

**PRESIDENT'S REVIEW
& ANNUAL REPORT
1990**

The Rockefeller Foundation 1990 Annual Report

The Rockefeller Foundation
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On the cover

Generations of Creative Genius
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Created for the
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Atlanta, Georgia.

Introduction	3
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The President's Review	4
------------------------	---

New Program Highlights for 1990	11
International Program to Support Science-Based Development	12
Arts and Humanities	28
Equal Opportunity	36
School Reform	43
Other Interests and Initiatives	46

1990 Grants and Fellowships	49
-----------------------------	----

Financial Report	105
------------------	-----

1989-90 Financial Statements	110
------------------------------	-----

Foundation Organization	117
Board of Trustees	117
Officers and Staff	117
Warren Weaver Fellows	119
Report of the Secretary	119

Information for Applicants	120
----------------------------	-----

Index	122
-------	-----

Introduction

The Rockefeller Foundation is a philanthropic organization endowed by John D. Rockefeller and chartered in 1913 “to promote the well-being of mankind throughout the world.” It is one of America’s oldest private foundations and one of the few with strong international interests. From the beginning, its work has been directed toward identifying and attacking at their source the underlying causes of human suffering and need.

Today, the Foundation offers grants and fellowships in three principal areas: international science-based development, the arts and humanities, and equal oppor-

tunity for U.S. minorities. Within science-based development, the emphases are on the global environment and on the agricultural, health, and population sciences. The Foundation also has smaller grant programs in international security and in school reform to improve public education for at-risk young people.

The Foundation concentrates its efforts on selected programs with well-defined goals, but tries to remain flexible by adjusting its course to reflect new needs and opportunities as they arise. In addition, the Foundation maintains the Bellagio Study and Conference Center in northern Italy for conferences of international scope and for

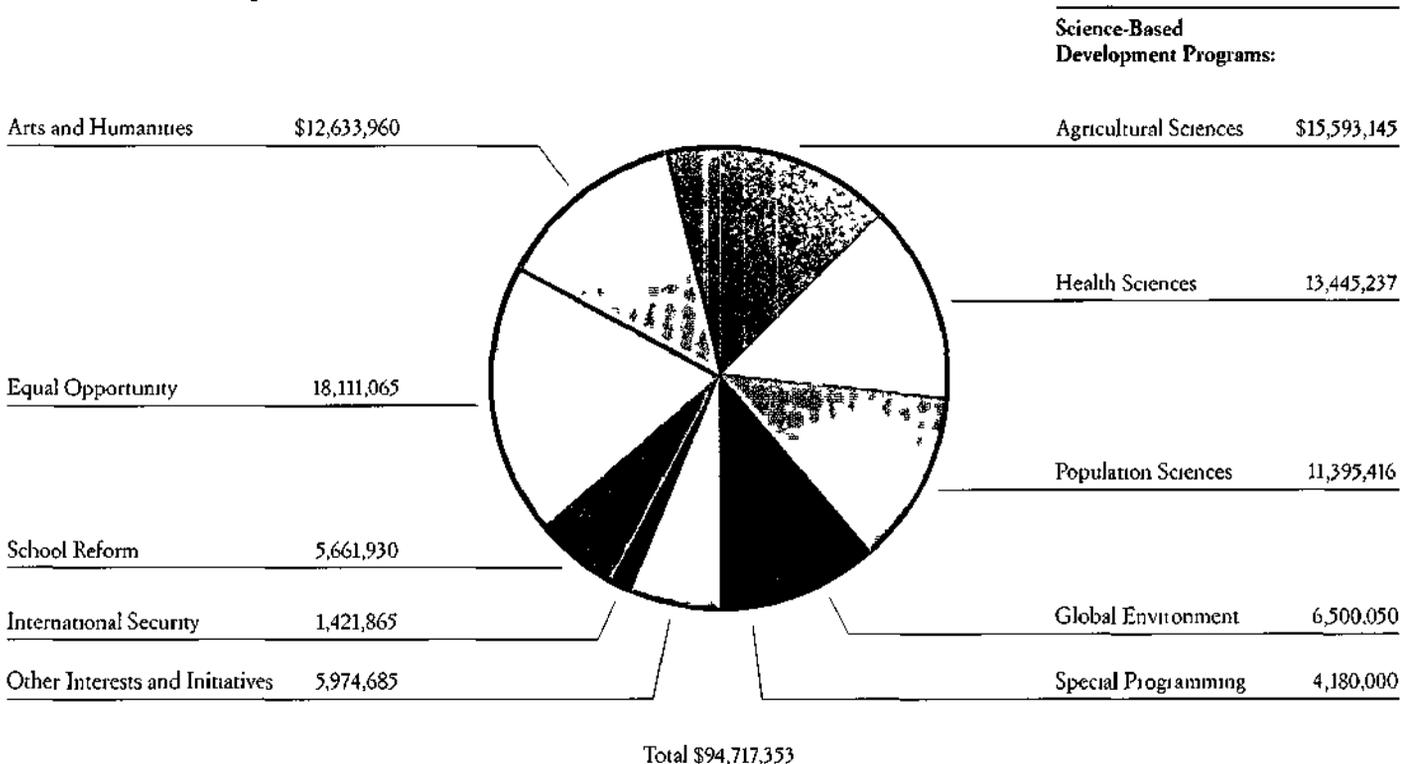
residencies for artists and scholars.

The Foundation is administered by its president through a staff drawn from scholarly, scientific, and professional disciplines. An independent board of trustees, which meets four times a year, sets program guidelines and financial policy and approves all appropriations.

The chart below depicts—by program and division—the grants, appropriations, and fellowships approved in 1990.

Information on how to apply for grants and fellowships begins on page 120.

Grants and Fellowships 1990



The President's Review

One of the perplexing issues for foundations is effectiveness. How can we determine whether a course of action actually helps to change something in the direction we intend? Or that the direction we intended was the right one?

Some foundations are in the business of service, and some are in the business of innovation. This was part of the insistent insight of John D. Rockefeller when he urged that the new Foundation that bore his name aim at “the root causes” of poverty and disease.

Charity and innovation are different. One is not better or more important than the other; they are simply different. Both approaches affect what happens to the individual human being—in one case by serving him or her, and in the other by changing his or her circumstances and opportunities. Both raise profound, troublesome questions about what really helps, limits, frees, or oppresses in the human circumstance.

To innovate means to *change* a system or situation or framework whose consequences are unsatisfactory. This is dangerous ground. Foundations are small in size and consequently dogged by uncertainty about how their initiatives will interact with the deeper, more powerful currents of history they encounter.

Any foundation initiative that aims at constructive innovation—at changing something for the better—should reflect a serious concern with effectiveness. In debating at the

Rockefeller Foundation whether to support a given grantee or course of action, we do indeed ask whether a proposal contains a plausible theory of change.

Many of the major program actions taken in 1990 entailed judgments as to how to maximize the impact of constructive innovation. Many of these judgments flow in turn from a sense of what our comparative advantages are. The comparative institutional advantages of an independent foundation include:

- *The ability to support first-rate talent.* Our money and organizational size are relatively small in an immense, interdependent world populated by thousands of governmental and private organizations. But in the end, change flows from the leadership, insight, commitment,

...we do indeed ask whether a proposal contains a plausible theory of change.

and sweat of talented people. Identifying and investing selectively in talented human capital is a traditional and important foundation strategy.

