managerial training for micro-entrepreneurs to the interior cities of Bahia.

\$15,000

EDITA TAN, Quezon City, Philippines, for teaching and research assignments at Thammasat University, the National Bureau of Economic Research-West, and Stanford University.

\$18,030

UNIVERSITY OF NAIROBI, Kenya, for appointment of a social science-oriented computer specialist to the Institute for Development Studies.

\$21,000

UNIVERSITY OF WISCONSIN, Madison, for a study on political change in Mobutu's Zaire.

\$2,925

INTERNATIONAL RELATIONS

Recognizing the potential for conflict inherent in the growing interdependence of nations, the trustees established the Conflict in International Relations program in 1973. In 1977, following a major review, a revised program was approved and launched. The new program now focuses on three areas:

- World energy;
- World food and agriculture;
- Regional conflicts and security arrangements.

What decisions are made and how problems are managed, nationally and internationally, in each of these broad areas will affect immediate economic and political conditions as well as the future character of the interdependent world community.

Within each problem area, the primary objectives are:

- To identify core problems for which cooperative action is required for effective management, for avoidance or resolution of conflict;
- To assess such problems from a global perspective in order to develop and evaluate alternative courses of action and institutional arrangements for coping with them;
- To develop scholarly and professional competence in relevant policy analysis;
- To increase public understanding of the context, issues, policy alternatives, and need for timely action.

WORLD ENERGY

The world is now in the early stages of a painful, uncertain, and lengthy transition from primary reliance on low-cost oil to much higher cost energy alternatives. The transition may be managed smoothly or fitfully, equitably or unfairly, or it may prove ultimately to be unmanageable. In any event, the prospects of every citizen in every country will be affected by the outcome, and the process of shaping the outcome will be a central task in the coming decades.

GRANT:

Overseas Development Council

Washington, D.C.

Oil-importing, developing countries have been especially hard hit by the 1974 jump in world oil prices, and many face grave difficulties in adjusting their economies and plans for future development to the new world energy situation. The ODC is reviewing the needs and potentials of energy in non-OPEC developing countries to assess possibilities for policy-relevant research.

\$38,625

GRANTS IN AID (\$35,000 or under):

MELVIN A. CONANT, Great Falls, Virginia, for a study of the competition for access to Middle East oil.	\$16,745
RODNEY W. JONES, New York, New York, for research on the problem of commercial competition among nuclear supplier countries.	\$4,500
EDWARD N. KRAPELS, Kent, England, for a study of international strategic petroleum reserves.	\$33,300
PRINCETON UNIVERSITY, New Jersey, for a study by Robert E. Kuenne on modeling the OPEC cartel.	\$34,527
RESOURCES FOR THE FUTURE, Washington, D.C., for production of a volume on the world's energy problems.	\$35,000
ROYAL INSTITUTE OF INTERNATIONAL AFFAIRS, London, England, for analytic work in connection with the May 1978 meeting of the International Consultative Group on Nuclear Energy.	\$8,300
ROYAL INSTITUTE OF INTERNATIONAL AFFAIRS, London, England, for a conference of the International Consultative Group on Nuclear Energy.	\$26,700
JONATHAN STERN, Charlottesville, Virginia, for a study, "Soviet Natural Gas to 1990."	\$10,250
THEODORE B. TAYLOR, Damascus, Maryland, for development of an international solar energy policy strategy.	\$33,345
UNIVERSITY OF CALIFORNIA, Berkeley, for use by Dr. Gene Rochlin for an international nuclear energy study.	\$34,902
UNIVERSITY OF WISCONSIN, Madison, for a study of energy, the structure of the political economy, and political and economic performance by Dr. Leon N. Lindberg.	\$22,151

WORLD FOOD AND AGRICULTURE

Food production and distribution will be a continuing and deepening world political problem, aggravated by the possibility of climatic changes and the certainty of scarce water in many regions and compounded by huge increases in world population levels in the next few decades, regardless of the success of current and future efforts to reduce growth rates. Food prices and agricultural development policies can become explosive domestic issues in many countries, especially where there is chronic high unemployment. The issues have substantial

international ramifications. Global food production and distribution will be a question of life or death for increasing numbers of poor people, and a potent political issue between rich and poor in the broader struggle to restructure international economic relations.

GRANTS:

American Universities Field Staff

Hanover, New Hampshire

Seven area specialists are collaborating on a three-year comparative study of the foreign and domestic political factors that shape food and agricultural policies in developing countries.

\$75,000

International Institute for Applied Systems Analysis

Laxenburg, Austria

IIASA has initiated a five-year program to evaluate systematically the nature of the world food situation. It seeks to identify underlying factors such as water, nutritional requirements, and population growth and distribution; and to investigate alternative policies at the national, regional, and global levels that may alleviate present and future food problems. (Jointly with the Conquest of Hunger program)

\$90,000

GRANTS IN AID (\$35,000 or under):

COUNCIL ON RELIGION AND INTERNATIONAL AFFAIRS, New York, New York, for a task force on value systems and the world food crisis.

\$12,000

JOHN R. TARRANT, Norwich, England, for a study of the international strategic role of food supply.

\$9,745

UNIVERSITY OF CALIFORNIA, Santa Barbara, for a study on the political economics of international food production and distribution.

\$20,737

REGIONAL CONFLICTS AND SECURITY ARRANGEMENTS

There are particular regions where political tensions among peoples and between nations appear most dangerous for the world community. The political approaches pursued in regions with high potential for conflict and escalation—by powers inside and outside—have major importance for international security. Peacekeeping and arms control arrangements in such regions are matters deserving high priority.

GRANTS:

Arms Control Association

Washington, D.C.

In order to stimulate fresh thinking in the field of arms control and international security, the Association, with the International Institute for Strategic Studies, will sponsor three international conferences for young arms control specialists.

\$100,000

Aspen Institute for Humanistic Studies

New York, New York

The Institute, with its cooperating universities (Cornell, Harvard, MIT, and Stanford), is extending the international scope of its arms control and international security program.

\$148,000

Columbia University

New York, New York

Columbia's East Asian Institute and the Asia-Pacific Association of Japan are engaged in a cooperative project to examine the prospect for greater U.S.-Japanese cooperation on energy, oceanic development, and trade issues in multilateral forums.

\$60,000

Cornell University

Ithaca, New York

The Cornell Peace Studies Program has begun a two-year study of the U.S. government's decision-making process with regard to military research and development.

\$92,000

Hague Academy of International Law

The Hague, Netherlands

The Academy's Research Centre has begun a new program which focuses on transnational questions of river management, including those stemming from environmental and resources management issues. (Jointly with the Quality of the Environment program)

\$30,000

International Research Fund

New York, New York

The International Peace Academy offers the only international training programs to educate personnel in political, diplomatic, and military establishments about the special problems that arise in assembling, deploying, and maintaining international peacekeeping units.

\$120,000

Interreligious Peace Colloquium

Washington, D.C.

IRPC is organizing a transactional colloquium of the Christian, Jewish, Buddhist, Muslim, and Hindu faiths to encourage religious leadership committed to common values of justice and peace, and leaders willing to develop religion as a cohesive rather than a divisive force in resolving major secular issues.

\$75,000

Japan Center for International Exchange

Tokyo, Japan

Japan's future role in the international community, from the perspective of "superpower without military power," is the subject of a major study by the Japan Center.

\$75,000

Franklin A. Thomas

New York, New York

Mr. Thomas will direct a feasibility study relating to the establishment of an independent national commission on U.S. policy toward Africa, with special reference to southern Africa.

\$20,000

United Nations Association of the United States of America

New York, New York

The Soviet-American Parallel Studies Program, jointly sponsored by U.S. and USSR branches of the United Nations Association, will focus for the next two years on arms control and economic relations.

\$50,000

GRANTS IN AID (\$35,000 or under):

AMERICAN FREEDOM ASSOCIATION, Greensboro, North Carolina, for the Ocean Education Project on issues under consideration by the Third United Nations Conference on the Law of the Sea.

\$15,000

COLUMBIA UNIVERSITY, New York, New York, for use by its Russian Institute, to enable Dr. Boris Rabbot to pursue a project on social research and management in the Soviet Union.

\$17,325

RICHARD A. FALK, Princeton, New Jersey, for a study of the decline of moderate politics, changing patterns of international conflict, and alternative choices for U.S. foreign policy.

\$21,048

LATIN AMERICAN STUDIES ASSOCIATION, Gainesville, Florida, for two conferences of Latin American Center directors.

\$9,618

POTOMAC ASSOCIATES, Washington, D.C., for a *Policy Perspective* on relations between the United States and the People's Republic of China.

\$25,000

SEVEN SPRINGS FARM CENTER, Mt. Kisco, New York, for a symposium, "China After Mao: The Global Implications."

\$10,000

RUTH LEGER SIVARD, Washington, D.C., for production of the 1977 and 1978 updatings of her 1974 publication *World Military and Social Expenditures*.

\$22,000

UNITED NATIONS ASSOCIATION OF THE UNITED STATES OF AMERICA, New York, New York, for the planning phase of the Soviet-American dialogue on economic and arms control problems.

\$25,000

UNIVERSITY OF MICHIGAN, Ann Arbor, for a conference on the political aspects of regional integration schemes among developing nations.

\$7,500

VRJJE UNIVERSITEIT BRUSSEL, Belgium, for the fourth Brussels Seminar on the law and institutions of the European Economic Community.

\$12,000

ROCKEFELLER FOUNDATION FELLOWS IN INTERNATIONAL RELATIONS

In 1977 the trustees appropriated \$500,000 to continue the selection, with the advice of an expert advisory committee, of outstanding and innovative scholars who are studying issues central to international conflict. The following awards were made during 1977:

FRANCIS M. AUBURN, University of Auckland, New Zealand, to study the management of offshore oil and gas in Antarctica.

ALEXANDRE S. C. BARROS, Rio de Janeiro, Brazil, to assess the international implications of arms procurement policies in South America, while associated with the University of Chicago.

BARBARA J. BROWN, United Nations Institute for Training and Research, New York, to evaluate the potential role of the United Nations in advance planning for disaster relief.

THOMAS C. BRUNEAU, McGill University, Montreal, Canada, to undertake a study of the Portuguese revolution, focusing on the international and domestic policies in the structuring and diminution of conflict.

DAVID A. DEESE, Woods Hole Oceanographic Institute, Massachusetts, to study international and political problems of managing the nuclear fuel cycle.

JESSICA P. EINHORN, Washington, D.C., to study public policy in response to rising LDC indebtedness to private creditors.

SEYMOUR MAXWELL FINGER, Ralph Bunche Institute on the United Nations, City University of New York, to undertake a study on the U.S. permanent representative to the U.N. and the making of U.S. foreign policy.

RICHARD GILMORE, Overseas Development Council, Washington, D.C., to study American and international food policy.

ROBERTO YOSHIUTI HUKAI, São Paulo, Brazil, to undertake a study on the risks and benefits of nuclear technology, while affiliated with the Massachusetts Institute of Technology.

WILLARD R. JOHNSON, Massachusetts Institute of Technology, Cambridge, to undertake a study on identifying factors of Arab-Afro cooperation that will promote and utilize African and Arab enterprise.

FUJI KAMIYA, Tokyo, Japan, to study Japanese defense policies and East Asian security problems, while affiliated with Columbia University.

PETER J. KATZENSTEIN, Cornell University, Ithaca, New York, to undertake a comparative analysis of the foreign economic policies of advanced industrial states.

DAVID LINEBAUGH, Washington, D.C., to assess the prospects for mutual and balanced force reduction in Europe, while serving as a visiting fellow of the Brookings Institution.

ONKAR MARWAH, Harvard University, Cambridge, Massachusetts, to compare the security concerns and political and technical disincentives affecting the nuclear procurement policies of less-developed countries.

JON MCLIN, Chevy Chase, Maryland, to complete a project assessing the alternatives to public international agencies for managing interdependence in welfare-related fields.

BRUCE PARROTT, School of Advanced International Studies, Johns Hopkins University, Washington, D.C., to study the interaction among Soviet technological needs, domestic politics, and foreign policy since Khrushchev.

VRATISLAV PECHOTA, Prague, Czechoslovakia, to undertake a study entitled, "Human Rights in the Era of Detente: A New Pattern of Cooperation in Implementing the International Standards," while at Columbia University.

JONATHAN D. POLLACK, Harvard University, Cambridge, Massachusetts, to explore energy, political, military, and diplomatic strategies of the People's Republic of China as they pertain to the prospects for greater arms control in a multipolar international setting.

ROBERT PRINGLE, Manila, Philippines, to reassess U.S. national interests in the conduct of foreign policy in relation to Indonesia and the Philippines.

TONY SMITH, Tufts University, Medford, Massachusetts, to undertake a study entitled, "Changing Configurations of Power in North/South Relations Since 1945: The Role of the U.S."

KOSTA TSIPIS, Massachusetts Institute of Technology, Cambridge, to undertake a study of the impact of new technologies on arms control negotiations.

EQUAL OPPORTUNITY

The program, formally adopted in 1963, grew out of the Foundation's historic concern for black people in America. Since then it has been reviewed periodically by trustees and staff to keep it consonant with changing needs. What has not changed is the program's overall goal of furthering a society which protects the basic rights of every individual.

The major thrusts of the program today fall within these areas:

- Community education;
- Leadership development;
- Policy-oriented research;
- Special Program for the Southeastern United States;
- Basic rights.

COMMUNITY EDUCATION

A strong national educational effort, supported by the communities it serves, is an effective means of moving minorities into the mainstream of American life. Comprehensive community education programs have been developed in several school systems around the country—among them, Oakland, California; Dade County, Florida; and New Orleans, Louisiana—which focus on encouraging parents, students, teachers, and administrators to work together within their own neighborhoods, to improve their local public schools. Community people, trained to take responsibility and make decisions about their children's education—an issue of strong personal interest—often go on to use their skills in other areas of local government. Sufficient models having come into existence, the Foundation will phase out this program.

GRANTS:

Macalester College

St. Paul, Minnesota

Macalester's Native American Community Involvement Project, now being expanded to include four other colleges in the Twin Cities area, is helping more American Indian students to complete the four-year course and earn a degree.

\$132,230

Westchester Academy

Baltimore, Maryland

In the 1977-78 school year the Academy's Home-Learning-Achievement

Program, currently in use in five major U.S. cities, will be adapted for Chinese- and Spanish-speaking students and for students in rural areas.

\$354,000

LEADERSHIP DEVELOPMENT

Special efforts need to be made to overcome the present effects of past discrimination. One way is to identify and train talented men and women from minority groups, helping them to qualify for a variety of visible and responsible positions. A program in which minority group administrators work for a year under the direct supervision of top level school superintendents is now in its eighth year; its aim has been to hasten the process by which administrators move up through the system, thereby producing a group of highly trained and experienced minority group superintendents in a relatively short time.

Private black colleges continue to be a primary source of education for thousands of young black Americans. Recent efforts toward institutional consolidation and faculty/curriculum development received modest Foundation support.

Other Foundation programs in this area are providing training experiences for qualified individuals to assume positions as school principals in inner-city schools; as decision-makers and financial administrators in black colleges, community and junior colleges; as administrators of early childhood and exceptional children educational programs; and as resource administrators in agencies and programs that fund, or have a special interest in, minority programs.