- *The ability to join an issue early on.* A foundation's capacity to prepare the ground for change is greater if it starts far upstream, when an issue is in its early stages and has not yet collected numerous participants, feverish adherents, tremendous gravity, or the sensitivity and intractability of highly inflamed public controversy. The danger of being wrong about the character, importance, or evolution of an issue is also correspondingly greater when one engages the issue upstream.

- *The ability to undertake a course of action that may bring results only after a long period of time*—one decade, or two, for example. One of the most precious and important attributes of a foundation is the freedom to pursue difficult, risky, or idealistic long-term objectives with some immunity from short-term pressures.

These broad advantages and other more specific devices can all be enlisted in the search for successful strategies for change.

One of the most overused words in the foundation world is “leverage,” by which is meant the amplification of an intended effect in order to promote a larger change. Pursuit of the elusive logic of leverage in philanthropy is intense; the achievements in amplification are modest. It is safest to examine the effectiveness calculus without resort to the word “leverage” or the mysterious philanthropic magic it is often used to evoke.

This review summarizes some of our major actions of the past year in terms of the strategies for change they employed.

The Energy Foundation

The Rockefeller Foundation joined with the John D. and Catherine T. MacArthur Foundation and the Pew Charitable Trusts to create the Energy Foundation, a new organization aimed at making patterns of energy generation and consumption in the United States more efficient and sustainable.

The formation of this partnership was itself an important part of the

strategy. The Energy Foundation intends to help the United States get on the road to a policy of high energy efficiency and energy renewables. It will fund implementation and replication of proven energy-efficient practices. The Energy Foundation will be pursuing this single objective through multiple

...there were proven methodologies of energy efficiency ready to be adopted.

avenues, including local utilities, non-profits, and advocates. It was therefore logical to create one organization with one staff, one mission, and one board to carry out this approach rather than to have each of three multipurpose national foundations attempt a part of it.

But we judged also that the *fact* of three well-known national foundations joining together to pursue an important common objective through a single instrument would in itself help attract attention to and support for that objective. This consideration was as important as the combination of financial resources, since each foundation could have allocated individually to any common objective the same funds it contributed to the partnership.

The initial "impulse to cooperate" did not tell the three foundations on what issue to join resources. An enormous array of national and international problems present themselves as candidates for cooperation. From this array, why new energy practices for the United States?

From the beginning, we were pulled toward environmental issues.

Each of the three foundations was already active, but at a level that was inadequate given the scope of the challenge. Two of the foundations, MacArthur and Rockefeller, primarily focused their environmental grant-making internationally. This raised a serious problem, for to try to help Mexico or India or China or Zimbabwe to improve their environmental performance and to ignore practices in the United States that harm the global environment was not productive or sensible.

Still, the agenda was broad. The end-point was not predetermined by trustee or officer preferences. The end-point—energy efficiency and renewables—emerged from the weight of the evidence and argument presented to us:

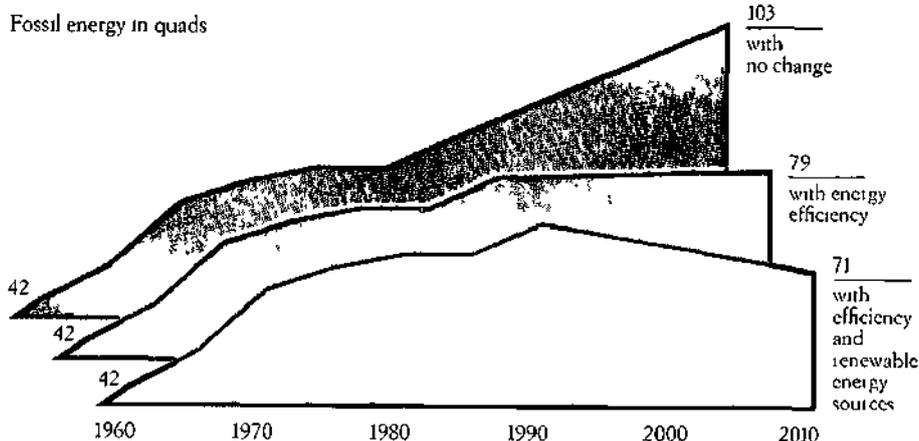
- the finding that there were proven methodologies of energy efficiency ready to be adopted. The "changes" in question had to be replicated and propagated, not invented;

- the assessment that this would be a long-term job lasting a decade or more;
- the conclusion that there was no existing national funding organization that had energy efficiency as its primary focus; and
- the judgment that identifying the names of the three foundations with the new organization, as well as pooling funds through a single structure, would underline the seriousness of the undertaking and increase its ability to influence others.

No reasonable person, it seems to those of us who became converted to the cause of improved energy

U.S. fossil fuel consumption could be significantly reduced if cost-effective, energy-efficiency technologies are brought into play. By also taking advantage of renewable energy sources, dependency on fossil fuel could actually be reduced below today's level, along with the adverse international security and environmental consequences of that dependence.
Source: The Energy Foundation

Possible energy futures



practices, can fail to appreciate the considerable opportunity that lies ahead.

The opportunity can be seized upon for reasons of a cleaner, healthier environment, for reasons of economic competitiveness and growth, for reasons of strengthened international security, or for reasons of global citizenship. Whatever the preferred reason—and the foundations believe all four matter—it defies logic, common sense, and self-interest for the United States to persist in its wasteful energy practices and to drive into the next century as if fossil fuels are limitless and benign.

Female Participation in Education in Africa

To raise the levels of participation by young females in education in Africa is a task that will require significant resources, new policies by African governments, changed parental attitudes, and new cooperation among donors. But the long-term payoff of increased female education is potentially one of the most far-reaching and positive that can be imagined in terms of economic self-sufficiency, health management, and family planning at the household level. This is a change worth pursuing.

The Foundation has embarked, therefore, on the extremely ambitious and difficult task of working with other international donors to help African governments formulate a large-scale, long-term strategy to increase female attendance and education performance.



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The Working Group on Female Participation in Education, convened by the Foundation, operates under the auspices of the Task Force of Donors to African Education, led by the World Bank. Its work covers all levels of education, but pays particular attention to late primary and early secondary school—when female education has greatest impact on behaviors and attitudes that lead to strong future roles in national development. At present, only 10 percent of females attend secondary school in Africa, far lower than the percentage of males in

African girls in primary schools are far less likely than boys to go on to secondary schooling. Fewer than 10 percent of eligible African females are enrolled in secondary schools, a figure well below that in other regions of the world. This has serious consequences for the development process. The aim of a new Foundation initiative is to address that disparity.

Africa and also lower than the percentage of females in Asia and Latin America. The Foundation will support indigenous expertise to devise strategies for educational development.

The central judgments about effectiveness in this equation are these: there is significant and increasing evidence that the education of women, and the economic power and family influence that follow, are powerful variables in the development process; it is, therefore, worthwhile for a foundation to invest serious time, energy, and money in seeking an approach to accelerating female participation in education on the African continent; and that this can be accomplished most effectively in close collaboration with other donors even if the process promises to be slow and awkward. Our board appropriated \$1 million in 1990 to advance this process with the conviction that the objective was important, and with the knowledge that success was uncertain at best. Working with a diverse group of strong-minded donors does not guarantee agreement on a strategy. It does make it more likely that, if there is agreement on strategy, the resources to carry out that strategy may be obtainable.

International Leadership for Development and Environment

How to develop safely, fairly, and in an environmentally sustainable manner is a critical task we humans face over the next few decades. In 1990, we conferred and collaborated with a variety of other organizations to design a program to identify, train,

and support young scientists, policymakers, humanists, and social and business entrepreneurs who will be making environmental and development policy in the next century.

The program will identify eight to ten fellows per year in each of seven to nine major countries that face large development challenges, and which together will have enormous impact on the pattern of interna-

The issue of environmentally sustainable development is central to many problems...

tional development and the global environment. Eventually, a worldwide class of 80 to 100 fellows will be added each year. The fellows will come together for a common curricular experience in global issues of environment and development. They will be supported in work assignments in their own countries by an international panel of experts and a computer network; and they will be assigned during their two-year fellowship to work on a concrete environment/development problem in one of the other countries participating in the program.

Surprisingly, there is no other program that aims to identify and prepare a generation of leadership for environmentally sound development policy around the world. This strategy is a classical bet on human capital. The elements of this gamble are:

- the issue of environmentally sustainable development is central to

many problems and will be with us for a long time;

- there is an acute shortage of people who know this issue and have the tools to address it;
- a common curriculum can have both global usefulness and local application; and
- it is an effective use of funds to identify some of the ablest people who will be grappling with these issues, to add to their background and training, and to teach them about global environmental and development issues in a common framework with peers from other countries.

National Community Development Initiative

The community development movement is one of the few real success stories in the uneven history of attempts to better conditions in America's central cities.

The key to this success is the Community Development Corporation, or CDC. A CDC is a neighborhood-based group with local roots and constituency that sponsors physical renewal projects, such as the construction or rehabilitation of housing or the building of a community shopping center. The physical rebuilding plus the introduction of social standards and local responsibility that accompany it lead to overall community renewal and progress. The Ford Foundation was the first major American foundation to put serious resources into this movement, which has now grown to the point where there are well over 500 sizable, experienced CDCs in cities around the country.

A major question about the community development movement has been: Can it ever become big enough to make a sustained, widespread impact? To try to take community development to the next level of scale, a group of seven national foundations and The Prudential have formed a consortium with three broad objectives:

- to accelerate the growth of the community development movement,
- to enlist a new set of funders and lenders in the national community development effort, and to widen use of the Program Related Investment (PRI) as a foundation tool for investment in neighborhood renewal,
- to put in place a mechanism that could supply from the conventional capital markets a flow of long-term, fixed-rate mortgage money for local CDC projects. This critical role is to be played by the Federal Home Loan Mortgage Corporation (Freddie Mac), a federally chartered agency that issues and guarantees mortgage-backed securities.

The result is a national community development initiative in which a core subsidy of \$62.5 million contributed by consortium members over the next three years will generate an overall investment of about \$500 million in community development. About two-thirds of the core funding will be PRIs, that is, subsidi-



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dized loans of capital. The loans will be made to the Local Initiatives Support Corporation and The Enterprise Foundation, two national intermediaries that will, in turn, make and manage loans to local CDCs.

The physical rebuilding plus the introduction of social standards and local responsibility which accompany it lead to overall community renewal and progress.

Why go through the time-consuming steps of forming a national consortium? Again, the issue was how to be effective in achieving change. Increasing the scale of community development meant large resources were required. A consortium of large, national players is the logical group

to do this. The combined assets of the foundations in the consortium total about \$14 billion dollars. And the extraordinary leadership of Prudential in adding the largest social investment it has ever made in America's low-income urban areas holds out the promise that other businesses not presently involved in community development will join in the future.

The existence of LISC and Enterprise, two competent and proven national intermediaries, was another key to the effort. It meant the members of the consortium could wholesale their loans and grants to credit-worthy intermediaries and make feasible an undertaking that would otherwise have been an administrative impossibility.

I have chosen the four examples above because their substance and scale mark them as among the most important of our initiatives in 1990. But also significant is that three, and possibly all of the four, will involve partnerships. Partnerships are difficult. It is hard for independent organizations not faced with a common external threat to act together. And there are, of course, situations where partnerships are too slow or too inflexible to serve well. But because all the problems we face are large, and our resources in the foundation world are small, I believe we should try to act together where that promises to be most effective. Not to try means failing to seek to be as effective as possible.

To the question I asked at the outset—"How can we determine whether a course of action actually helps to change something in the

direction we intend?"—there is an important answer: We can evaluate our programs.

In 1990, the Rockefeller Foundation adopted and instituted a system of regular evaluation. We cannot and will not evaluate every grant and program. But we will take a disciplined look at large, on-going programs as they proceed, both to measure their effectiveness and to inform our direction of them.

All this is more easily written than done. But we are determined to bring rigor and tenacity to this effort, and will report on it in future annual reports.

Controversy over obscenity in the arts, the terms of government support for the arts, and the public mandate of the National Endowment for the Arts erupted in 1989 and continued throughout 1990. The Foundation played an active

role in this debate. The questions raised about how one decides what art to support apply potentially to the philanthropic sector as well as to the public sector. In addition, we were involved in several joint programs with the NEA, and thus Foundation-funded programs were affected by Federal restrictions and policies arising out of the national controversy.

In 1990, we acted in several ways that are not usual for the Foundation:

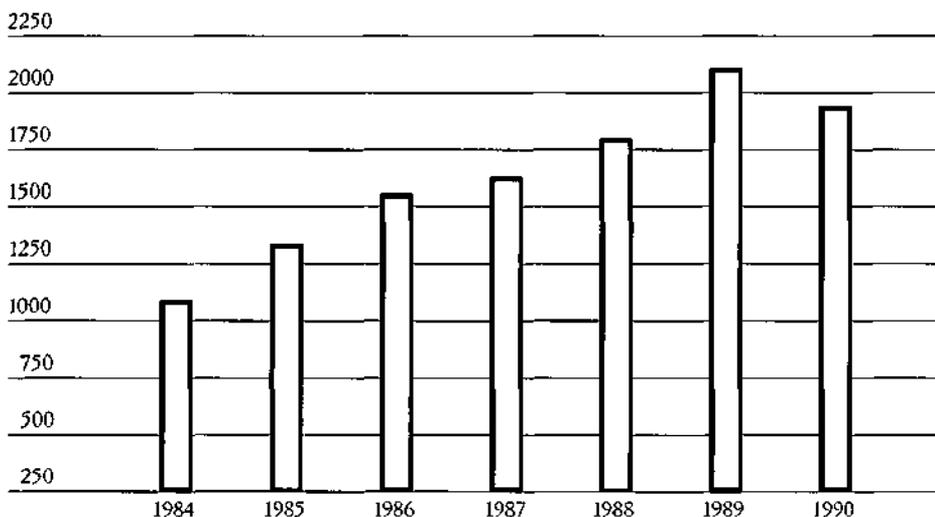
- We testified before the Congress, at its invitation, on the issues of public policy, principle, and procedure involved in the NEA controversy.
- For programs funded jointly with the NEA, we refused to agree to use of the certificate required of its grantees by the NEA. We insisted upon and obtained NEA's concurrence with a procedure designed to protect artists' constitutional rights.
- For the first time in the Foundation's history, we went into Federal Court as an *amicus* in two suits brought against the NEA by grantees alleging that what the NEA certification process required of them was unconstitutional. In one of these suits, the court found for the plaintiffs, citing the Foundation's brief at several points. In the other, the plaintiff and the NEA reached a settlement that cleared away the constitutional objection to the certification process.
- We supported the effort of various groups to re-affirm the principles of freedom of expression and restraint upon the power of the state that are central to this country's traditional values.