GRANTS:

American Indian Development Association

Bellingham, Washington

The American Indian Development Association was formed in 1973 to assist tribes to develop their own natural resources in harmony with their culture. The Association has now developed a training program designed to allow Indian managers to use their own systems and values in operating profitable enterprises and community programs.

\$98,600

ASPIRA of America

New York, New York

ASPIRA's educational leadership training program for young Puerto Rican educators combines internships under high level policymakers in federal and state government offices with intensive coursework at Fordham University's School of Education, leading to the Master of Science degree in Urban Education.

\$331,570

Atlanta University Center*Atlanta, Georgia*

The current Foundation grant supports the activities of the Office of Institutional Research and Planning (including the reorganization of the fiscal affairs of Center operations and development of a management information system) and permits acceleration of the work of the Office of Development and Public Relations.

\$210,000

Center for Educational Leadership*Los Angeles, California*

CEL, in cooperation with the University of Southern California and La Verne College, continues to offer a program to train minority educators in modern management expertise and skills for placement as management specialists in urban school districts and state departments of education.

\$148,300

Denver Public Schools*Denver, Colorado*

Under the Administrative Internship Program for minority group educators, outstanding teachers are receiving on-the-job training while studying for the Colorado State school administrator's certificate. At the conclusion of the fifteen-month training program, the interns are considered for administrative positions at or above the assistant principal level.

\$300,000

Fordham University*Bronx, New York*

Fordham's Graduate School of Social Service has expanded a program of graduate training in public social services for minority group social workers.

\$204,285

George Washington University*Washington, D.C.*

The Institute for Educational Leadership awards Educational Policy Fellowships to men and women to study for one year educational administration at the federal or state level.

\$95,120

Joint Center for Political Studies*Washington, D.C.*

In an effort to remedy the lack of minority group experts in the public policy field, the Center selects 10 to 12 administrators annually for individually tailored training fellowships, including experience in pertinent government

agencies and ongoing contact with key Congressional committees and Washington-based organizations.

\$500,000

Rockefeller Foundation Fellowships in Administration of Early Childhood and Exceptional Children Educational Programs

There is a dearth of substantive leadership nationally in the areas of learning disability and education of the very young. Many minority group educators have distinguished themselves in these areas at the school level but are unable to move upward because they lack advanced training. Under this new fellowship program, candidates are selected for graduate studies in education and educational administration by a committee of Foundation officers, consultants, and school superintendents. In 1977 the first awards, from a \$325,000 appropriation by the trustees in 1976, were made to the following individuals:

JEANETTE W. BREWER, Lansdowne, Pennsylvania
SHIRLE M. CHILDS, Windsor, Connecticut
CONSTANCE E. CLAYTON, Philadelphia, Pennsylvania
AUSTINE B. FOWLER, Hyattsville, Maryland
JACQUELINE G. HOUSTON, Nashville, Tennessee
ADRIENNE K. JACKSON, Evanston, Illinois
MARCO A. MARTINEZ, Chicago, Illinois
RONALD A. WILLIAMS, Albuquerque, New Mexico

Rockefeller Foundation Fellowships in Finance and Management in Higher and Secondary Education for Minority Group Educators

This program of fellowships, created in 1974, is serving to increase the number of minority group individuals in finance and management in public schools and black colleges and thus is improving the quality of financial administration at these institutions. In 1977 the trustees approved an appropriation of \$300,000 to continue the program, and the following awards were made:

MARIE P. ADAMS, Mt. View, California
LEROY T. BARNES, JR., Stanford, California
NAMHIRA BOLTON, Eugene, Oregon
KAREN CARRILLO, San Francisco, California
ARTHUR HENDERSON, Baton Rouge, Louisiana
FIDEL LOPEZ, Highland Park, Illinois
CHARLES MCINTYRE, Norfolk, Virginia
WILLIAM F. O'NEAL, Washington, D.C.
RONALD PARR, Nashville, Tennessee
LORRAINE R. PERRY, Ann Arbor, Michigan
SAMI SULEIMAN, Somerville, Massachusetts
CARNELL WHITL, Miami, Florida

Rockefeller Foundation Fellowships in Higher Education Administration for Minority Group Educators

This domestic fellowship program, initiated in 1974, offers minority group educators opportunities to gain the experience and skills necessary to assume important positions in educational administration in the nation's colleges and secondary schools. In 1977 the trustees approved appropriations of \$675,000 for continuation of the program and awards were made to the following institutions:

AMERICAN COUNCIL ON EDUCATION, Washington, D.C.
ATLANTA UNIVERSITY, Georgia
CLARK COLLEGE, Atlanta, Georgia
COLLEGE OF SAN MATEO, California
DILLARD UNIVERSITY, New Orleans, Louisiana
FORDHAM UNIVERSITY, Bronx, New York
HARVARD UNIVERSITY, Graduate School of Education, Cambridge, Massachusetts
KALAMAZOO COLLEGE, Michigan
MERRILL-PALMER INSTITUTE, Detroit, Michigan
STANFORD UNIVERSITY, California
UNIVERSITY OF MIAMI, Coral Gables, Florida
UNIVERSITY OF NORTH CAROLINA, Chapel Hill
UNIVERSITY OF SOUTH CAROLINA, Columbia
WAYNE STATE UNIVERSITY, Detroit, Michigan

Rockefeller Foundation Superintendents' Training Program

This Foundation-funded program, begun in 1969, has provided qualified minority school superintendents with a year of in-service training in the superintendent's office of each of two cities, to prepare them for positions of high responsibility in U.S. urban school systems. To date, 62 men and women have completed their internship assignments and thus have had an opportunity to work closely with those who shape urban educational policy. With the completion of the assignments of the 1977-78 candidates, the program will be phased out. In 1977 Foundation officers allocated a total of \$138,647 for this program. Interns for 1977-78 are as follows:

H. KENNETH JOHNSTON, New Orleans Public Schools, Louisiana
ROGERS M. LEWIS, Columbus Public Schools, Ohio
EVA LONG, Hayward Public Schools, California
ERNESTO RAMOS, Chicago, Illinois

State University of New York at Stony Brook

Stony Brook, New York

A three-year course of study that prepares minority group students for positions as professional urban policy analysts and planners is now in its

fifth year at the W. Averell Harriman College for Urban and Policy Studies.

\$178,940

University of North Carolina

Chapel Hill, North Carolina

The recently founded Southeastern Black Press Institute now plans to provide workshops for high school students, internships for college students, and apprenticeships for college graduates. In addition, a black press archive will be established at the University.

\$253,700

GRANTS IN AID (\$35,000 or under):

COMMUNITY RENEWAL SOCIETY, Chicago, Illinois, for a study of the feasibility of establishing publications similar to *The Chicago Reporter* in other cities.

\$10,000

COMMUNITY RENEWAL SOCIETY, Chicago, Illinois, for an educational leadership development internship for Ms. Alice T. Wood.

\$12,910

FLORIDA STATE UNIVERSITY, Tallahassee, for use by Ms. Joann Anderson for studies in early childhood education.

\$15,000

HARVARD UNIVERSITY, Cambridge, Massachusetts, for use by its Institute for Educational Management for support for minority participants in its annual summer Institute.

\$23,000

NORMA HICKMAN, Denver, Colorado, for an educational leadership development internship.

\$12,600

HOWARD UNIVERSITY, Washington, D.C., for use by its Bureau of Educational Research for its Graduate Internship Program in Educational Research and Journalism.

\$24,990

JOHNS HOPKINS UNIVERSITY, for use by its School of Advanced International Studies, Washington, D.C., for its Minority Fellowship Program in international relations.

\$35,000

MERRILL-PALMER INSTITUTE, Detroit, Michigan, for development of a pilot program in early childhood education.

\$22,000

YOLANDA ROMERO, Denver, Colorado, for an educational leadership development internship.

\$4,225

ST. PAUL INDEPENDENT SCHOOL DISTRICT 625, Minnesota, for its administrative internship program for minority group educators.

\$14,851

UNIVERSITY OF IOWA, Iowa City, for an educational leadership development internship for Ms. Glenda E. Gill.

\$18,000

UNIVERSITY OF NEW ORLEANS, Louisiana, for use by Ms. Lynette Fomerette for studies in educational and urban planning.

\$6,202

UNIVERSITY OF NORTH CAROLINA, Chapel Hill, for a project to strengthen the present and future leadership of the black press.

\$25,000

WILBERFORCE UNIVERSITY, Ohio, for use by Mr. Luther T. Lyle for studies in personnel.

\$4,000

WINSTON-SALEM UNIVERSITY, North Carolina, for a staff educational improvement program.

\$15,000

POLICY-ORIENTED RESEARCH

Many questions concerning the disadvantaged remain unanswered. Wherever possible, the participation of minority group scholars and scientists in research projects on these subjects has been sought.

GRANT:

University of Chicago

Chicago, Illinois

The University's Industrial Relations Center is engaged in an extensive occupational analysis of the school superintendency, designed to provide job clarification and to establish validated procedures for selection of superintendents.

\$79,443

GRANTS IN AID (\$35,000 or under):

ATLANTA UNIVERSITY, Georgia, for a research training project by Dr. Alfred B. Pasteur which has the goal of infusing the theory of black affective behavior into a counselor education training program.

\$24,950

GARY COMMUNITY SCHOOL CORPORATION, Indiana, for a feasibility study on urban education and school health problems.

\$15,000

DR. ALBERT E. MANLEY, Atlanta, Georgia, for a research project on the effects of continuing social change on the life and growth of Spelman College in particular and the Atlanta University Center institutions in general.

\$20,000

MARTIN LUTHER KING, JR. CENTER FOR SOCIAL CHANGE, Atlanta, Georgia, for the development of a policy research, analysis, and dissemination program.

\$25,000

MICHIGAN STATE UNIVERSITY, East Lansing, for a conference concerning strategies for the successful implementation of school desegregation and publication of the resultant book.

\$10,000

UNIVERSITY OF NORTH CAROLINA, Chapel Hill, for a research project, "The Black Preacher: An Analysis of Leadership Behavior in Community Development," by Dr. Sonja H. Stone.

\$25,000

UNIVERSITY OF NORTH CAROLINA, Chapel Hill, for use by Norton L. Beach for an investigation and analysis of a leadership training program for school principals in Sweden.

\$7,820

SPECIAL PROGRAM FOR THE SOUTHEASTERN UNITED STATES

The Rockefeller Foundation has undertaken a special program in the southeastern United States which involves several of the Foundation's disciplines and major program areas. Supported projects are designed to improve minority group participation in the region's development, with particular emphasis on the problems of blacks in rural areas and small towns of the Southeast.

GRANTS:

Atlanta University

Atlanta, Georgia

A commonly held view—but one not supported by recent history—is the notion that once blacks gained equal access to formal political structures the socioeconomic well-being of black Americans would begin to improve automatically. Dr. Mack Jones and Mr. Charles Prejean are beginning a two-year study of how changes in political and economic participation, social conditions, and socioeconomic well-being affect black citizens in the Black Belt of the U.S. South.

\$21,900

Center for Community Change

Washington, D.C.

The Center for Community Change is providing management support services to the Virginia Community Development Organization and the National Association for the Southern Poor, both organizers of confederations of local, self-help organizations.

\$10,000

Coastal Plains Human Development Coordinating Council

Charleston, South Carolina

Clemson University

Clemson, South Carolina

A long-range program of training and technical assistance is designed to upgrade and strengthen the operational capabilities of small, minority group, rural community-based cooperatives and self-help organizations in South Carolina.

\$101,586

Interdenominational Theological Center*Atlanta, Georgia*

The problem of reaching and influencing the lives of roughly four million scattered and isolated blacks in the rural South is a formidable one. ITC is developing a pilot program to train, mobilize, and utilize the black clergy for economic and social improvement in rural black communities.

\$52,404

Mississippi Action for Community Education*Greenville, Mississippi*

With Foundation assistance, MACE, a community development corporation with a successful record of organizing self-help activities for the rural black poor in the Mississippi Delta, is expanding its training program and extending technical assistance outreach programs.

\$209,900

Mississippi Research and Development Center*Jackson, Mississippi*

A "circuit-riding" team of professionals from the Center provides technical assistance and community development know-how to officials, employees, and citizen participation groups in six of Mississippi's minority-managed towns.

\$98,815

National Urban League*New York, New York*

The League and its affiliates in Richmond, Virginia, and Columbus and Albany, Georgia, have undertaken a program of institutes and seminars designed to upgrade and improve volunteer leadership in selected black communities in Virginia and Georgia.

\$34,500

Tuskegee Institute*Tuskegee, Alabama*

For some years, Tuskegee's Department of Agriculture has been investigating suitable production technologies for small landholdings. Research has now reached the point where an appropriate package of horticultural crops—plus honeybees—can be tested and demonstrated.

\$250,000

Urban League of Greater Little Rock*Little Rock, Arkansas*

The League has initiated an Arkansas minority community training and leadership development project. It is offering seminars on public policy for minority community leaders, helping to organize a statewide network of local organizations that can effectively represent their communities in

matters related to employment, education, housing, and delivery of public services.

\$120,252

BASIC RIGHTS

The search for exceptional challenges and opportunities must continue: several possibilities are being explored. Attention is also being given to the plans and objectives of the stable and effective organizations and institutions that have been in the forefront of the efforts in the equal opportunities field.

GRANTS:

Children's Foundation

Washington, D.C.

Under the Southwestern Food Rights Project, two field advocates conduct workshops in six southwestern states to help low income Native American, black, white, and Chicano communities to develop community-influenced food delivery systems.

\$84,830

Lawyers' Committee for Civil Rights Under Law

Washington, D.C.

Two years' training in civil rights law is being offered under the tutelage of a senior staff attorney of the Lawyers' Committee to young black lawyers who intend to practice in Mississippi. The hope is to establish a viable black bar to serve the needs of the state's black and poor citizens.

\$134,155

NAACP Special Contribution Fund

New York, New York

The Fund is engaged in a systematic attack on school segregation patterns in urban centers of the North and West and also is continuing long-standing efforts to combat employment discrimination throughout the United States.

\$500,000

Puerto Rican Legal and Defense Fund

New York, New York

The Fund has established a graduate internship program under which Puerto Rican law school graduates will be assigned for one year to the Fund's national office and for a second to an outside firm or agency.

\$102,460

THE ARTS, THE HUMANITIES & CONTEMPORARY VALUES

The Rockefeller Foundation has a long history of support for the arts and the humanities. During the past decade, interest in the arts was maintained at a high level in large part because of the unprecedented vitality and variety of artistic expression. That same decade, however, brought to the fore in public and private life value issues and questions of judgment. In their 1974 policy statement, the trustees called for renewed attention to the humanities, along with an active arts program. "It is hoped," they wrote, "that encouragement may thus be given to the illumination that each brings to our understanding of human nature and destiny in the late 20th century world."

THE ARTS

Even as the arts are perceived as essential grammar of our vocabulary today, artists occupy a fragile position in American life. The goal of the Foundation's program is to make visible the importance of creative artists and the institutions that encourage them, to the development of a mature society. In 1977, the main thrusts (carried out through institutional grants, individual awards, and goal-oriented conferences) toward this goal were:

- Support for the creative artist;
- Assisting nonprofit arts institutions to solve the root problems—economic, administrative, and artistic—now afflicting them;
- Explorations of how to make the arts more central to general education;
- Explorations of the medium of television for work in the arts—a shared goal with the humanities.

ASSISTING THE CREATIVE PERSON IN THE ARTS

Today, as in the past, America's creative artists support themselves most often with work at best only tenuously related to their field. In the Foundation's opinion, it continues to be essential to enable gifted individuals to concentrate on their work relatively free from outside pressures.

The current RF Fellowship Program for Playwrights—for which the trustees appropriated another \$120,000 this year—includes two categories of annual awards. In the first, eight playwrights are selected on the basis of outside nominations and the recommendations of an independent committee of professionals to receive stipends of \$8,500 for a one-year period. That sum is administered by a producing theatre designated by the playwright with the agreement that he or she will spend a minimum of six weeks in residence. An additional \$3,000 is available to the theatre for preproduction costs of the playwright's work. (This sum will be increased to \$4,000 in 1978.) Women and minority group members

have consistently constituted a significant proportion of the award recipients.

The second category of awards consists of \$2,500 stipends to playwrights chosen by selected small, regional theatres, along with \$1,000 to the theatre for its related costs. This segment of the program emphasizes the discovery and nurturing of new artists outside the New York area.

1977 PLAYWRIGHT AWARDEES

THOMAS BABE, Darien, Connecticut: New York Shakespeare Festival, Public Theater
ELAINE JACKSON, New York: American Place Theatre, New York
ARTHUR KOPIT, Westport, Connecticut: Yale Repertory Theatre, New Haven
MIGUEL PINERO, New York: New York Shakespeare Festival, Public Theater
DAVID STARKWEATHER, New York: New York Theater Strategy
RONALD TAVEL, New York: New Playwright's Theatre, Washington, D.C.
LUIS VALDEZ, San Juan Bautista, California: Mark Taper Forum, Los Angeles
JOSEPH WALKER, Rockville, Maryland: American National Theatre and Academy,
New York

1977 REGIONAL THEATRE AWARDS

ASIAN AMERICAN THEATER WORKSHOP, San Francisco
BROOM STREET THEATER, Madison, Wisconsin
EAST-WEST PLAYERS, Los Angeles
FREDERICK DOUGLAS CREATIVE ARTS CENTER, New York
INTAR (Hispanic Theatre), New York
MAGIC THEATRE, Omaha
MAGIC THEATRE, San Francisco
MARK TAPER FORUM, Los Angeles
ORGANIC THEATER COMPANY, Chicago
SEATTLE REPERTORY THEATER, Seattle

During 1977 grants of \$20,000 each were made to ten universities for Rockefeller Foundation Fellowships in American Art History, sponsored jointly by the Arts and the Humanities programs. The purpose of these fellowships is to stimulate scholarly research in pre-20th century American art on the part of doctoral candidates enrolled at these universities:

BOSTON UNIVERSITY, Massachusetts
CITY UNIVERSITY OF NEW YORK, Graduate Center
COLUMBIA UNIVERSITY, New York
UNIVERSITY OF CALIFORNIA, Los Angeles
UNIVERSITY OF NORTH CAROLINA, Chapel Hill
UNIVERSITY OF DELAWARE, Newark
UNIVERSITY OF MICHIGAN, Ann Arbor
UNIVERSITY OF PENNSYLVANIA, Philadelphia
UNIVERSITY OF TEXAS, Austin
YALE UNIVERSITY, New Haven

A grant of \$150,000 was made to the John F. Kennedy Center for the Performing Arts in Washington, D.C. for awards in the first Kennedy Center-Rockefeller Foundation International Competition for Excellence in the Performance of American Music. This competition for pianists will be held during 1978. Toward the costs of preparing materials and mailings, including 100 sets of 49 musical scores by 39 composers to approximately 60 foreign countries, the Foundation made available \$50,000.

GRANT:

New Federal Theater

New York, New York

Woodie King, Jr., director of the New Federal Theater, is reviving three works by black writers of the WPA Writers Workshop for the 1977-78 seasons.

\$75,000

GRANTS IN AID (\$35,000 or under):

AGNES DE MILLE DANCE THEATER, New York, New York, for the creative work of its Heritage Dance Theatre.

\$15,000

AMERICAN CENTER FOR STUDENTS AND ARTISTS, Paris, France, for administrative costs.

\$15,000

MARY ELLEN BUTE, New York, New York, for a visual project concerned with Walt Whitman.

\$10,000

JOEL CHADABE, composer, Albany, New York, for development of a portable computer system for music composition.

\$10,000

COMPOSERS FOR PEOPLE, New York, New York, for further development of the Composers' Forum Project.

\$10,000

PHILIP GLASS, composer, New York, New York, for research in India for an opera, "Satygraha."

\$6,300

MAGIC THEATRE, San Francisco, California, for development of a new theatre piece entitled "INACOMA."

\$15,000

PENNSYLVANIA BALLET, Philadelphia, for creation of an interdisciplinary dance work.

\$22,500

PHILHARMONIC SYMPHONY SOCIETY OF NEW YORK, New York, for visual materials for a Conductors' Symposium.

\$1,500

WALKER ART CENTER, Minneapolis, Minnesota, for an exhibition documenting the work of Isamu Noguchi.

\$25,000

ROBERT WILSON, New York, New York, to enable him to devote time to his work in theatre.

\$5,000

YALE UNIVERSITY, New Haven, Connecticut, for use by the Yale Repertory Theatre, to enable Lee Breuer and Andrei Serban to be resident theatre artists at Yale Repertory Theatre.

\$12,600

ANTHONY ZERO, Santa Monica, California, for production of a film documenting the possibility of using hydrogen as a power source alternative for the internal combustion engine in automobiles. (Jointly with the Quality of the Environment program)

\$2,000

STRENGTHENING ARTS INSTITUTIONS

During the 1960's, The Rockefeller Foundation was privileged to participate in the founding of a number of cultural institutions—ranging from national cultural complexes to regional dance companies and theatre groups—which have made substantial and recognized contributions to the arts in America. Today, in the stringent economic climate of the 70's, we recognize that our principal effort vis-à-vis institutions must be directed toward the basic problems affecting existing institutions. With one or two exceptions—as notable as they are exceptional—grants were made to existing, and usually previously supported, organizations which show promise of widening their range of support.

GRANT:

Original Ballets Foundation

New York, New York

The Eliot Feld Ballet, one of America's major dance organizations, will continue to perform in the United States and abroad and plans to open a school that would link its professional activities to providing training for young dancers.

\$375,000

GRANTS IN AID (\$35,000 or under):

AMERICAN COUNCIL FOR THE ARTS, New York, New York, to enable it to participate in a United States Arts and Cultural Trend Data System.

\$25,000

ARTNEWS ARCHIVE FOUNDATION, New York, New York, for development of an archive of contemporary coverage of information relating to the visual arts.

\$12,000

JANETTE CARTER, Hiltons, Virginia, for establishment of a Carter Family Archive.

\$2,000

JUST ABOVE MIDTOWN, New York, New York, for development costs of a gallery.

\$5,000

PALACE OF ARTS AND SCIENCE FOUNDATION, San Francisco, California, for use by the EXPLORATORIUM for expansion of its arts programs.

\$25,000

PHELPS STOKES FUND, New York, New York, to assist Marta Vega in the further development of the Visual Arts Research and Resource Center Relating to the Caribbean.

\$10,000

MAKING THE ARTS MORE CENTRAL TO GENERAL EDUCATION

This was an active component of the Arts program during the four-year period 1973-1977, mainly concerned with helping to restructure teacher education in the arts, to train school administrators in the arts, and to augment arts organizations as education resources.

GRANT:

University of Southern California

Los Angeles, California

The USC School of Performing Arts, working with staff of the neighboring 32nd Street Elementary School, has developed an innovative approach to elementary education in which the arts serve as a central motivating force for learning.

\$70,000

GRANTS IN AID (\$35,000 or under):

ADELPHI UNIVERSITY, Garden City, New York, for a workshop for school administrators, "Education in Dialogue: A New Approach to Humanism."

\$10,000

AMERICAN COUNCIL FOR THE ARTS IN EDUCATION, New York, New York, for publication and distribution of its final report.

\$10,000

CLEVELAND AREA ARTS COUNCIL, Ohio, for an arts education development program related to teacher training.

\$8,500

FREDERICK BURK FOUNDATION FOR EDUCATION, San Francisco, California, for a study evaluating the academic achievement of children in the Arts Magnet primary school, Oakland, California.

\$1,500

HUNTER COLLEGE, THE CITY UNIVERSITY OF NEW YORK, for curriculum planning and development in the fine and performed arts.

\$27,500

NALANDA FOUNDATION, Boulder, Colorado, for use by the Naropa Institute for a teacher training program.

\$35,000

TELEVISION

In recent years, the Foundation has made some significant contributions to the experimental uses of video by artists and humanists; explorations continue on the uses of this powerful medium in relation to Foundation programs.

Of particular interest during 1977 was the development of a series of programs by artists concerned with non-crisis, cultural views of foreign cultures, and the preliminary planning for a North American-European Public Television Screening Conference, the goal of which is to increase the flow of cultural broadcasting between North America and a number of European countries.

GRANT:

Educational Broadcasting Corporation

New York, New York

The Television Laboratory at WNET/13, together with the Cable Arts Foundation, and other video artists, is developing a series of programs concerned with non-crisis, cultural reporting from abroad.

\$65,900

GRANTS IN AID (\$35,000 or under):

BAY AREA VIDEO COALITION, San Francisco, California, for a pilot program for independent video artists/producers in the San Francisco Bay area.

\$35,000

CABLE ARTS FOUNDATION, New York, New York, for development of an editing and post-production facility to serve video and television artists in the New York area.

\$34,000

CABLE ARTS FOUNDATION, New York, New York, for the final editing of video projects focusing on non-crisis aspects of foreign cultures.

\$18,000

RUSSELL CONNOR, New York, New York, for development of two video projects.

\$35,000

EDUCATIONAL BROADCASTING CORPORATION, New York, New York, for use by the Television Laboratory for fellowship assistance for a writer in residence.

\$18,000

EDUCATIONAL BROADCASTING CORPORATION, New York, New York, to enable Nam June Paik to be an artist in residence at the Television Laboratory.

\$7,500

ELECTRONIC ARTS INTERMIX, New York, New York, for further development of its post-production and editing facility.

\$23,000

LOUISE ETRA, video artist, New York, New York, for her creative work.

\$9,000

WILLIAM ETRA, video artist, New York, New York, for his creative work.

\$9,000

KANSAS CITY ART INSTITUTE, Missouri, for a video curriculum development project.	\$25,000
DOUG MICHELS, video artist, San Francisco, California, for documentation of the Dolphin Embassy expedition.	\$15,000
MUSEUM OF MODERN ART, New York, New York, for expansion of its video program.	\$20,000
NAM JUNE PAIK, New York, New York, for development of a video project.	\$27,000
PUBLIC BROADCASTING SERVICE, New York, New York, for the installation of the Digital Audio for Television.	\$10,000
ANTHONY D. RAMOS, video artist, New York, New York, to enable him to devote time to video projects.	\$8,000
BILL VIOLA, New York, New York, for development of a video project.	\$35,000
WASHINGTON COMMUNITY VIDEO CENTER, Washington, D.C., for distribution and audience expansion for <i>Televisions</i> magazine.	\$18,000
WGBH EDUCATIONAL FOUNDATION, Boston, Massachusetts, to enable Charles Johnson to be an artist in residence at the New Television Workshop.	\$15,000
ROBERT AND INGRID WIEGAND, New York, New York, for the filming of family life and culture in India.	\$13,500
JUDITH WILLIAMS, video artist, San Francisco, California, to complete a video tape on the evolution of the recorded image from photograph to video.	\$1,000

ROCKEFELLER FOUNDATION FELLOWSHIPS IN TRAINING IN MUSEUM EDUCATION

In the early 1970's as demand grew for greater public access to arts institutions, it became evident that there was a need for training programs which would blend the curatorial aspects of museum work with the sociological and educational aspects. The Foundation responded by devising, in 1972, a program of fellowships to train professionals in museum work. As of this year, 62 fellows have been trained and 39 have been placed with museums through the efforts of the four training institutions: The Metropolitan Museum of Art, New York; the Walker Art Center, Minneapolis; the Dallas Museum of Fine Arts; and the de Young Museum, San Francisco.

ROCKEFELLER FOUNDATION MUSEUM FELLOWS

Dallas Museum of Fine Arts (1977-78)

GINGER GEYER, Texas

MAUREEN MCKINNA, Louisiana

de Young Museum (1977-78)

ISRAEL ALCANTAR, California

NANCY CHAMBERS, California

MICHAEL FREED, California

CAROL HASEGAWA, Hawaii

PHILIP HART, Nevada

NANCY OLEXO, California

WILLIAM SANDOVAL, New Mexico

HIROSHI SASAKI, California

KATHY ZIMMERER, California

Metropolitan Museum of Art (1976-77)

CAROL CONOVER, Washington, D.C.

ESTELLA PATE, Arizona

CHARLES STEINER, New York

GYLBERT COKER, New York

GARY JOHNSON, New York

Walker Art Center (1976-77)

MICHAEL R. KLEIN, New York

A SPECIAL PROJECT: THE RECORDED ANTHOLOGY OF AMERICAN MUSIC, A BICENTENNIAL PROJECT

This major undertaking, in the planning for several years, came to fruition in 1976. New World Records, a nonprofit recording organization with its own board of trustees and professional staff, is supervising the production, manufacture, and distribution of a collection of one hundred records tracing the social and cultural history of the United States through its music. Seven sets of ten discs have now been distributed to some 6,000 institutions—all the country's major music schools, music libraries, educational FM and public broadcasting stations, and USIS centers throughout the world—chosen because they will provide the widest possible access to those for whom the records will be significantly useful. By the fall of 1978, the remaining three sets of discs will be made available. The collection, produced at an eventual cost of almost four million dollars, is the Foundation's bicentennial gift to the American people. In 1977, \$1,300,000 was appropriated by the trustees for the project.

In addition, in order to help New World Records prepare for the continued recording of American music after the Bicentennial project, the Foundation made available \$80,000 toward a future development reserve for general operating costs, this sum to be matched by contributions from other sources.

THE HUMANITIES AND CONTEMPORARY VALUES

An emphasis on contemporary human and social values is the overarching concern of the Foundation's work in the humanities. The program encourages humanists to deepen our understanding of the past, assess the ideals and goals of the world in which we live, explore ethical values, and preserve and revitalize our American cultural heritage. The Foundation hopes to encourage the exploration of humanistic problems in these broad areas:

- The examination of values, beliefs, and ideas of contemporary society;
- The encouragement of studies of the cultural heritage and identity of America;
- Attempts to reach neglected audiences, in part through television and film, and to tap new sources of humanistic creativity.

VALUES AND IDEAS

The Foundation's interest here is in the work of people of unusual intellectual capacity engaged in clarifying fundamental goals and values inherent in contemporary life. Such men and women are confined to no single country or tradition. Because collaboration between various disciplines is often required in such investigations, Foundation support is likely to be given to interdisciplinary projects.

GRANTS:

American Council of Learned Societies

New York, New York

A fellowship program enables graduate students in various humanistic disciplines to obtain language training and allied skills necessary for eventual participation in reciprocal scholarly exchanges with the Soviet Union and Eastern Europe carried out through the International Research and Exchanges Board.