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Year-end values of Rockefeller Foundation assets

(nominal dollars in millions)



The legislative compromise on the NEA controversy in Congress in the fall of 1990 owed much to the recommendations of a national commission appointed by the President and the two houses of Congress, and wisely co-chaired by Foundation trustee John Brademas, president of New York University. The broader issues and passions ignited and fanned over the past two years continue to fuel debate and confrontation.

Nineteen-ninety marked the end of five years of rapid growth in the financial assets of the Foundation. It couldn't last forever, and it didn't. The stormy financial weather of the second half of 1990 did not leave the Foundation unaffected. The chart above shows our total investments at year's end for each of the past 7 years.

The big question is not whether we can absorb the bumps in the road so far. We have been expecting

them, and can absorb them readily without adverse impact on program level or quality. The big question is: how bumpy is it going to get from here on out? Will the five years of financial progress be followed by five years of financial famine? Our all-purpose answer is: maybe. We

... I believe we should try to act together where that promises to be most effective. Not to try means failing to seek to be as effective as possible.

have positioned the Foundation so that if a severe drop in total asset level occurs, we will have a margin of financial flexibility and time to adjust with minimum damage to program. But our underlying philosophy is that when financial conditions get tough, that is just when a foundation should be most persistent and insistent. We intend to act prudently, but not defensively. It is our business and purpose to support

those who pursue constructive innovation. It is important that we continue to do that most aggressively when conditions are most difficult.

Conclusion

After 1989's miracles and excitement, 1990 offered sobering realities and even bleaker prospects. Proliferation of weapons of mass destruction, the outbreak of war in the Mideast, increased tensions and conflict in Africa and South Asia, disappointment in Eastern Europe and the Soviet Union, the continuation of repression in China, and the failure to make solid international progress on environmentally sustainable development—all these suggest that the decade ahead will be daunting.

To survive as a species of promise rather than as a race of destruction will require of us a degree of planetary cooperation that we have barely begun to imagine. That should prompt us to prepare soberly for the test of effectiveness; the history of the '90s will demand it.

But let us remember also the hope of '89. And perhaps, as Seamus Heaney writes in "The Cure at Troy":
*... then, once in a lifetime
 The longed-for tidal wave
 Of justice can rise up,
 And hope and history rhyme.*

Pete Goldmark

New Program Highlights for 1990

The Foundation's major new initiatives are the primary focus of this narrative overview. The list of grants and fellowships that follows this section is the more complete view of the year's activities. The list chronicles all of the new initiatives of 1990 as well as the larger number of grants and fellowships for activities that were continued from prior years.

International Program to Support Science-Based Development

Helping the developing world to increase its capacity to use advances in the agricultural, health, and population sciences and to share in protecting the global environment is the mission of the Foundation's International Program to Support Science-Based Development. The objective is to help countries use modern science and technology, on their own terms, and in ways that are environmentally sound, to increase their people's access to food, health, reproductive choice, education, and life's other essentials

The relatively small technical and policy communities of developing countries are being stretched beyond their capacities to respond to the global environmental challenge and its interlocking political,

...technical and policy communities of developing countries are being stretched beyond their capacities...

developmental, scientific, and cultural dimensions

These countries are expected, somehow, to begin adopting new and often untested sustainable development strategies while beginning to clean up the environmental damage of prior practices, and to do both without further jeopardizing their countries' current debt-encumbered development efforts. As if this were not enough, these

same countries are being urged quickly to become constructive contributors in the ever-expanding and continuing regional and international deliberations about energy efficiency, resource management, environmental economics, climate change, technology transfer, pollution-induced diseases, and to help design the appropriate international agreements and institutions necessary for global environmental action.

The Foundation, working with a number of organizations and institutions, is creating a fellowship program to help build the cadre of developing-world experts needed to meet these challenges. Young professionals already committed to careers in environmental sciences, policymaking, or community action in a selected group of countries will be recruited for two-year fellowships designed to:

- enrich and extend their skills through workshops, internships, and electronic communication,
- support them as they address policies and policy institutions, both present and prospective, in their own countries, and
- prepare them for a period of complex international negotiation and scientific exchange leading to treaties and bargains that accommodate regional and global interests on environment and development.

The fellows' workshops will be rotated among a number of host institutions, primarily but not exclusively in the developing world, and covering a large array of topics related to the global environment. In addition, there will be workshops focused on the environmental and



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A number of the Foundation's 1990 grants are aimed at finding agricultural alternatives for small farmers currently using "slash and burn" techniques to clear valuable tropical forests, then planting crops for a few years and, when the soil is depleted, moving to a new location and repeating the cycle

developmental issues facing the host country. Special attention will be paid throughout to the kinds of bargains that must be struck between human communities in the coming decades to preserve and protect the global environment.

The initial fellows will be recruited from Brazil, China, India, Indonesia, Mexico, and the Soviet Union, plans call for eventually adding a few other countries from Asia and Africa, and for involving representation of organizations in North America, Europe, and Japan. Eight to ten fellows from each country will be appointed annually.

This year, the Foundation also joined with the Ford Foundation

and the United Nations Development Programme on an environmental initiative in China. The project began with the formation of an international advisory council to help China's Hainan province design environmentally sound development strategies, and to review major development proposals.

...energy efficiency creates a reserve of the safest, cleanest, and least expensive energy available...

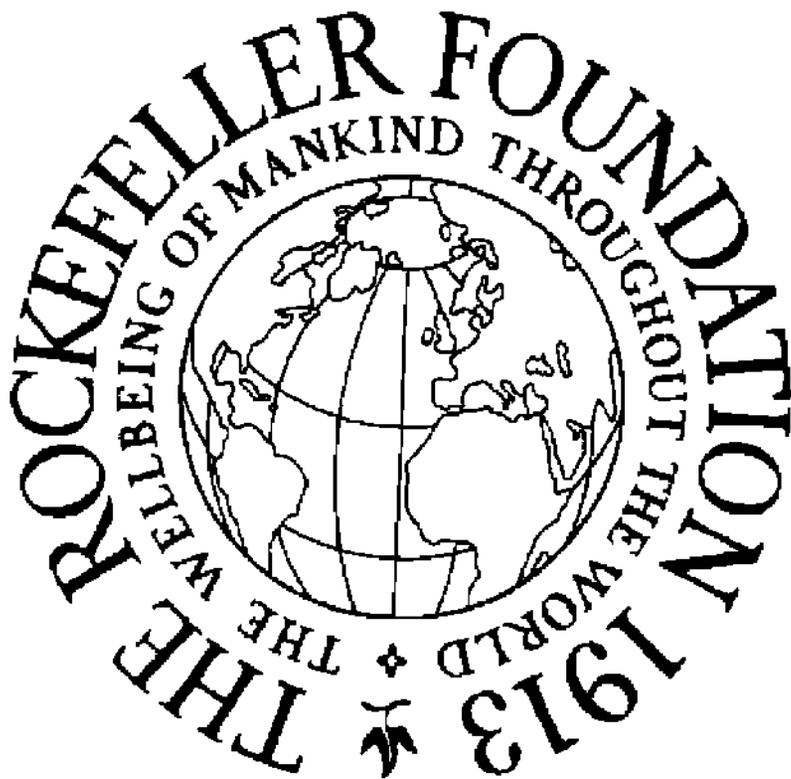
being funded by multilateral banks.