\$150,000

Center for Advanced Study in the Behavioral Sciences

Stanford, California

The Center was founded in 1954 to promote the development of the behavioral sciences and those aspects of the physical and biological sciences and the humanities related to behavior. Foundation funding will enable the Center to diversify the representation of its fellows, by providing support for young, minority group, and women scholars in the humanities.

\$120,000

Columbia University*New York, New York*

A long research project on the relation of expressive behavior to culture and society is nearing completion. Through worldwide comparative surveys of music, speech, and movement, the researchers have explored the parallel evolution of culture and expressive communication, and developed a system to classify human culture by distinctive patterns of song, dance, and speech.

\$105,000

Cornell University*Ithaca, New York*

The Humanities, Science, and Technology unit at Cornell is responsible for substantial research on the relationship of humanistic disciplines to science and technology. New curricula that can serve as models elsewhere are being developed, and methods for collaborative work among humanists, scientists, and technologists are evolving.

\$88,000

Graduate Theological Union*Berkeley, California*

The Graduate Theological Union plans to create a Center for the Study of New American Religious Movements, which is expected to become a significant resource for scholars and others interested in the study of these movements and their implications for modern society.

\$100,700

Institute of Society, Ethics and the Life Sciences*Hastings-on-Hudson, New York*

The Institute's special program in the humanities, inaugurated in 1972, brings a humanistic perspective to interdisciplinary research on ethical and value questions arising out of advances in science, medicine, and technology.

\$160,000

GRANTS IN AID (\$35,000 or under):

AMERICAN ACADEMY OF ARTS AND SCIENCES, Boston, Massachusetts, for a workshop on love and work in adulthood, directed by Dr. Erik Erikson and Dr. Neil Smelser.

\$15,000

ASSOCIATION OF INDIANS IN AMERICA, New York, New York, for a conference on the future of Indian (South Asian) studies in the United States.

\$2,500

CHULALONGKORN UNIVERSITY, Bangkok, Thailand, toward the costs of the Seventh Annual Conference of the International Association of Historians of Asia.

\$10,000

COLUMBIA UNIVERSITY, New York, New York, for establishment of the annual Lionel Trilling Seminars.

\$10,000

COUNCIL ON LIBRARY RESOURCES, Washington, D.C., for development of a plan to establish a National Periodicals Center.

\$15,000

GADJAH MADA UNIVERSITY, Yogyakarta, Indonesia, for establishment of an Institute of Indonesian Cultural Studies.

\$10,000

NATIONAL ACADEMY OF SCIENCES, Washington, D.C., in support of U.S. participation in the XVth International Congress and General Assembly of the Division of the History of Science under the auspices of the International Union of the History and Philosophy of Science.

\$10,000

MIRIAM MCNAIR SCOTT, San Francisco, California, and CAROL STRATTON, Hartland Four Corners, Vermont, for research and related expenses for the writing of a comprehensive history of art in Thailand.

\$10,000

UNIVERSITY OF CALIFORNIA, Berkeley, for use by its Regional Oral History Office for an oral history project on John and Caroline Service, "Two Views of China and the State Department, 1935-1962."

\$9,100

UNIVERSITY OF CALIFORNIA, Berkeley, for use by the Department of South and Southeast Asia Studies for programs on Buddhism and contemporary intellectual movements in Southeast Asia.

\$4,500

UNIVERSITY OF KENT, Canterbury, England, for a conference on religion, anti-slavery, and reform.

\$13,100

UNIVERSITY OF MARYLAND, College Park, for use by the Conference Group in Women's History for an international conference on women's history.

\$14,828

UNIVERSITY OF MINNESOTA, Minneapolis, for a lecture series relating to an art exhibit on the "Golden Age" of Russian culture.

\$10,000

UNIVERSITY OF SOUTHERN CALIFORNIA, Los Angeles, for a conference sponsored by its Center for the Humanities, "Towards a Theory of the Humanities."

\$12,500

THOMAS G. WINNER, Cambridge, Massachusetts, for research on the semiotics of culture.

\$21,000

WOMEN'S RESEARCH INSTITUTE OF WISCONSIN, Madison, for a conference, "The Equitable Pursuit of Knowledge: Is it Possible?"

\$10,000

LAURENCE WYLIE, Cambridge, Massachusetts, for two projects related to the study of French language, behavior, and culture.

\$25,000

AMERICA'S CULTURAL HERITAGE AND THE QUEST FOR AMERICAN IDENTITY

Many of America's people and regions are inadequately represented in the national consciousness. With encouragement to be broader in their sympathies and outlook, scholars can enrich our understanding of our nation, draw upon overlooked cultural resources, and enhance the country's pride in its diversity as well as its unity.

GRANTS:

Ethnic Archives of American Immigrant Groups

In 1977 the trustees appropriated \$250,000 for two years for a program of grants to universities and other institutions to support the development of ethnic archives of American immigrant groups. The following allocations were made during the first year of the appropriation:

CALIFORNIA STATE COLLEGE, Sonoma, for a regional ethnic archive project focusing on six counties in the northern San Francisco Bay area.

\$31,500

CENTER FOR MIGRATION STUDIES, Staten Island, New York, for an archival development project which includes the microfilming and cataloging of nine major collections of Italian-American immigrants.

\$30,430

GUSTAVUS ADOLPHUS COLLEGE, Saint Peter, Minnesota, toward archival development in connection with its Scandinavian Ethnic Heritage Studies program.

\$25,100

KENT STATE UNIVERSITY, Ohio, for the collection and cataloging of ethnic materials of the Baltic peoples from Finland, Estonia, Latvia, and Lithuania.

\$35,000

University of Kentucky

Lexington, Kentucky

The University has established an Appalachian Center comprised of an interdisciplinary institute and an interdepartmental program of Appalachian studies, research, and analysis.

\$125,000

GRANTS IN AID (\$35,000 or under):

AMERICAN NATIONAL THEATRE AND ACADEMY, New York, New York, for research and scripting relating to a television series entitled "Promised Land."

\$24,000

ARKANSAS CONSUMER RESEARCH, Little Rock, to enable Dr. Ralph Desmarais to study the impact of agribusiness and emigration on rural culture in Arkansas.

\$22,100

ANN BANKS, Cambridge, Massachusetts, to enable her to inventory and edit the manuscripts collected by the Federal Writer's Project.

\$15,700

CHINATOWN PLANNING COUNCIL, New York, New York, for an exploration of current patterns of Chinese-American cultural assimilation.

\$35,000

COLUMBIA UNIVERSITY, New York, New York, for a conference, "From Religious Toleration to Religious Freedom."

\$18,250

CONSUMERS UNION FOUNDATION, Mount Vernon, New York, for its Center for the Study of the Consumer Movement.

\$25,000

GEORGE MASON UNIVERSITY, Fairfax, Virginia, for videotaped interviews of former participants in the Federal Theatre Project.

\$7,000

JAMES A. HALSTED, Hillsdale, New York, for completion of a study of the career of Harry L. Hopkins and the relationship of his health problems to his public career.

\$10,000

LEARNING DESIGN ASSOCIATES, Cambridge, Massachusetts, for the planning of an educational program and film series, "The Making of America."

\$25,000

DR. EDWARD LURIE, Newark, Delaware, for preparation of a cultural history of American science from 1820 to 1945.

\$15,000

ANN PASANELLA, New York, New York, for a study of the life of Paul Lazarsfeld and his contributions to American intellectual life.

\$11,000

PENNSYLVANIA STATE UNIVERSITY, University Park, for use by Roy C. Buck for completion of the study, "The Impact of Tourism on an Indigenous Folk Culture: The Case of the Amish in Lancaster County."

\$10,000

SOCIETY FOR FRENCH HISTORICAL STUDIES, Hartford, Connecticut, for a colloquium, "Two Hundred Years of Franco-American Relations."

\$8,000

SOUTHERN UNIVERSITY, Baton Rouge, Louisiana, for use by Henry Cobb for the writing of the history of black American graduate schools.

\$21,050

SUN VALLEY CENTER FOR THE ARTS AND HUMANITIES, Idaho, toward the costs of the initial planning and policy meeting of the advisory board for the Institute of the American West.

\$7,500

DIANA TRILLING, New York, New York, for preparation of a book on American intellectual history from the 1930's to the present.

\$35,000

UNIVERSITY OF ARIZONA, Tucson, for use by Robert P. Browder for research for a study of Lewis Williams Douglas and his contributions to American public life.

\$24,200

UNIVERSITY OF MARYLAND, College Park, for a study directed by Herbert Gutman and Ira Berlin on the history of America's first industrial revolution.

\$22,400

UNIVERSITY OF PENNSYLVANIA, Philadelphia, for development of educational materials for the Frankford community history project.

\$15,000

UNIVERSITY OF SOUTHWESTERN LOUISIANA, Lafayette, for establishment of a Center for Acadian and Creole Studies.

\$16,300

UNIVERSITY OF WISCONSIN, Madison, for use by Michael Petrovich for research and editing of *A History of the Serbs in the United States*.

\$1,600

URBAN APPALACHIAN COUNCIL, Cincinnati, Ohio, for its Appalachian Community Videotape Service.

\$23,500

PERRY WALKER, Memphis, Tennessee, for a photographic and oral history of the rural black church in America.

\$10,000

JOSEPH ZACEK, Albany, New York, for the writing of a history of the Czechs and Slovaks.

\$16,500

PUBLIC HUMANITIES: NEW AUDIENCES AND NEW SOURCES OF CREATIVITY

The Foundation hopes to reach neglected audiences by integrating the humanities into education and daily living, thereby building a sense of human dignity and tapping new sources of creative energy. In addition, the Foundation hopes to encourage efforts to help humanists utilize film and television.

GRANTS:

Middlebury College

Middlebury, Vermont

In the summer of 1978 the Bread Loaf School of English will introduce a program aimed at strengthening the teaching skills of high school teachers of English in rural areas where students are relatively isolated from a variety of educational and cultural resources.

\$100,000

Montclair State College

Upper Montclair, New Jersey

The Institute for the Advancement of Philosophy for Children, established in 1974, has designed a philosophy curriculum for grades five through eight which is being used successfully in several schools. The Foundation grant will support the research and curriculum preparation necessary to expand the program to cover kindergarten through grade 12.

\$120,000

GRANTS IN AID (\$35,000 or under):

ARIZONA STATE UNIVERSITY, Tempe, for a Southwest Labor Studies Conference.	\$2,000
ASPEN INSTITUTE FOR HUMANISTIC STUDIES, Colorado, for the planning and administrative costs of a special executive seminar on women and men in a changing society.	\$15,000
BENTLEY COLLEGE, Waltham, Massachusetts, for a conference on business ethics.	\$10,000
CARNEGIE-MELLON UNIVERSITY, Pittsburgh, Pennsylvania, for a project to develop case studies and conferences on health, education, and welfare in connection with its program in Applied History and Social Science.	\$35,000
KENNETH FINK, New York, New York, toward the costs of a film, "Only a Miner."	\$5,000
MARK GELBER, Saratoga Springs, New York, for research and preparation of a book on humanities-based nontraditional education in prisons.	\$12,500
HIGHER EDUCATION RESEARCH INSTITUTE, Los Angeles, California, for a study on the non-job-related benefits of college education for graduates of humanities programs.	\$24,500
INDIANA UNIVERSITY, Bloomington, for a conference sponsored by its Poynter Center on American Institutions, "The Politics of the Humanities."	\$6,835
MODERN LANGUAGE ASSOCIATION OF AMERICA, New York, New York, for the creation of five task forces on the status and problems of foreign language studies in the United States.	\$13,500
UNIVERSITY OF CHICAGO, Illinois, for use by its Center for Policy Study for two conferences on the effect of language on American public policy.	\$10,000
UNIVERSITY OF THE STATE OF NEW YORK, Albany, for a model program of alternative careers for humanists, "Humanists in Business," involving graduate students in the humanities under the direction of Dorothy G. Harrison and Ernest J. May.	\$35,000
WAKE FOREST UNIVERSITY, Winston-Salem, North Carolina, for research and development costs of a television series on environmental crises, "The Last Hour of the Billionth Year." (Jointly with the Quality of the Environment, International Relations, Population and Health, and Conquest of Hunger programs)	\$25,000

ROCKEFELLER FOUNDATION FELLOWSHIPS IN THE HUMANITIES

This program of individual awards, established in 1974, is designed to support the production of works of humanistic scholarship and reflection intended to illuminate and assess the values of contemporary society. In 1977 the trustees appropriated \$600,000 for continuation of the program, and the following awards

were made at the recommendation of an outside panel composed of distinguished humanists.

SYDNEY E. AHLSTROM, professor of American history and modern religious history, Yale University—modern romanticism as a religious revolution.

LESLEY W. BRILL, assistant professor of English, University of Colorado—meaning in photography.

ORVILLE VERNON BURTON, assistant professor of history, University of Illinois, Urbana—race relations in Edgefield County, South Carolina in the 19th and 20th centuries: a case study.

WILLIAM H. CHAFE, associate professor of history, Duke University—coming of age: a social history of the American people, 1940-1970.

GERALDINE JONCICH CLIFFORD, professor of education, University of California, Berkeley—the American tradition of popular schooling, 1800-1900.

RICHARD CRITCHFIELD, journalist and associate, American Universities Field Staff—cultural change in rural Asia, Africa and Latin America: a study of representative villagers.

ELIZABETH DALTON, assistant professor of English, Barnard College—fiction and psychoanalysis: a study of four novels.

RICHARD T. DE GEORGE, University Distinguished Professor of Philosophy, University of Kansas—authority and America: a philosophical analysis.

STEPHEN DONADIO, assistant professor of English and comparative literature, Columbia University—Henry David Thoreau: a critical and intellectual biography.

VIRGINIA G. DRACHMAN, postdoctoral scholar, School of Public Health, University of California, Los Angeles—women doctors and women's health, 1895-1935.

ELLEN C. DUBOIS, assistant professor of American studies and history, State University of New York, Buffalo—the sexual revolution: a social history of ideas, 1890-1920.

STEPHEN ELLENBURG, associate professor of political science, Mount Holyoke College—a political philosophy of anarchism.

CAROL C. GOULD, assistant professor of philosophy, Swarthmore College—toward a redefinition of democracy: political democracy, pluralism and the concept of human freedom.

WILLIAM A. GREEN, professor of history, Holy Cross College—a history of the Atlantic slave trade.

WILLIAM HARMON, associate professor of English, University of North Carolina, Chapel Hill—T. S. Eliot's use of the social sciences.

ALEXANDER E. HARRIS, visiting lecturer in documentary photography, Duke University—the Alaskan Eskimo in a time of change: a photographic study.

ALTON HORNSBY, JR., professor of history, Morehouse College—the public education of blacks in Atlanta: from segregation to re-segregation under black control.

GRAHAM HUGHES, professor of law, New York University—comparison of American and European criminal trial procedures: adversarial contest or public inquiry.

GERALD JONAS, writer, New York, New York—recent scientific investigations of the human brain as a coding mechanism.

STEPHEN KERN, assistant professor of history, Northern Illinois University—conceptions of time and space in Europe and America, 1890-1914.

CLARA SUE KIDWELL, associate professor of Native American studies, University of California, Berkeley—personal and group power in American Indian societies.

BRUCE KING, professor of English, Ahmadu Bello University, Nigeria—the emerging national literatures of former British colonies in Africa and the West Indies.

GERTRUD LENZER, associate professor of sociology, Brooklyn College, City University of New York—division of labor: historical development of the differentiation of intellectual disciplines.

FRANCIS L. LOEWENHEIM, professor of history, Rice University—the international vision of Harry S. Truman.

KARL WILHELM LUCKERT, assistant professor of humanities, Northern Arizona University and research associate, Museum of Northern Arizona—the relationship of Ajilee, a Navajo healing ceremonial, to the Navajo value system.

JACOB NEEDLEMAN, professor of philosophy, San Francisco State University—the impact of new religious groups on established religions and institutions in the United States.

LILLIAN S. ROBINSON, associate professor of American studies, State University of New York, Buffalo—the impact of television on aspects of contemporary culture.

JOHN PAUL RUSSO, assistant professor of English, University of Chicago—a critical biography of I. A. Richards, the literary critic and linguistics scholar, and his place in modern criticism and intellectual history.

PAUL H. SHEPARD, Avery Professor of Natural Philosophy and Human Ecology, Pitzer College and the Claremont Graduate School—origins of American perceptions of nature.

RICHARD S. SLOTKIN, professor of English, Wesleyan University—the myth of the frontier in industrial America, 1860-1970.

THOMAS A. SPRAGENS, JR., associate professor of political science, Duke University—the irony of liberal reason: the impact of modern epistemology on political theory.

DAVID THORBURN, associate professor of literature, Massachusetts Institute of Technology—American television as a dramatic medium.

WILLIAM H. VAN VORIS, professor of English, Smith College—oral history of the effects of violence on the families of terrorists in Northern Ireland.

RONALD G. WALTERS, associate professor of history, Johns Hopkins University—popular entertainment in the United States in the 19th century.

MICHAEL ZUCKERMAN, associate professor of history, University of Pennsylvania—community and character in early America.

QUALITY OF THE ENVIRONMENT

Two major worldwide developments will continue to have significant bearing on environmental quality in the United States and other nations. The first is the broad public realization, resulting primarily from the energy crisis, that certain natural resources exist in finite quantities and are concentrated in specific regions of the world. This limited, uneven distribution, combined with economic and political realities, has led the U.S. to a policy of expanded exploitation of its own natural resources and of encouraging their conservation through more efficient use.

A second development which has a significant impact on the environmental movement is the economic outlook. More than ever before the costs of environmental improvements and their impact on national and local economies are brought under scrutiny. The public and their representatives have had to make hard choices concerning the value of environmental improvement regulations and programs relative to numerous other demands on public and private dollars. In many ways the desire to maintain environmental quality has matured under this pressure to become an integral component of our public and private objectives even in direct competition with other public and private goals.

The goal of the Foundation's program is to help develop an improved understanding of and solutions to important environmental problems and, in so doing, to assist in the creation of institutional capabilities to deal with them and to build a better base for public understanding of environmental issues.

Work toward this goal is carried out through six thrusts:

- Assisting universities and other institutions which, in cooperation with state and federal environmental agencies, undertake research on specific environmental problems having significant biological and social components;
- Testing alternative approaches to comprehensive, integrated, regional environmental analysis and management;
- Developing environmentally attractive alternatives for the management of major pollutants, particularly waste nutrients, pesticides, and heavy metals;
- Assisting with the development and testing of new, environmentally improved approaches to natural resources management;
- International collaboration on environmental problems;
- Developing an improved understanding of the nature and sources of public perceptions of environmental problems.

CENTERS FOR INTERDISCIPLINARY STRENGTH

One of the earliest strategies of this program, and a continuing one, is to assist in the building of centers of interdisciplinary strength which can address major national and regional environmental problems in comprehensive ways.

The inherent complexity of our environment and of the problems we face are becoming better understood. We have learned that most environmental problems require the effective collaboration of several disciplines for their full understanding and resolution.

Another basic strategy of this thrust is to encourage the development of close working relationships between research organizations such as universities and those public action agencies which should be the beneficiaries and utilizers of research results. The Foundation and its officers often play a direct role in establishing such relationships, in some cases making the appropriate initial contacts with action agencies.

GRANTS:

Massachusetts Institute of Technology

Cambridge, Massachusetts

A new research and training program will address both technical and institutional problems in an effort to develop better methods for selecting the indices of environmental impact, for predicting impact, and for assessing public preferences and trade-off options.

\$103,106

SIAM Institute for Mathematics and Society

Philadelphia, Pennsylvania

The SIAM Institute, in collaboration with Stanford and Columbia Universities, has initiated a research and graduate training program which is developing new and more effective statistical methodologies specifically designed to more accurately determine the relationships between environmental contamination and human health.

\$65,000

University of Washington

Seattle, Washington

Over the past four years, the Office of Environmental Mediation has demonstrated that costly delays and litigation can be avoided or substantially reduced through the newly developed environmental mediation process. The Office now intends to broaden its range into other western states, and to deal with major issues it has not previously confronted.

\$64,000

GRANT IN AID (\$35,000 or under):

STANFORD UNIVERSITY, California, for research by its Environmental Law Society.

\$6,000

REGIONAL ENVIRONMENTAL ANALYSIS AND MANAGEMENT

Since the inception of the program, concerted efforts have been made to determine the effectiveness and utility of a comprehensive integrated approach to environmental management within defined geographical regions. Given the interrelated characteristics of most major environmental problems and the desirability of research and development strategies which can be broadly applied, we have believed that effective coordination of special talents and experience in universities and research institutions might be more effectively marshaled for problem resolution and development of alternative solutions having regional rather than local application. Several tests of this strategy have been undertaken.

Currently this objective is focused on the establishment of the Institute for Policy Research associated with the Western Governors' Policy Office. The difficulties of gathering and coordinating expert talents and funds for such efforts are not underestimated. The potential advantages, however, of more effectively addressing very complex regional environmental problems and concurrently strengthening regional institutional capabilities argue strongly for the regional approach.

GRANTS:

Institute for Policy Research

Denver, Colorado

The Institute for Policy Research encourages cooperation between universities of the Rocky Mountain region and appropriate federal and state agencies to achieve resolution of critical environmental problems shared by or common to the states in this region.

\$60,700

Utah State University

Logan, Utah

The Foundation is continuing support for the establishment and operation of the Institute for Policy Research associated with the Western Governors' Policy Office.

\$87,000

GRANTS IN AID (\$35,000 or under):

CITY PLANNING DEPARTMENT FUND, New York, New York, for research on a new zoning code for New York City.

\$15,000

CORNELL UNIVERSITY, Ithaca, New York, for an environmental impact statement assessment program.

\$21,000

INSTITUTE ON MAN AND SCIENCE, Rensselaerville, New York, for an investigation of the economics of environmental impact statements.

\$20,000

REGIONAL PLAN ASSOCIATION, New York, New York, for research on the future of automobile travel.

\$25,000

SOUTHERN GROWTH POLICIES BOARD, Research Triangle Park, North Carolina, for a scholar-in-residence program focused on alternative southern growth policies.

\$18,000

UNIVERSITY OF COLORADO, Boulder, for research on a program of environmental conciliation in the Rocky Mountain region.

\$7,400

UNIVERSITY OF WEST FLORIDA, Pensacola, for research on institutional innovations for regional energy policy development.

\$5,000

APPROACHES TO CRITICAL PROBLEMS

The strategy of supporting the development of ecologically sound approaches to pest control and to the management of waste materials, heavy metals, and synthetic chemicals, aims directly at improving our health and welfare. Problems being addressed are associated with economic development and a technological society's tendency to overburden natural ecosystems.

GRANTS:

Cornell University

Ithaca, New York

Researchers at the New York State Agricultural Experiment Station, Geneva, who made the first discovery of anti-juvenile hormones, are now working with tropical as well as temperate zone plants in their efforts to further develop safe and insect specific pesticides.

\$50,000

Harvard University

Boston, Massachusetts

Through its Interdisciplinary Programs in Health, Harvard seeks to attract and train for the environmental health field a nucleus of postdoctoral fellows and mid-career professionals with strong backgrounds in natural or social sciences

\$240,000

Resources for the Future

Washington, D.C.

Resources for the Future is conducting an in-depth analysis of the environmental and economic consequences of increased U.S. agricultural produc-

tion, with recommendations as to alternative policies for mitigating predictable adverse effects. (Jointly with the Conquest of Hunger program)
\$133,000

University of Washington

Seattle, Washington

University scientists are examining alternative uses of juvenile hormones as safe and insect specific pesticides.

\$28,500

GRANTS IN AID (\$35,000 or under):

CHARLES F. KETTERING FOUNDATION, Dayton, Ohio, for use by the Charles F. Kettering Research Laboratory, Yellow Springs, Ohio, for research to develop an inexpensive, simple, and compact system of producing nitrogen fertilizer from air using on-farm energy sources such as wind, solar or water power. (Jointly with the Conquest of Hunger program)

\$35,000

PENNSYLVANIA STATE UNIVERSITY, University Park, for research on the further development of practical procedures for testing noise susceptibility.

\$25,000

PENNSYLVANIA STATE UNIVERSITY, University Park, for studies on the role of insect pheromones in the biology of insect pests.

\$25,000

STATE UNIVERSITY OF NEW YORK, COLLEGE OF ENVIRONMENTAL SCIENCES AND FORESTRY, Syracuse, for studies on the isolation, identification, and determination of the mode of action of the various components of the insect trail pheromone.

\$10,000

UNIVERSITY OF NEW BRUNSWICK, Fredericton, Canada, for studies on mechanisms which underly the insect's responses to its sex pheromones.

\$11,930

URBAN ENVIRONMENT CONFERENCE FOUNDATION, Washington, D.C., for preparation of a manual on the unequal burden of environmental disease on urban dwellers.

\$15,000

NATURAL RESOURCES MANAGEMENT

An increasing number of environmental problems being brought to the attention of the Foundation are directly associated with expanding demand for natural resources. Earlier or existing practices of extraction and utilization of minerals, fossil fuels, forest products, and related land use practices have placed unnecessary and, in some instances, harmful burdens on the natural environment and human health. The Foundation is selectively supporting research which can assist in formulating effective resource management strategies designed to minimize environmental and social disruption and adverse effects on human health.

GRANTS:

Associated Universities

Upton, New York

In cooperation with the Town of Brookhaven, Long Island, Brookhaven National Laboratory is studying a technique in which sewage effluent filters through a series of marshes.

\$250,000

Georgetown University

Washington, D.C.

The National Coal Policy Project of the Center for Strategic and International Studies brings together leaders from industry and environmental organizations to consider and, it is hoped, to reach a practical accord on the controversial issues associated with further development of U.S. coal resources.

\$50,000

Hebrew University

Jerusalem, Israel

Researchers at the University's Environmental Health Laboratory have now demonstrated that health hazards associated with the use of partially treated, nondisinfected wastewater for irrigation may be greater than supposed. Studies are continuing on the mechanism of infection and on procedures for reducing the health risk.

\$100,000

Marine Biological Laboratory

Woods Hole, Massachusetts

The Laboratory's scientists are studying the physiology of East Coast wetlands dominated by *Spartina* (marsh grass) in order to develop an ecosystem model which can be used to predict the response of a salt marsh to environmental change.

\$176,000

Massachusetts Audubon Society

Lincoln, Massachusetts

Wetlands are essential to the hydrologic cycle, serve as wildlife habitats, insure adequate water supplies, and are crucially important in flood control. The Audubon Society is developing technical and educational materials and consultative services for community organizations designated to manage wetlands areas throughout New England.

\$34,000

Nature Conservancy

Arlington, Virginia

The Conservancy is a national conservation organization dedicated to

identifying, protecting, and managing natural areas and the diversity of life they support. Its recently initiated State Natural Heritage Program provides a framework within which government agencies and private groups can cooperate at the state level.

\$100,000

Rand Corporation

Santa Monica, California

At the request of the State Assembly, the Rand Corporation will examine the water supply situation in California, assess the efficiency of water use throughout the state, and recommend policy alternatives for curbing demand and increasing use efficiency.

\$100,000

GRANTS IN AID (\$35,000 or under):

BEDFORD COLLEGE, UNIVERSITY OF LONDON, England, for research on changes in Colombian rainforest soils due to agricultural development.

\$1,500

BRONX FRONTIER DEVELOPMENT CORPORATION, New York, for development and initiation of a combined composting and gardening program leading to the enhancement of the South Bronx area.

\$25,000

CALIFORNIA INSTITUTE OF TECHNOLOGY, Pasadena, for research examining alternatives for disposal of sewage sludge using Los Angeles as a case study.

\$25,000

CANADIAN ARCTIC RESOURCES COMMITTEE, Ottawa, Canada, for publication of reports resulting from their research on Canadian northern resource and land use policy.

\$5,000

DIVISION OF HEALTH, STATE OF FLORIDA, Tampa, for research on the use of forested wetland wastewater reclamation sites for the attenuation or removal of viruses from municipal effluents.

\$18,215

HEIDELBERG COLLEGE, Tiffin, Ohio, for research on the management of agricultural nutrient runoff in the Sandusky River watershed.

\$25,000

INFORM, New York, New York, for preparation and distribution of an educational handbook on environmental planning in the land development industry.

\$3,884

RESOURCES FOR THE FUTURE, Washington, D.C., for a forum on institutional considerations in resource and environmental management.

\$15,200

STATE UNIVERSITY OF NEW YORK, COLLEGE OF ENVIRONMENTAL SCIENCES AND FORESTRY, Syracuse, for research on emerging land use concepts such as transfer of development rights.

\$4,500

YALE UNIVERSITY, New Haven, Connecticut, for development and initiation of a cooperative research program on improved strategies for the management of the New England forest.

\$25,000

INTERNATIONAL COLLABORATION

A growing pool of expertise and knowledge is being developed at selected institutions throughout the world which can be useful to other nations in research on their environmental problems and in the training of their nationals.

The Foundation has made contact with many international leaders of environmental programs and with scientists engaged in research on problems of global significance. Modest, nongovernmental funding may be particularly valuable in convening multinational expertise for transferring information and in devising cooperative research on old and new problems.

GRANTS:

International Council of Scientific Unions

Paris, France

Two postdoctoral fellows are working to develop the international programs of the Scientific Committee on Problems of the Environment.

\$100,000

Massachusetts Institute of Technology

Cambridge, Massachusetts

The Institute's Center for International Studies is engaged in analysis of international procedures for dealing with global environmental problems such as possible ozone depletion and changes in the earth's albedo. (Jointly with the International Relations program)

\$50,000

University of East Anglia

Norwich, England

The University's Climatic Research Unit is engaged in a comparison of historical data with proxy data in order to produce an improved and extended series of world weather maps for the past 1,000 years.

\$98,000

University of Toronto

Toronto, Canada

University of Toronto investigators are analyzing and assessing public participation in the management of the Great Lakes using the International

Joint Commission as a case study. (Jointly with the International Relations program)

\$9,250

University of Wisconsin

Madison, Wisconsin

The University of Wisconsin has begun a two-year study of water quality management in the Great Lakes and implications for U.S.-Canadian cooperation. Investigations are focused on two areas: nutrients and eutrophication, and petroleum production. (Jointly with the International Relations program)

\$30,000

GRANTS IN AID (\$35,000 or under):

INSTITUTE OF SOUTHEAST ASIAN STUDIES, Singapore, for a study, "Frontiers for Development: The Southeast Asian Seas."