In seeking a balance between economic development and environmental protection, and with the advice of the new council, the provincial government is proceeding with a seven-point agenda. It includes creation of a master plan, pilot studies for agricultural and forestry improvements, and explorations seeking new ways of developing technology that can serve as models for environmentally compatible industrialization.

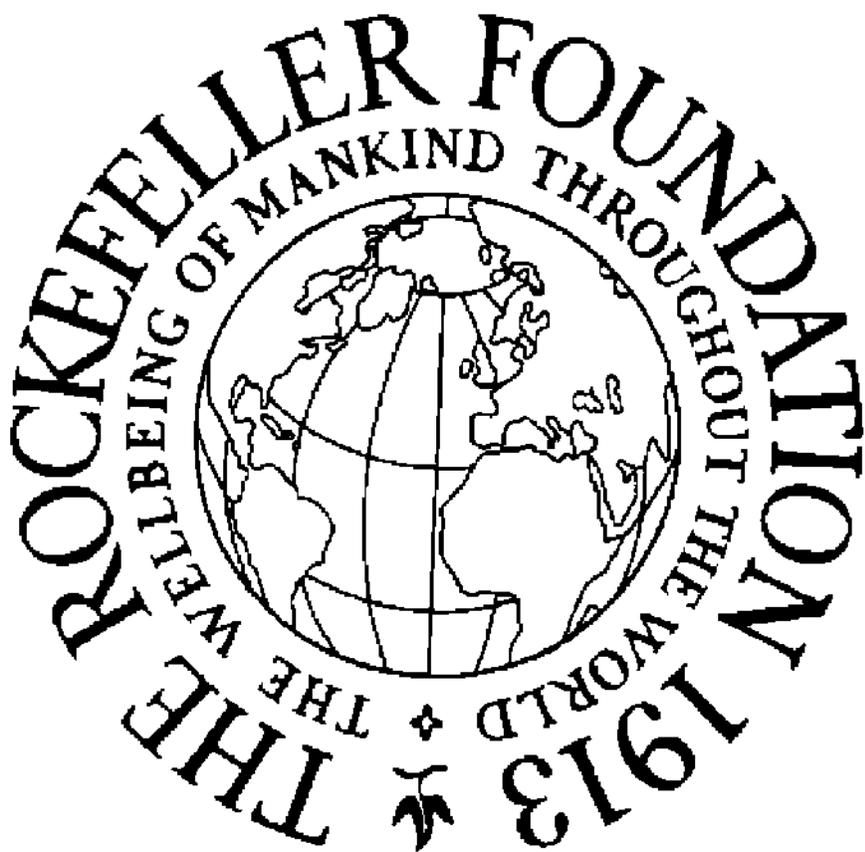
Most recently, the Foundation and its partners are responding to a request to expand this approach to assist the national government of China as it considers a national environmental strategy and the impact of national strategy on international environmental issues.

Another major appropriation is providing support for a variety of institutions and organizations advancing the interests of developing countries in the preparatory work for the 1992 United Nations Conference on Environment and

The Foundation is one of several agencies supporting and participating in an international advisory council aiding China's Hainan province to design development strategies that are environmentally sound.



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Energy Efficiency

in Automobiles
U S vs France

Miles per gallon (figures are on road fleet averages)



in Housing
U S vs Sweden

Energy Efficiency (degrees days x foot²/BTU per year)



in Manufacturing
U S vs Japan

Manufacturing Energy Efficiency (1980 dollars/MMBTU) Adjusted to U S output mix



The U S lags behind other industrialized nations in energy efficiency, as these charts suggest, costing the American consumer and putting the country at a relative disadvantage in international trade. The Energy Foundation, which the Foundation helped create this year, is promoting greater energy efficiency in this country and the development and use of technologies producing energy from wind (above), and other renewable energy sources.



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Improving tropical forest management in Southeast Asia by shifting from logging operations, shown here, to forest retention and the harvesting of nuts, oil, and other sustainable products is the focus of two major projects assisted in 1990. Also, funds were provided for a more global project to help developing countries introduce adjustments to their national income accounts so that they reflect the depletion of forests and other natural resources rather than the traditional practice of simply recording only the income from timber, minerals, and other products



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Development. This includes producing background papers on 10 options for accelerating the transfer of environmentally sound technologies to developing countries; ensuring the participation of young scientists and others from developing countries in preparing the agenda and analytic papers for the Conference; and conducting a series of briefings on global warming for the cabinets of selected developing countries.

In the belief that a credible international environmental effort should be complemented with a parallel effort in the United States, the Rockefeller Foundation also joined with the John D. and Catherine T. MacArthur Foundation and the Pew Charitable Trusts to create the Energy Foundation. This new grantmaking foundation seeks to promote energy efficiency and the use of renewable energy in the United States, and will operate for

its first three years on allocations totaling \$20 million from the three donors.

This strategy is based on evidence that if this country were to use proven, off-the-shelf energy efficiency technologies, projected

...a number of the new initiatives funded have an agroforestry focus.

energy consumption in the United States over the next decade could be cut by one-third to one-half with no compromise in lifestyle. Because the United States—spending about \$450 billion a year for energy—is the largest energy consumer in the world, the resulting savings would be billions of dollars a year.

Greater U.S. energy efficiency would therefore increase the country's economic performance and could improve international security. And because the United States is the largest national contributor to global warming—over 40 percent of the world's CO₂ emissions are released in this country—greater energy efficiency would also help the global environment.

The new foundation, headquartered in San Francisco, will foster the idea that energy efficiency creates a reserve of the safest, cleanest, and least expensive energy available to this country. It will focus on five sectors: electric utilities and industry, buildings, transportation, renewable energy, and integrated issues requiring multidisciplinary approaches. And it will provide grant support for research and analysis, advocacy of promising



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strategies, implementation and replication of successful models, and training. It will also explore the feasibility of accelerating the application of selected renewable sources of energy.

The Foundation's divisions in the agricultural, health, and population sciences are funding environmental projects specific to their own program interests. This year, in agriculture, a new guideline was defined and approved on the management of natural resources,

... information on water, soil, and other constraints is essential to guide research and the application of farming technologies.

and a number of the new initiatives funded have an agroforestry focus.

In Latin America, a cooperative venture of Brazil's national agricultural research agency and scientists from North Carolina State University will examine different sets of crop, grass, and tree components to develop viable, long-term cropping and agroforestry alternatives for the small-scale farmers in the Western Amazon who presently slash and burn forest land, plant crops for a few years, and then move on to a new location and repeat the cycle. To increase the project's impact, there are provisions to employ graduate assistants from Latin American universities, and for linking the participating scientists

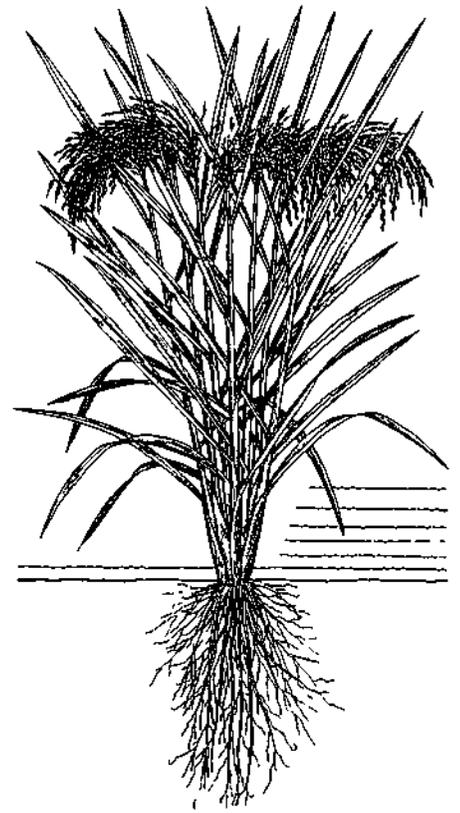
with others seeking solutions to tropical deforestation.

An African project, in Malawi, is developing agroforestry practices that can yield cash for small farmers and complement their other cropping systems. Another, in Uganda and Tanzania, is developing agricultural alternatives to slash-and-burn methods.

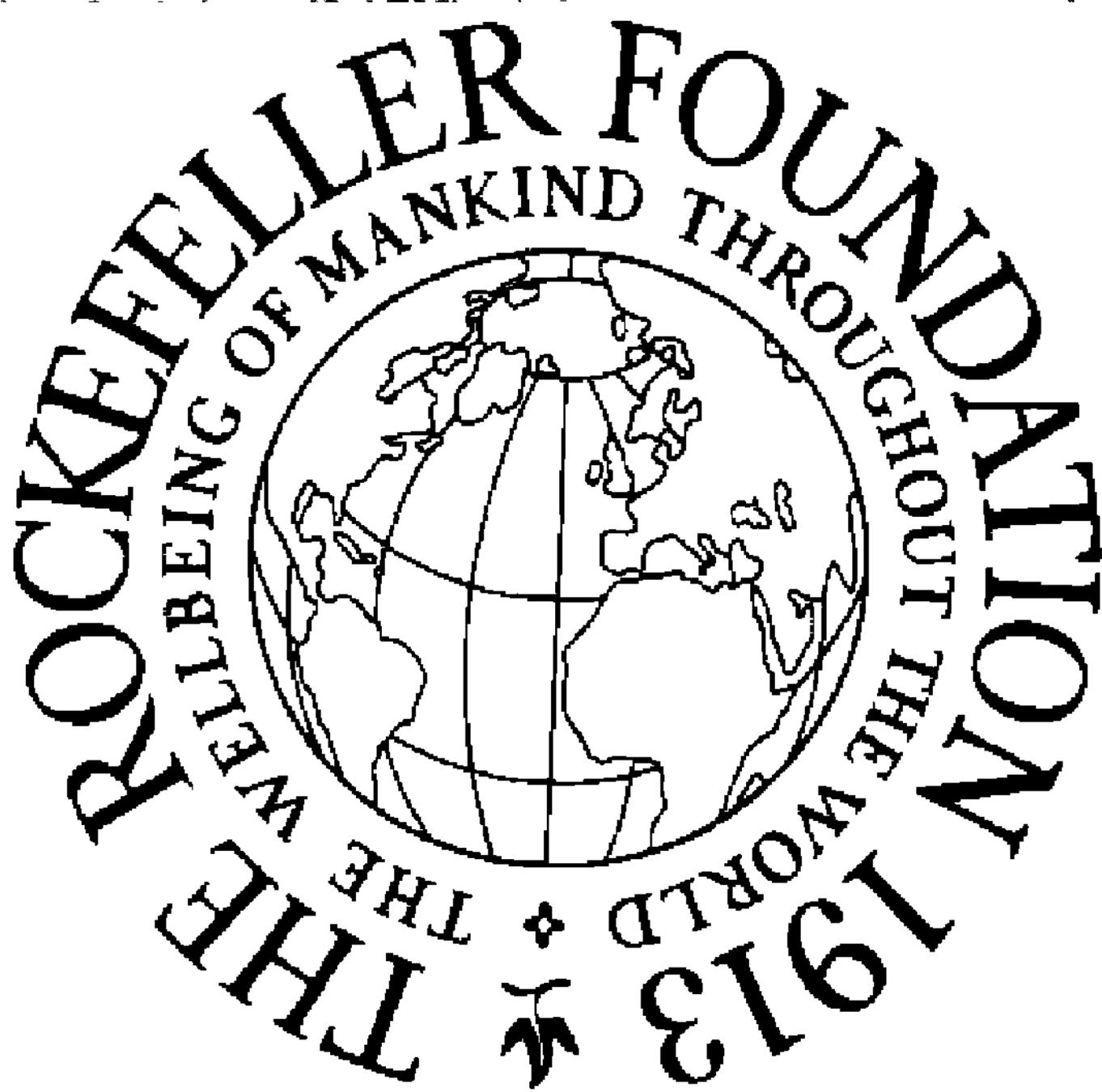
There are also two agroforestry projects in Southeast Asia. One seeks to assess the economic and environmental implications of shifting from exploiting timber to sustainable harvesting of such forest products as fruits, nuts, organic gums, and oil. The other is one of long-term field research to develop predictive models for forest management systems that would strengthen the socioeconomic case for forest retention. This project expands on work funded by the John Merck Fund, the W. Alton Jones Foundation, the National Science Foundation, the Smithsonian Institution, the World Wildlife Fund, and the U.S. Agency for International Development.

Other initiatives under the new guideline include a large-scale, Latin American study of the environmental effects of using pesticides in growing potatoes, a major Andean food crop. Results from the study will be used to formulate recommendations for modifying government policies influencing pesticide use.