\$1,900

INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS, Paris, France, for use by its Scientific Committee on Problems of the Environment, for the preparation of a major publication on ecotoxicology.

\$8,000

INTERNATIONAL INSTITUTE FOR APPLIED SYSTEMS ANALYSIS, Laxenburg, Austria, for research on estimating water demand and wastewater discharge in agriculture and industry.

\$18,000

JOHNS HOPKINS UNIVERSITY, Baltimore, Maryland, for travel costs associated with geologic and hydrolic research on the Brahmaputra River.

\$3,000

RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY, New Brunswick, for an objective evaluation of the United Nations Environment Programme's Mediterranean Action Plan.

\$4,000

SOLAR CLIMATIC RESEARCH INSTITUTE, Cambridge, Massachusetts, for research related to solar activity.

\$15,000

UNIVERSITY OF TORONTO, Canada, for initiation of a research program on global environmental monitoring.

\$30,000

ENVIRONMENTAL PERCEPTIONS

Foundation officials believe that an improved understanding of the nature and sources of public perceptions of environmental problems, through careful, sharply focused opinion studies, is vital for the achievement of sustained, mature interest in environmental affairs. The results of studies funded this year by the

Foundation should assist many agencies and officials in identifying major gaps in public understanding and enable public agencies to pursue activities leading to a better informed citizenry.

GRANTS IN AID (\$35,000 or under):

FAIRFIELD UNIVERSITY, Connecticut, for use by its Teacher Center, for establishment of a branch of the Watershed Heritage Project as a model environmental education program in the State of Connecticut.

\$10,000

HARVARD UNIVERSITY, Cambridge, Massachusetts, for use by its Graduate School of Design, for a series of environmental development round table discussions.

\$9,000

STATE UNIVERSITY OF NEW YORK, Buffalo, for research on the further development and assessment of a model process for incorporating public perceptions of environmental quality and problems into local and regional environmental planning.

\$35,000

ROCKEFELLER FOUNDATION FELLOWSHIPS IN ENVIRONMENTAL AFFAIRS

One final strategy which is employed in nearly all activities of the Quality of the Environment program is to provide opportunities for highly qualified individuals to receive training in environmental affairs.

The most recent direct use of this strategy is through Rockefeller Foundation Fellowships in Environmental Affairs approved by the trustees in 1974.

These awards are intended to enable highly qualified individuals to broaden their knowledge and enhance their capacity for leadership in the area of environmental affairs. Thus far, 70 fellowship awards—for periods of up to one year—have been made. In 1977, \$300,000 was appropriated by the trustees for continuation of the program and the following 21 awards were made:

RICHARD ANDREWS, associate professor, School of Natural Resources, University of Michigan—to identify principal formative influences on environmental policy formulation in the United States, and to evaluate the significance of these influences over the course of American history.

CAMILLA AUGER, president, Tosco Foundation—to conduct research on the alternatives available for more effective federal/state relations on energy policy.

GARY BELL, recent graduate of the Harvard School of Design—a renewal of his fellowship to enable him to develop a Natural Resources Inventory Kit.

MATTHEW BERMAN, recent Ph.D. graduate in economics from Yale University—to conduct research on the relationship between employment and environmental protection in Alaska, while associated with Trustees for Alaska, a nonprofit public interest group.

BARUCH BOXER, professor of geography and director of the International Environmental Studies Program, Rutgers University—to complete an interdisciplinary assessment of the Mediterranean Action Plan of the United Nations Environment Programme.

GARDNER BROWN, associate professor of economics, University of Washington—to conduct research on the economic value of preserving species.

JONATHAN CHARRY, recent Ph.D. graduate in psychology from New York University—to examine cause-effect relationships between aggressive behavior, neurochemical changes, and ionized air, while associated with the Laboratory of Physiological Psychology at Rockefeller University.

ROBERT L. CHASSON, physicist—to design programs and procedures for coordination of weather modification activities in the State of Colorado.

DAVID W. CRUMPACKER, professor of biology and chairman of the Department of Environmental Population and Organismic Biology, University of Colorado—to study means of designing a National Heritage Trust to protect the biological diversity of the nation's ecosystems.

EARL F. EPSTEIN, lawyer, Ph.D. in physical chemistry, and project coordinator of the Coastal Zone Management Task Group of the Institute for Environmental Studies, University of Wisconsin—to develop land record and information systems that will allow for more effective land management.

THOMAS J. HARLUKOWICZ, recent Ph.D. graduate in civil engineering from Rutgers University—to conduct research on groundwater quality and its interrelationships with land use and community development.

NANCY E. HETZEL, political scientist and instructor of environmental studies, Dartmouth College—to enable her to conduct a study of the coordination role of the United Nations Environment Programme.

DONALD A. JAMESON, range scientist and associate director of Colorado State University's Experiment Station—to work on the simplification and aggregation of ecological models to make them more useful for land management.

MARTIN MELOSI, assistant professor of history, Texas A&M University—a renewal of his fellowship to enable him to finish a book on environmental pollution and municipal reform using New York City as a case study.

DAVID MYRHA, economist and planner, Mitre Corporation—to identify public and private sector issues which cause delays in energy facility siting and to recommend improvements while associated with the Department of Urban and Regional Planning, George Washington University.

TALBOT PAGE, research economist, Resources for the Future—to conduct research on environmental risk assessment and management while associated with the Environmental Quality Laboratory at the California Institute of Technology.

DAVID POWELL, political scientist, the Harvard University Russian Research Center—to conduct a comparative investigation on environmental problems, policies, and improvements in the cities of Moscow and New York.

RICHARD C. ROSEN, recent Ph.D. graduate in zoology from the University of Vermont—to enable him to study the ecological and biological resources of Haiti, and to evaluate future prospects for species maintenance while associated with the Département de

l' Agriculture des Ressources Naturelles et du Développement Rural, Port-au-Prince, Haiti.

JAMES SAGNER, associate professor of business and public administration, Southern Illinois University—a renewal of his fellowship to enable him to finish a book on the impact of environmental law on transportation and energy policy, while associated with the Washington University School of Law.

JAMES SHORT, associate professor, School of Business, San Diego State University—to enable him to conduct research on land use in rural areas adjoining urban regions in association with the Conservation Foundation.

ROY D. SJOBLAD, agronomist—a renewal of his fellowship to enable him to conduct research on the effects of pollutants on chemotactic responses in microorganisms, while associated with the Division of Engineering and Applied Physics, Harvard University.

JERRY STOCKDALE, associate professor of sociology, University of Northern Iowa—to conduct research on the social and environmental impacts of alternative food production systems.

PHILIP D. STRAFFIN, JR., associate professor of mathematics, Beloit College, specializing in game theory—to enable him to contribute to an interdisciplinary study of social choice in environmental decision-making.

DONALD WATSON, practicing architect and teacher, Yale University—to enable him to develop a methodology incorporating the costs and benefits of energy conservation into building design.

HENRY L. WITTER, associate professor of speech pathology and audiology, University of South Carolina—to conduct research seeking improved methods for detecting sensory cell destruction due to noise and to find agents which will help to prevent such damage, while associated with the Noise Research Laboratory of the University of Tennessee.

SPECIAL INTERESTS AND EXPLORATIONS

Occasionally, grants are made not directly associated with any existing program but of special interest to the Foundation as a whole. Such activities would be designed to study and pursue new possibilities, for example, public policy and administration, and cultural and scientific exchanges with China.

Under this rubric also fall grants related to the special interests of the Foundation as an institution, e.g., the Council on Foundations, and support for the Rockefeller Archive Center and the Bellagio Study and Conference Center.

GRANT:

Rockefeller Archive Center

Pocantico Hills, New York

The Rockefeller Archive Center of Rockefeller University was established in 1974 to serve as a research facility and as a permanent repository for the archival material of the Rockefeller Foundation, the Rockefeller University, the Rockefeller Brothers Fund, members of the Rockefeller family, and the philanthropic organizations which they have created or supported. The Foundation's 1977 appropriation of \$220,000 was for direct costs of the Foundation's archival activities and to Rockefeller University for costs allocable to the operation of the Foundation's archives at the Center.

\$220,000

GRANTS IN AID (\$35,000 or under):

ALLIANCE TO SAVE ENERGY, Washington D.C., for its educational programs.

\$10,000

AMERICAN ACADEMY OF ARTS AND SCIENCES, Cambridge, Massachusetts, for preparation and publication of an issue of *Daedalus* on limits and directions of scientific inquiry.

\$34,000

NATIONAL COMMISSION ON CONFIDENTIALITY OF HEALTH RECORDS, Washington, D.C., for partial core funding.

\$30,000

NEW YORK CITY POLICE FOUNDATION, New York, for purchase of educational films concerning crime and senior citizens.

\$660

UNIVERSITY OF CHICAGO Illinois for use by Professors Stanley Katz and Barry Karl for research for a history of foundations and public policy formulation in the United States, 1890-1970.

\$5,900

THE BELLAGIO STUDY AND CONFERENCE CENTER

The Villa Serbelloni, an historic estate in the Italian Alps, is located high on the promontory that divides Lake Como and overlooks the town of Bellagio; it was bequeathed to the Foundation in 1959. The Center has since evolved into a unique meeting place for conferences attended by scholars from many parts of the world who meet at Bellagio to examine major human problems. "Bellagio Conferences" have been the modest beginnings of now worldwide cooperative undertakings in agricultural research, population stabilization efforts, and the development and strengthening of universities and training institutes in the Third World countries. All conferences held at the Center are related in some way to the Foundation's own programs, and the Foundation has recently been increasing its own use of the Center's conference facilities. However, each year the Foundation invites a number of persons or organizations outside the Foundation who have so requested to use the Center for conferences of clearly international dimensions and importance.

In addition to conferences at Bellagio, the Foundation offers residencies, generally for about four to five weeks each, to scholars, writers, and composers engaged in major writing projects. During 1977, the Center was able to accommodate 72 men and women of recognized distinction from 13 countries.

The Center is administered from the Foundation's New York office by an interdisciplinary committee of which Dr. John J. McKelvey, Jr. is currently the chairman. Dr. William C. Olson is the Center's resident director.

The following conferences were held at the Center during 1977:

Global Environmental Monitoring—Ralph W. Richardson, Jr., The Rockefeller Foundation. Administrators and research leaders from the United Nations Environment Programme, Chelsea College of the University of London, the National Academy of Sciences, MIT, and The Rockefeller Foundation met to examine current research in the age of global environmental monitoring. Participants came from the United Kingdom, Finland, Bolivia, the Soviet Union, Sweden, Kenya, France, Nigeria, and the United States.

Means of Accelerating Agricultural Progress in Developing Countries—A. Colin McClung, International Agricultural Development Service, New York. Representatives from developing countries of Africa, Asia, and Latin America met with RF and IADS staff members to examine the possibilities for IADS assistance in overcoming obstacles to agricultural progress in those nations.

Political Aspects of Regional Economic Integration Schemes—Harold K. Jacobson, University of Michigan. A group of scholars and officials of regional economic integration schemes in Latin America and Africa examined the leadership characteristics and strategies involved in regional economic integration schemes in Third World countries.

The Impact of Technological Change on Workers' Motivation—Betty M. Jacob, University of Hawaii at Manoa. This was a meeting of the authors of reports from sixteen different countries on automation and the automobile worker. The participants worked on the preparation of a volume that will make the information available to scholars, government planners, union leaders, and social scientists.

New Means of Financing International Environmental Programs—Joseph Yager, The Brookings Institution. High-level officials and representatives of several specialized agencies of the UN and other international organizations, as well as diplomats and other national governmental officials and representatives of the Brookings Institution, convened to examine the findings of a study on new means of financing international environmental programs.

The Role of the Economist in Government—A. W. Coats, University of Nottingham, England. Economics professors from universities in Norway, India, Australia, Japan, Greece, Belgium, the United Kingdom, and the United States examined two research projects/case studies on economists in government.

Escapes from Resources Scarcity—William N. Parker, Yale University. Economic historians from universities in the United Kingdom, Poland, France, Australia, Norway, Japan, and the United States surveyed some historical examples of resource scarcities as they have appeared in the economic history of Western Europe, North America, and Japan, focusing on fuels, minerals, and timber resources.

The Problems of a More Equitable Distribution of Income in Developing Countries—Hollis B. Chenery, International Bank for Reconstruction and Development, Washington, D.C. A group of policymakers and planners in developing countries, scholars from both developing and developed countries, and World Bank staff came together to focus on the problem of more equitable distribution of income in developing countries.

The Changing Roles of Health Service Persons and the Implications of Their Education—Ronald W. McNeur, Society for Health and Human Values,

Philadelphia. Physicians, medical educators, and administrators from the United States, the United Kingdom, Switzerland, Malaysia, Turkey, Guatemala, India, Sweden, Zaïre, Saudi Arabia, Nigeria, and Cameroon exchanged information and attempted to reevaluate traditional concepts of the provision of health care and the nature of the education of health care persons.

The New Europe Revisited—Stephen R. Graubard, Daedalus, Cambridge, Massachusetts. This second conference on the “New Europe” focused on current political, social, and economic problems and endeavored to revisit the topics covered in a 1963 conference. Scholars came from France, the United Kingdom, Italy, Germany, and the United States.

Problems and Prospects of Increased International Exchange of Cultural Programming on Television—Howard Klein, The Rockefeller Foundation, and Russell Connor, Cable Arts Foundation, New York. This conference was attended by producers and other professionals from television organizations in Europe who came together with representatives from the United States to discuss the international exchange of television programming and to consider the problems now inhibiting a greater exchange of television programming including documentaries, artistic programs, and entertainment.

The Humanities and Social Thought—Joel Colton, The Rockefeller Foundation, and Ronald Florence, New York Council for the Humanities. This conference brought together twenty European and American scholars who share a common interest in cross-disciplinary studies of subjects relating to social thought and cultural criticism.

Breeding Plants for Insect Control—John J. McKelvey, Jr., The Rockefeller Foundation and Carl S. Koehler, University of California. This was a meeting of the authors and editorial committee of a textbook entitled *Breeding Plants for Insect Control*. The approximately thirty chapters in the book will embody the advances that have taken place in our knowledge and utilization of plant resistance to insect attack over the last several decades.

The Dynamics of Eastern European Ethnicity Outside of Eastern European Countries, with Emphasis on the American Case—Irene Portis Winner, Brown University. A group of historians, anthropologists, and sociologists from the United States, France, the Netherlands, Hungary, Israel, and Poland met to exchange information and ideas on the problem of presenting the study of Eastern European ethnic groups in the United States within the widest possible theoretical and methodological framework.

Lactation, Fertility, and the Working Woman—Derrick B. Jelliffe, University of California School of Public Health, Los Angeles, and Fred Sai,

International Planned Parenthood, London. This conference was sponsored jointly by the International Union of Nutrition Sciences and the International Planned Parenthood Federation. Twenty experienced workers in the fields of pediatric nutrition, family planning, and labor legislation from developing countries, industrial countries, and socialist countries devised guidelines for programs designed to facilitate breast feeding for working women in different parts of the world and examined the possibilities of organizing, with IPPF backing, practical programs in certain countries. Countries represented were India, Cuba, Guatemala, Iran, Indonesia, Nigeria, Yugoslavia, Sweden, Japan, Belgium, France, and the United States.

The International Energy Supply—Mason Willrich, The Rockefeller Foundation, and Melvin A. Conant, Great Falls, Virginia. This meeting brought together an international group of petroleum experts to discuss the policy options available to governments in both producer and consumer countries in view of the world's growing dependence on Middle East oil. Participants came from the United Kingdom, France, Germany, Japan, and the United States.

Education Research and Evaluation Training in Third World Countries—David Court and Joseph E. Black, The Rockefeller Foundation. A group of researchers on Third World education met to present the results of some of their research in an effort to reach policy-related generalizations and to examine the problems of training scholars to conduct research related to education in Third World countries. Participants came from Kenya, Tanzania, Zambia, the United Kingdom, Bangladesh, and the United States.

National Treaty Law and Procedure—John L. Hargrove, The American Society of International Law, Washington, D.C. This conference brought together a group of scholars from the United States, the United Kingdom, Canada, Mexico, the Soviet Union, Western Europe, and a number of Asian countries to examine the principal differences, advantages, and disadvantages between the two different types of international agreements—treaties and executive agreements.

Privacy, Confidentiality, and the Use of Government Microdata for Research and Statistical Purposes—David H. Flaherty and Edward H. Hanis, University of Western Ontario, London, Canada. The conference brought together the principal decision-makers in central statistical agencies in the United Kingdom, Germany, Sweden, Canada, and the United States, as well as a demographer, medical researcher, epidemiologist, sociologist, economist, psychologist, and historian, to exchange and analyze information on how different countries cope with the problem of formulating policy on data protection and dissemination.

The Economics of Nutrition-Oriented Food Policies—Ralph K. Davidson, *The Rockefeller Foundation*, and Marcel Selowsky, *The World Bank*. An international group of economists from the United States, Europe, and Third World countries met to examine ways in which food policies can be designed and implemented to reach the malnourished in the developing countries at reasonable costs, given the resources of the countries.

International Cooperation Among Breeder Reactor Programs—Mason Willrich, *The Rockefeller Foundation*. This conference brought together an international group of scientists, industrialists, and government officials concerned with the development and use of nuclear fission breeder reactors as a major new energy supply technology. Participants came from the United States, the United Kingdom, France, Spain, Italy, West Germany, and India.

Fetal Antigens and Cancer—Peter Medawar, *Medical Research Council, Clinical Research Centre, Harrow, England*. This conference brought together approximately twenty research scientists and investigators from the United Kingdom, France, Germany, and the United States to exchange information on the current status of research into the relationship between fetal antigens and cancer, with special reference to the “T locus.”

The Transfer of Power in Africa—Prosser Gifford, *Amherst College, Massachusetts*. A group of experts on Africa came together to work on the first of a two-volume study called *The Transfer of Power in Africa*. The first volume deals with decolonization and the nineteen authors of the different chapters came from France, the United Kingdom, Canada, and the United States. Also invited to participate in the preparation of this study were scholars from African universities.

Potentials for Cooperation Among National Agricultural Research Systems—Joseph C. Madamba, *Philippine Council on Agricultural Resources and Research*, and Sterling Wortman, *The Rockefeller Foundation and the International Agricultural Development Service*. This meeting brought together directors of a large number of major national agricultural research programs of the developing countries to determine specific means by which cooperation among agricultural research programs of developing countries can be implemented, with the intent of contributing to rapid strengthening of national efforts. Participants came from Bangladesh, India, Indonesia, Korea, Malaysia, the Philippines, Brazil, Colombia, Ecuador, Mexico, Venezuela, Egypt, Nigeria, Senegal, Sudan, and Tanzania.

Strategies for the Control of Schistosomiasis—Kenneth S. Warren, *The Rockefeller Foundation*, and J. Stauffer Lehman, *The Edna McConnell Clark Foundation*. This conference brought together the directors of pilot or

national control programs in the field of schistosomiasis, as well as responsible persons in international health agencies and a group of knowledgeable generalists. Participants came from St. Lucia, Iran, Brazil, the Philippines, Rhodesia, Japan, Egypt, Sudan, and the People's Republic of China.

The Physiological and Behavioral Manipulation of Food Fish as Production and Management Tools—John Bardach, *The Hawaiian Institute of Marine Biology*, and Ziad Shehadeh of the *International Center for Living Aquatic Resources Management, Philippines*. This conference, organized and sponsored by The Rockefeller Foundation, brought together a group of international experts to assess the feasibility of developing and applying methods to influence, for the advantage of man, the biologically determined behavior of certain fish species. Participants came from the United Kingdom, the Netherlands, Germany, France, Japan, India, Israel, Canada, and the United States.

Biology and Politics—Albert T. Somit, *State University of New York at Buffalo*. This meeting of the International Political Science Association's Research Committee on Biology and Politics brought together scholars in the field who exchanged ideas and produced substantive papers establishing biopolitics as a distinct area of study in political science, requiring special research and training strategies. Participants came from Canada, the United Kingdom, France, Germany, and the United States.

THE ROCKEFELLER FOUNDATION ARCHIVES

Use of the Archives by the Public

A total of 58 scholars made 151 research visits to the Rockefeller Archive Center to use Rockefeller Foundation records or collections previously held by the Foundation in New York City. Among the visitors were 27 college or university faculty members, 16 graduate students, and three undergraduate students. Foundation projects files prior to 1942 continued to be the most frequently used material, but the General Education Board and the Laura Spelman Rockefeller Memorial collections were also frequently searched. Biographies of persons who worked for or received grants from the Foundation were frequent topics, and the history of science and medicine, medical education, and philanthropy continued to be subjects of interest.

FELLOWSHIPS

During 1977 a total of 238 persons held general Foundation fellowships, 8 held postdoctoral fellowships in the Social Sciences and one in the Agricultural Sciences under the Conquest of Hunger Program, and 5 held Visiting Research Fellowships.

Of the general fellowship awards, 197 that began in previous years continued active in 1977, and 41 new awards became active during the year. Their distribution is as follows:

	<i>Study awards from previous years continued into 1977</i>	<i>New awards in 1977</i>	<i>Number of awards active in 1977</i>
AGRICULTURAL SCIENCES	66	20	86
NATURAL AND ENVIRONMENTAL SCIENCES	2	1	3
HEALTH SCIENCES	47	3	50
SOCIAL SCIENCES	74	11	85
HUMANITIES	8	6	14
	197	41	238

For 1977 the Trustees approved a fund of \$3,200,000 for the three types of fellowships mentioned above. A fund of \$3,375,000 was approved for allocation during 1978.

Rockefeller Foundation Fellows in 1977, under the general fellowship program, came from the following countries:

	<i>Previous Awards</i>	<i>New Awards</i>		<i>Previous Awards</i>	<i>New Awards</i>
Brazil	7	1	Mexico	3	2
Chile	2		Nigeria	7	1
Colombia	20	2	Paraguay	1	
Costa Rica	2		Peru	5	
Dominican Republic		1	Philippines	5	2

Ecuador	1	1	St. Lucia	1	
El Salvador	2		Tanzania	8	1
Ethiopia		1	Thailand	40	5
Guatemala	8		Tunisia	1	
Honduras	1		Turkey	1	
Indonesia	23	7	Uganda	7	
Kenya	11		United States	25	14
Lebanon	1	1	Zaire	15	2
				197	41

1977 GENERAL FELLOWSHIP AWARDS

Key to abbreviations in the following section:

F—Fellow, RB—Reproductive Biology, AS—Agricultural Sciences, HS—Health Sciences, SS—Social Sciences, HUM—Humanities, NES—Natural and Environmental Sciences, CIAT—International Center for Tropical Agriculture, IRRI—International Rice Research Institute, INIAP—National Institute of Agricultural Research, ALAD—Arid Lands Agricultural Development Program, CIMMYT—International Maize and Wheat Improvement Center.

CONQUEST OF HUNGER

Colombia

POSADA, RAFAEL M.S., University of Wisconsin, 1973. Agricultural Economics. Appointed from CIAT. Place of study: U.S.A. F-AS

Dominican Republic

CUEVAS PEREZ, FEDERICO M.S., University of Puerto Rico, 1975. Genetics and Breeding. Appointed from Instituto de Agricultura Santiago. Place of study: U.S.A. F-AS

Ecuador

VILLASIS HIDALGO, CRISTOBAL Agr. Ing., Central University, 1971. Genetics and Breeding. Appointed from INIAP. Place of study: Mexico. F-AS

Ethiopia

TUWAFA, SOLOMON B.S., University of Addis Ababa, 1968. Agronomy. Appointed from University of Addis Ababa. Place of study: India. F-AS

Lebanon

ALAHAYDOIAN, EUGENE-KEVORK M.S., American University of Beirut, 1973. Genetics and Breeding. Appointed from ALAD. Place of study: U.S.A. F-AS

Mexico

CORTEZ FLORES, JOSE M.S., National School of Agriculture, 1975. Soil Science, Fertility and Management. Appointed from National School of Agriculture. Place of study: U.S.A. F-AS

ORTIZ FERRARA, GUILLERMO M.S., National School of Agriculture, 1975. Genetics and Breeding. Appointed from CIMMYT. Place of study: U.S.A. F-AS

Thailand

AMNART CHINCHEST M.S., University of Sydney, Australia, 1975. Genetics and Breeding. Appointed from Ministry of Agriculture. Place of study: U.S.A. F-AS

United States

EMERICH, DAVID WILLIAM Ph.D., University of Wisconsin, 1976. Biochemistry. Appointed from University of Wisconsin. Place of study: U.S.A. F-AS

EVANS, DAVID A. Ph. D., Ohio State University, 1977. Genetics and Breeding. Appointed from Ohio State University. Place of study: U.S.A. F-AS

KENMORE, PETER A.B., Harvard College, 1974. Plant Science, Entomology. Appointed from University of California, Berkeley. Place of study: Philippines (IRRI). F-AS

LUDDEN, PAUL W. Ph.D., University of Wisconsin, 1977. Biochemistry, Plants. Appointed from University of Wisconsin. Place of study: U.S.A. F-AS

LUDWIG, ROBERT ALLEN Ph.D., Yale University, 1975. Biophysics, Molecular Biology. Appointed from Massachusetts Institute of Technology. Place of study: U.S.A. F-AS

MAIER, ROBERT J. Ph.D., University of Wisconsin, 1977. Genetics and Breeding. Appointed from University of Wisconsin. Place of study: U.S.A. F-AS

MATTHEWS, DAVID EARL Ph.D., University of Florida, 1976. Biochemistry. Appointed from University of Florida. Place of study: U.S.A. F-AS

MILLER, STEPHAN SHERMAN Ph.D., Harvard University, 1975. Genetics and Breeding. Appointed from Harvard University. Place of study: U.S.A. F-AS

POPULATION AND HEALTH

Indonesia

HAGUL, PETER B.A., Gadjah Mada University, 1971. Population Education. Appointed from Gadjah Mada University. Place of study: U.S.A. F-SS

United States

KINSEY, WILLIAM HENDERSON Ph.D., University of Washington, 1977. Reproductive Biology. Appointed from University of Washington. Place of study: U.S.A. F-HS-RB

EDUCATION FOR DEVELOPMENT

Brazil

DAHAB, SONIA M.A., Boston University, 1976. Economics. Appointed from Federal University of Brazil. Place of study: U.S.A. F-SS

Colombia

ALZATE SANCHEZ, RODRIGO ALBERTO M.D., Universidad del Valle, 1972. Public Health. Appointed from Universidad del Valle. Place of study: England. F-HS

Indonesia

DIJAMALUDIN ANCOK B.A., Gadjah Mada University, 1969. Psychology. Appointed from Gadjah Mada University. Place of study: U.S.A. F-HUM

GUNAWAN SUMODININGRAT M.A., Thammasat University, 1977. Economics. Appointed from Gadjah Mada University. Place of study: U.S.A. F-SS

HARI HARTADI Ir., Gadjah Mada University, 1974. Nutrition and Physiology. Appointed from Gadjah Mada University. Place of study: U.S.A. F-AS

NASIKUN B.A., Gadjah Mada University, 1965. Sociology. Appointed from Gadjah Mada University. Place of study: U.S.A. F-SS

SUNARDI D.V.M., Gadjah Mada University, 1972. Animal Science, Physiology. Appointed from Gadjah Mada University. Place of study: Philippines. F-AS

YAHYA, MUHAIMIN B.A., Gadjah Mada University, 1967. Political Science. Appointed from Gadjah Mada University. Place of study: U.S.A. F-SS

Nigeria

TAYO, TIMOTHY Ph.D., University of Cambridge, England, 1974. Plant Science, Physiology. Appointed from University of Ibadan. Place of study: U.S.A. F-AS

Philippines

LANTIN, MANUEL MONTECER M.S., University of the Philippines, 1976. Genetics and Breeding. Appointed from University of the Philippines. Place of study: U.S.A. F-AS

MONTES, MANUEL A.B., Ateneo de Manila University, 1971. Economics. Appointed from University of the Philippines. Place of study: U.S.A. F-SS

Tanzania

LIPUMBA, NGUYURU H. M.A., University of Dar es Salaam, 1977. Economics. Appointed from University of Dar es Salaam. Place of study: U.S.A. F-SS

Thailand

CHINNAPHONG BUMRUNGSUP M.S., University of Illinois, 1976. Economics. Appointed from Thammasat University. Place of study: U.S.A. F-SS

PREEYANUCH SANGPASSORN M.B.A., University of the Philippines, 1976. Agricultural Economics. Appointed from Kasetsart University. Place of study: U.S.A. F-SS

SOMKIT TUGSINAVISUITTI M.B.A., University of the Philippines, 1975. Agricultural Economics. Appointed from Kasetsart University. Place of study: U.S.A. F-SS

VUTHIPHONG PRIEBJIVAT M.S., Stanford University, 1976. Business Administration. Appointed from Thammasat University. Place of study: U.S.A. F-SS

Zaire

KONDE, AENA B.S., Catholic University, Louvain, Belgium, 1971. Public Health Nursing. Appointed from National University of Zaire. Place of study: U.S.A. F-HS

TSHILEMA TSHIHILUKA Licence, National University of Zaire, 1974. Archaeology. Appointed from National University of Zaire. Place of study: England. F-HUM

ARTS, HUMANITIES AND CONTEMPORARY VALUES

United States

GONZALEZ, ALICIA MARIA M.A., California State University, 1977. Literature-Folklore. Appointed from California State University. Place of study: U.S.A. F-HUM

LIPSON, CAROLYN M. M.A., George Washington University, 1977. Literature-Folklore. Appointed from Indiana University. Place of study: U.S.A. F-HUM

MAGGARD, SALLY WARD M.S., Purdue University, 1970. Sociology. Appointed from University of Kentucky. Place of study: U.S.A. F-HUM

YOUNG-DAY, VIRGINIA KAY B.A., Georgia State College, 1966. Anthropology. Appointed from Rutgers University. Place of study: U.S.A. F-HUM

QUALITY OF THE ENVIRONMENT

United States

KAPSTEIN, ETHAN BARNABY A.B., Brown University, 1976. Solar Energy and Climatology. Appointed from University of Toronto. Place of study: Canada. F-NES

The postdoctoral awards in the Social Sciences and the Agricultural Sciences that were made in 1976 and in 1977 under the Conquest of Hunger Program were as follows:

1976

CAMPBELL, DAVID—a geographer working on semi-arid land agricultural and pastoral development strategies at the Institute for Development Studies, Nairobi, Kenya, 1976-1978. (SS)

DOHERTY, VICTOR—an anthropologist working on watershed management strategies at the International Center for Research in the Semi-Arid Tropics, Hyderabad, India, 1976-1978. (SS)

GLADWIN, CHRISTINA—an agricultural economist working on peasant fertilizer decision strategies at the International Fertilizer Development Center, Alabama, on outreach in Totonicapan, Guatemala, 1976-1978. (SS)

GRAVELY, SALLY M.—an immunologist working on studies connected with the development of a vaccine for bovine babesiosis at the Instituto Nacional de Investigaciones Pecuarias, Palo Alto, Mexico, 1976-1978. (AS)

1977

GOODELL, GRACE—an anthropologist working on institutional problems of rice technology adoption at the International Rice Research Institute, and the University of the Philippines, Los Banos, 1977-1979. (SS)

LYNAM, JOHN—an agricultural economist working on manioc technology adoption at the International Center for Tropical Agriculture, Palmira, Colombia, 1977-1979. (SS)

MATTESON, PATRICIA—an entomologist working on biological control as it relates to host plant resistance to grain legume insects at the International Institute of Tropical Agriculture, Ibadan, Nigeria, 1977-1979. (AS)

PANAYOTOU, THEODORE—a natural resources economist working on national fisheries policy at Kasetsart University, Bangkok, Thailand, 1977-1979. (SS)

SCHROEDER, ROBERT—an anthropologist working on small farm systems at the International Agricultural Development Service, Kathmandu, Nepal, 1977-1979. (SS)

In 1977 the Foundation established a new program that permits young scholars, known as Visiting Research Fellows, to be assigned to the New York office for limited periods of time. The fellows' responsibilities are divided about equally between a defined research project or projects directly related to one of the Foundation's stated program objectives, and program internship activities intended to contribute to their professional development and understanding of the Foundation.