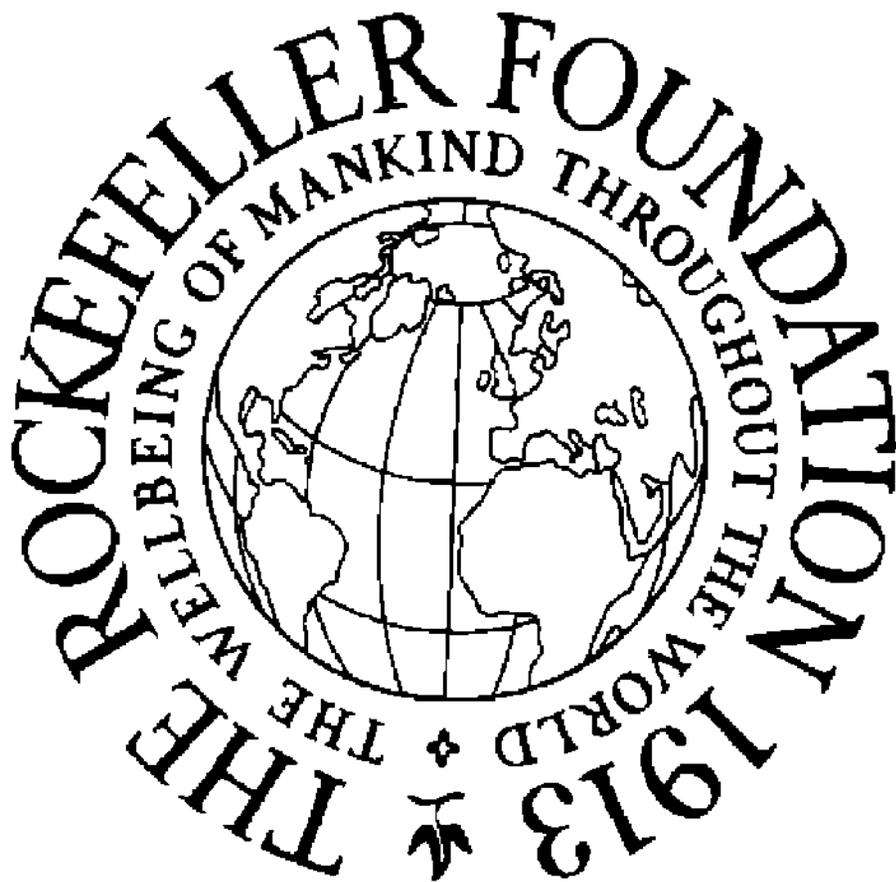
And finally, a major African project will modernize the compilation of information from standard statistical sources, remote sensing, and electronic information systems for the identification of the physical, biological, and socioeconomic constraints on agricultural production



Collecting seeds from wild rice varieties wherever they can be found is part of a worldwide effort to preserve the genetic diversity of important food crops. Seeds and other germ plasm material collected yield genes that, potentially, can be used by scientists using plant breeding and new biotechnologies to create improved plant varieties. Because plant pests and diseases continuously evolve to overcome plant resistance, and do so at a much faster rate than plants evolve, the need for improved varieties is unending. The Foundation is one of 39 donor organizations in the Consultative Group on International Agricultural Research, which supports this work.



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Editing was completed (above), and Local Heroes, Global Change, a four-part public television series was broadcast this year to give Americans a better understanding of the developing world and the global challenge of hunger. Policies affecting trade, aid, and debt received particular attention in the video and in collateral print materials that have been used extensively by school, church, civic, and other groups across the country. The Foundation was one of a number of funders of the project.

in Eastern and Southern Africa. The region is too vast for current macro-level analytic methods, and information on water, soil, and other constraints is essential to guide research and the application of farming technologies.

Leguminous plants—beans, peas, peanuts, and alfalfa, for example—incorporate certain bacteria into their root structures and form symbiotic relationships in which the bacteria convert atmospheric nitrogen to soluble forms that can function as essential plant nutrients. Cereals and many other important crops do not.

If genetic engineering can be used to introduce symbiotic nitrogen fixation into non-legume crops, it could be one of the most significant contributions of biotechnology to agriculture. It would substantially reduce the need for fertilizer derived from non-renewable fossil fuels. And by helping to wean modern agriculture from its excessive dependence on such fertilizer, millions of peasant farmers who cannot afford commercial fertilizer would benefit.

During the past year, results from earlier Foundation-supported work suggest this goal may be less difficult to attain than most scientists have envisioned. This work is under way, with Foundation assistance, at England's University of Nottingham, the Australian National University in Canberra, and the Chinese Academy of Sciences' Institute of Botany in Beijing. The three laboratories will exchange materials, try to replicate one another's results, and use selection and genetic engineering

strategies to advance toward effective symbioses involving cereal plants. The Center for Nitrogen Fixation Research in Cuernavaca, Mexico, is also collaborating in this effort.

Other appropriations under the Foundation's guideline to apply biotechnology to developing-country food crops include support for two groups of Mexican scientists working with the Monsanto Company to effect the first no-cost transfer of a proprietary, bio-engineered trait—disease resistance—to a potato variety important in developing-world agriculture; and funds enabling scientists at the John Innes Foundation in England to use biotechnology techniques to capitalize on earlier work by creating genetically engineered maize plants resistant to a virus causing severe yield losses in Africa.

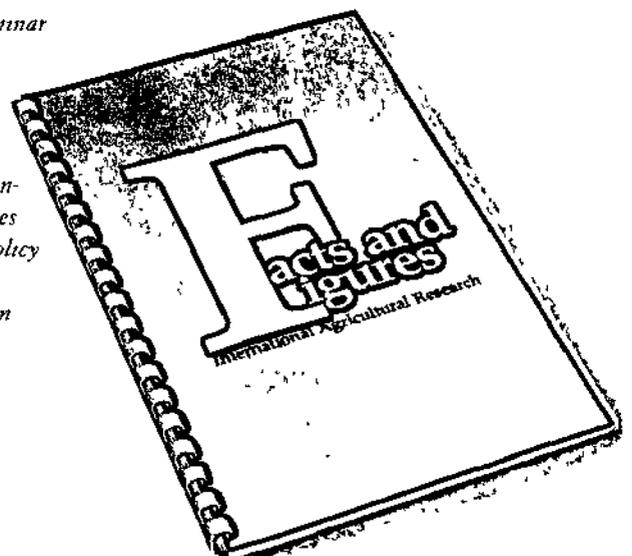
Seventeen scientists from around the world and 35 journalists, mostly from the U.S., participated in a three-day media seminar this spring in Annapolis, Maryland, on the latest advances in international agricultural research and the environment. The seminar quickly covered the basics in Facts and Figures and then worked through individual presentations on research in progress and newly completed. It was a cooperative effort of the Communications Office and Agricultural Sciences division and the International Food Policy Research Center to increase public understanding of world food production.

During the year, one of the Foundation's biotechnology career fellows, Sheikh Riazuddin, succeeded in developing a means for genetically engineering chickpea plants, an important food crop in Ethiopia, Pakistan, India, and other developing countries. Following his first success in using bacteria to transfer genes between plant varieties in Dr. Milton Gordon's

... the bacteria convert atmospheric nitrogen to soluble forms that can function as essential plant nutrients.

laboratory at the University of Washington, Dr. Riazuddin is continuing the work in his own laboratory at the University of the Punjab, in Pakistan.

A \$1.2-million program of grants and staff technical assistance to assist China in reestablishing its national crop germplasm conservation program was concluded successfully this year with the beginning of operations in the new plant



gene bank at Beijing. China is the country of origin for the soybean, cabbage, onion, peach, and other crops, so the new gene bank has important international implications. The new facility maintains 180,000 varieties of 294 different crop species stored at -18°C ., and plans call for increasing this to more than 400,000 varieties within five years.

Nineteen-ninety was the final year in an international campaign to vaccinate developing-world children for six common diseases: measles, diphtheria, pertussis, tetanus, polio, and tuberculosis. Begun in 1974 when less than five percent of the children had been vaccinated, the campaign had a goal of universal childhood immunization, technically defined as 80 percent vaccinated. Statistical compilations will not be completed until 1991, but indications are that goal was reached, or very nearly so.