There were five visiting research fellows in the New York office for varying periods of time during 1977:

Agricultural Sciences

PAULSON, JO ANN—research on food policy and trade.

Humanities

RICHARDSON, MALCOLM L.—research on political and cultural developments in Algeria.

International Relations

LESTER, RICHARD K.—research on international supply of nuclear fuel.

WAI, DUNSTAN—research on cooperation between African and Arab states.

Natural and Environmental Sciences

PRYOR, C. ANTHONY—research on sustainable growth.

FINANCIAL

STATEMENTS

SUMMARY

The grants announced, program costs incurred and expenditures in 1977 are summarized as follows:

	GRANTS ANNOUNCED AND PROGRAM COSTS INCURRED	EXPENDITURES
GRANTS AND PROGRAMS		
Arts, Humanities, and Contemporary Values	\$ 6,479,760	\$ 6,073,642
Conquest of Hunger	7,998,286	7,523,299
Education for Development	6,626,731	7,242,916
Educational Publishing	538,382	530,247
Equal Opportunity	6,175,441	6,848,351
International Relations	2,962,440	3,199,153
Population and Health	5,526,373	8,290,397
Quality of the Environment	3,371,466	2,989,361
Special Interests and Explorations	1,071,777	1,491,424
Deduct: Lapses, refunds and savings	<u>(1,335,083)</u>	
TOTAL GRANTS AND PROGRAMS	<u>\$39,415,573</u>	44,188,790
General administrative expenses		3,382,750
Capital items on headquarters relocation		15,000
Federal excise tax paid		<u>1,580,885</u>
TOTAL		<u>\$49,167,425</u>

The guidelines used by the Foundation's Trustees to establish the level of annual appropriations are based upon the prior four years' market values of securities and prior four years' investment income. They are designed to minimize year-to-year fluctuations in appropriation levels while adjusting to any long-term changes in the Foundation's assets and income.

There was no change in the management of the assets during 1977. The two bond funds (of \$100 million and \$60 million initial investment) and two equity funds (of \$62 million and \$42 million initial investment) are managed by independent investment managers on a full discretion basis. The balance of the funds, currently approximately \$500 million, chiefly in equities, are managed internally with the assistance of professional investment counsel.

Total income on investments rose from under \$40 million in 1976 to almost \$41.5 million in 1977, primarily through increases in dividends. At the end of the year approximately 27% of the assets at market value were invested in fixed income securities and 73% in equities. This ratio has not changed significantly since July 1976, when the fixed income segment was raised from 24%. Investment income is maximized by keeping short-term cash fully invested. Of the \$2.6 billion of security transactions in 1977, approximately \$1.6 billion were in repurchase agreements (normally of 1 to 7 days duration).

The market value of securities held at December 31, 1977 was \$107 million below that of December 31, 1976. Of that amount, approximately \$15 million represents withdrawals to cover operational needs and approximately \$92 million reflects market decline. With the exception of the smaller equity fund, the total return unit values of all of the funds are above the unit values at their inception—1972 for the equity funds and 1974 for the bond funds. During the year the total portfolio showed a decline of 6.2%, compared with declines of 12.7% in the DJIA and 7.2% in the S&P 500, and a rise of 1.7% in the Salomon Brothers bond index. One of the bond funds outperformed the latter index and one underperformed it. The equity funds all outperformed the DJIA but underperformed the S&P 500.

Diversification out of the oil stocks continued, with the sale of 114,800 shares of Exxon, the Foundation's largest holding, which was reduced from 18.1% of the Foundation's market value to 17.9%. The Foundation's holding of Exxon represents 6/10 of 1% of the outstanding shares of that company.

Since its founding in 1913, The Rockefeller Foundation has paid out approximately \$1 billion 327 million, of which \$1 billion 48 million came from income and \$279 million came from principal.

The financial statements for 1977 and 1976 and the opinion of Arthur Young & Company, certified public accountants, are presented on the following pages.

ACCOUNTANTS' OPINION

ARTHUR YOUNG & COMPANY

277 PARK AVENUE
NEW YORK, N. Y. 10017

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, 1977 and 1976 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, 1977 and 1976, 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

February 23, 1978

**STATEMENT OF ASSETS, OBLIGATIONS AND PRINCIPAL FUND
DECEMBER 31, 1977 AND 1976**

<i>ASSETS</i>	<i>1977</i>	<i>1976</i>
Marketable securities, at quoted market value (fair market value at date of gift or purchase cost 1977: \$516,071,462; 1976: \$527,193,711) (Note 6)	\$735,543,614	\$842,582,075
Cash	361,785	538,298
Accounts receivable (in 1976 primarily security sales) and advances	1,414,160	10,643,503
Dividends and interest receivable	5,223,572	5,150,706
Property—at depreciated cost	<u>1,880,137</u>	<u>1,986,522</u>
Total assets	<u>\$744,423,268</u>	<u>\$860,901,104</u>
 <i>OBLIGATIONS AND PRINCIPAL FUND</i> 		
Accounts payable (in 1976 primarily security purchases) and accrued liabilities	\$ 967,782	\$ 16,489,869
Federal excise tax payable (Note 2)	1,572,501	1,580,884
Deferred federal excise tax (Note 1)	2,558,069	6,207,259
Appropriations by the Trustees, announced and released for specific purposes but not yet paid (Notes 1 and 4)	<u>29,224,141</u>	<u>34,053,137</u>
Total obligations	<u>34,322,493</u>	<u>58,331,149</u>
Principal fund:		
Appropriations by the Trustees not yet released for specific grantees, and appropriations for program costs and general administrative expenses for the following year (Notes 1 and 4)	44,992,983	41,423,840
Unappropriated	<u>665,107,792</u>	<u>761,146,115</u>
Total principal fund	<u>710,100,775</u>	<u>802,569,955</u>
Total obligations and principal fund	<u>\$744,423,268</u>	<u>\$860,901,104</u>

See accompanying notes.

**STATEMENT OF OPERATIONS AND CHANGES IN PRINCIPAL FUND
YEARS ENDED DECEMBER 31, 1977 AND 1976**

	<i>1977</i>	<i>1976</i>
Investment income:		
Dividends	\$ 26,186,119	\$ 23,440,896
Interest	15,106,835	16,238,405
Other	114,496	118,517
	<u>41,407,450</u>	<u>39,797,818</u>
Less: investment expenses	<u>877,425</u>	<u>923,494</u>
Investment income before federal excise tax	40,530,025	38,874,324
Less: provision for federal excise tax (Note 2)	<u>1,603,311</u>	<u>1,512,880</u>
Net investment income	<u>38,926,714</u>	<u>37,361,444</u>
Grants announced and program costs incurred during the year	39,415,573	43,392,860*
General administrative expenses	3,448,357	3,389,394*
	<u>42,863,930</u>	<u>46,782,254</u>
Excess of grants announced and program costs and general administrative expenses incurred over net investment income	(3,937,216)	(9,420,810)
Principal fund at beginning of year	802,569,955	703,175,132
Increase (decrease) in unrealized appreciation on marketable securities net of deferred federal excise tax—1977: reduction \$3,680,000; 1976: provision \$4,550,000 (Note 2)	(92,236,212)	104,205,442
Realized gain on sale of marketable securities less provision for federal excise tax—1977: None; 1976: \$53,281 (Note 2)	3,624,153	4,570,674
Contributions to the Foundation	<u>80,095</u>	<u>39,517</u>
Principal fund at end of year	<u><u>\$710,100,775</u></u>	<u><u>\$802,569,955</u></u>

*Reclassified to conform to 1977 presentation.

See accompanying notes.

STATEMENT OF CHANGES IN FINANCIAL POSITION
YEARS ENDED DECEMBER 31, 1977 AND 1976

	1977	1976
Sources of funds:		
Investment income before federal excise tax	\$ 40,530,025	\$ 38,874,324
Securities and repurchase agreement transactions:		
Proceeds from sales	2,630,278,835	2,038,443,535
Less: purchases	<u>2,615,532,433</u>	<u>2,032,795,111</u>
	14,746,402	5,648,424
Net change in accounts receivable, advances, dividends and interest receivable, accounts payable and accrued liabilities	(6,365,610)	6,887,286
Federal excise tax refund	—	19,203
Cash contributions to the Foundation	80,095	39,517
	<u>48,990,912</u>	<u>51,468,754</u>
Application of funds:		
Expenditures for grants and programs:		
Arts, Humanities, and Contemporary Values	6,073,642	6,862,751
Conquest of Hunger	7,523,299	8,827,513
Education for Development	7,242,916	8,501,769
Educational Publishing	530,247	530,886*
Equal Opportunity	6,848,351	7,091,562
International Relations	3,199,153	2,397,554
Population and Health	8,290,397	8,264,351
Quality of the Environment	2,989,361	3,244,250
Special Interests and Explorations	<u>1,491,424</u>	<u>1,732,083</u>
	44,188,790	47,452,719
General administrative expenses	3,382,750	3,332,856*
Headquarters relocation—capital items	15,000	209,319
Federal excise tax paid	<u>1,580,885</u>	<u>1,340,280</u>
	49,167,425	52,335,174
Decrease in cash	(176,513)	(866,420)
Cash balance at beginning of year	<u>538,298</u>	<u>1,404,718</u>
Cash balance at end of year	<u>\$ 361,785</u>	<u>\$ 538,298</u>

*Reclassified to conform to 1977 presentation.

See accompanying notes.

NOTES TO FINANCIAL STATEMENTS

DECEMBER 31, 1977 AND 1976

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 an accrual basis.

Appropriations by the Trustees are charged to operations when grants are announced and released for specific grantees. Program costs and general administrative expenses are charged to operations when incurred. Appropriations made but not released for specific grantees and program costs and general administrative expenses 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. Total depreciation and amortization expense amounted to \$121,385 in 1977 and \$107,896 in 1976.

Federal excise tax is accrued on investment income less investment expenses and on net realized tax basis gains from securities sales. Deferred federal excise tax arises from timing differences between financial and tax reporting relating to investment income and the change between the tax basis and market value of marketable securities.

2. 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 as such, under the Tax Reform Act of 1969, is subject to a 4 percent excise tax on investment income less investment expenses and net realized gains on securities transactions. 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. In 1976 net gains on disposition of securities in the amount of \$1,332,027 were subject to federal excise tax; there were no net taxable gains in 1977. The basis for calculating taxable gains of securities held at December 31, 1977 is approximately \$676,000,000.

3. Pension plan

The Foundation has a non-contributory pension plan with vesting for regular salaried employees who are at least 25 years old with one year's service or have attained the age of 40. It is the Foundation's policy to fund all current pension obligations as incurred and to amortize unfunded past service costs over a period of ten years. Pension expense under this plan, including charges for current service and amortization of unfunded prior service costs, amounted to \$1,420,000 in 1977 and \$1,259,000 in 1976. The actuarially computed value of vested benefits at the latest valuation date exceeded the market value of the pension fund assets by approximately \$1,680,000.

At December 31, 1977 the premiums payable through March 1, 1982 to complete the purchase of annuities for personnel who retired under a prior plan were approximately \$950,000.

4. Appropriations and expenditures

Appropriations and expenditures for the year are summarized as follows:

	TOTAL APPROPRIATED	ANNOUNCED AND RELEASED	APPROPRIATED BUT NOT RELEASED
Balance, January 1, 1977	\$75,476,977	\$34,053,137	\$41,423,840
Appropriations by the Trustees	47,114,185	14,600,381	32,513,804
Less: lapses and refunds savings	(787,498)	(471,404) (863,679)	(316,094) 863,679
Released from prior years' appropriations		29,492,246	(29,492,246)
Expenditures for grants, program costs, administrative expenses and capital items	<u>(47,586,540)</u>	<u>(47,586,540)</u>	
Balance, December 31, 1977	<u>\$74,217,124</u>	<u>\$29,224,141</u>	<u>\$44,992,983</u>

5. Long-term leases

Minimum rental commitments under non-cancellable leases, principally for headquarters office space, at December 31, 1977 aggregate \$11,890,000 and are payable approximately \$700,000 annually until 1994. The Foundation also is required to pay additional amounts for maintenance and taxes for the headquarters office.

6. Summary of marketable securities—December 31, 1977 and 1976

	1977		1976	
	Ledger Amount*	Quoted Market Value	Ledger Amount*	Quoted Market Value
U.S. Government Obligations	\$115,185,751	\$112,030,485	\$151,437,471	\$156,570,023
Certificates of Deposit	44,773,781	44,762,496	29,780,285	29,766,000
Corporate Obligations	38,569,202	37,807,157	54,643,031	56,627,747
Other Investment	<u>1,296,910</u>	<u>960,930</u>	<u>1,296,910</u>	<u>960,930</u>
	<u>199,825,644</u>	<u>195,561,068</u>	<u>237,157,697</u>	<u>243,924,700</u>
Convertible Bonds	2,767,063	2,810,355	1,968,125	2,240,580
Preferred Stock	3,763,079	2,625,500	3,646,739	3,676,500
Common Stocks	<u>309,715,676</u>	<u>534,546,691</u>	<u>284,421,150</u>	<u>592,740,295</u>
	<u>316,245,818</u>	<u>539,982,546</u>	<u>290,036,014</u>	<u>598,657,375</u>
Total	<u>\$516,071,462</u>	<u>\$735,543,614</u>	<u>\$527,193,711</u>	<u>\$842,582,075</u>

*Fair market value at date of gift or purchase cost basis.

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