With attention focused this year on sustaining universal childhood immunization, the 1990 U.N. summit on children called for accelerated development of "The Children's Vaccine"—a one-dose, oral vaccine effective against all the major viral and bacterial diseases of childhood, which would remain stable without refrigeration, could be given early in life, and would be affordable for developing countries.

If reaching the ideal for 20 or so diseases is problematic, there is a strong consensus that major strides

in this direction are achievable, and a flurry of meetings around the world brought together funders and experts in the field to plan an umbrella organization that will launch an international research and development drive, beginning in 1991.

Even the six vaccines used in the 1974-90 campaign all have limitations presenting special problems in much of the developing world. Five are injected, which in many areas of the world puts children at high risk of infection from nonsterile needles.

The report notes that good health is both a development objective and a factor driving development, and that health in developing and industrialized countries is interdependent.

To get all six vaccines, a child must make five separate visits to a physician or clinic, significantly reducing the numbers of children who complete the course of immunization, and all of the vaccines must be refrigerated until used.

Foundation support for this new effort builds on years of funding and staff participation in a range of vaccinology programs, including the World Health Organization's vaccine development program, the transfer of new vaccine production technology into the developing

world, and the Task Force for Child Survival, which has served as a coordinating device for the just-completed immunization campaign and is co-sponsored by WHO, UNICEF, the World Bank, the U.N. Development Programme, and the Foundation.

Another take on health—as a dimension of national development—generated attention around the world this year as the Commission on Health Research for Development issued its report and recommendations and prepared to launch an international task force for follow-up action.

The independent Commission, created in 1987 and chaired by John R. Evans, who also chairs the Foundation's Board of Trustees, produced a detailed strategy and case for country-specific research that can inform decision-making on programs and policies to protect and improve the people's health and to use the limited resources for health most effectively—what it termed Essential National Health Research. Such research is not limited to biomedical studies but emphasizes epidemiological, operational, and other health sector inquiries, socioeconomic determinants of health and the health effects of development in other sectors.

The report notes that good health is both a development objective and a factor driving development, and that health in developing and industrialized countries is interdependent. The report presents a comprehensive picture of health research activity and sources of funding worldwide, and identifies



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The growth, health, and health expenses of 640 children in Manila are being monitored in an immunization study by staff from the Clinical Epidemiology Unit at the University of the Philippines System medical school—one of 27 such units the Foundation is helping to establish at medical schools in 16 developing countries. This and other studies under way in these units have been designed to produce information that health officials can use in creating programs and policies to use scarce medical resources effectively and wisely.

priorities for attention that are currently neglected.

The Commission recommends that developing countries invest at least two percent of their national health expenditures in health research and that development assistance agencies commit at least five percent of their health project aid for essential national health research and research capacity building in the developing world.

Essential national health research and research capacity building along the lines recommended by the Commission is the mission of the Foundation's International Clinical Epidemiology Network (INCLIN). For 10 years, INCLIN, as the Network is known, has been training cadres of physicians and other professionals to form and staff Clinical Epidemiology Units (CEUs) in 27 medical schools in 15 developing countries. Epidemiology is the core discipline—a science dealing with the incidence, distribution, and control of disease in populations—but health economics, biostatistics, and the social sciences are also represented. Research in these units is now producing information essential to understand the countries' most serious, large-scale health problems and to devise cost-effective measures and policies to control or overcome these health problems.

Faculty members staffing the CEUs have been trained at five universities in the industrialized world. In 1990, however, INCLIN began to shift the responsibility for training from these universities to the CEUs themselves. In addition to continu-

ing their own research efforts, CEU personnel will begin helping other medical schools in their regions to establish similar research units, and will be training faculty from these schools to staff the new units.

The newest element in the Foundation's efforts to help developing countries increase their capacities to create research-based health strate-

Research in these units is now producing information essential to understand the countries' most serious, large-scale health problems...

gies and policies are national epidemiology boards in Thailand, Mexico, and Cameroon. These boards plan and fund policy-relevant research and provide advice, based on such research, to their countries' health policymakers.

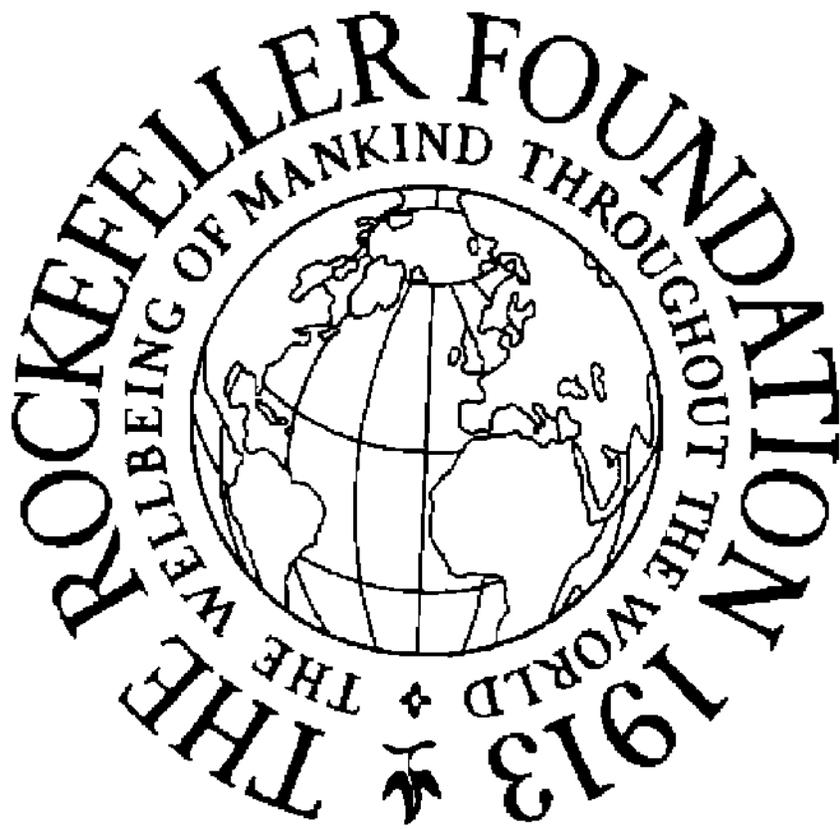
In providing continued support this year for the advisory board in Mexico, the Foundation facilitated its first "debt swap." Such arrangements enable developing countries to use their own currencies to reduce external debts owed in harder currencies while simultaneously enhancing external investment. Working with the Fundación Mexicana Para La Salud, which arranged the transactions, the Foundation was able to increase support for the epidemiology advisory board by approximately 70 percent above the original level of the grant.

Twenty-one years ago, the Foundation began supporting field trials of NORPLANT, a contraceptive implant that releases the hormone progesterin over a period of five years to inhibit ovulation. The Foundation's support for study and evaluation of NORPLANT has continued without interruption, and today this contraceptive system, approved by 16 countries, is being used by more than one million women, mostly in developing countries.

This year, the U.S. Food and Drug Administration approved NORPLANT for use in the United States—the first new contraceptive method in this country in 30 years—and Sheldon Segal, the Foundation's director for Population Sciences, received the Arthur and Edith Wippman Scientific Research Award of the Planned Parenthood Federation for his contributions as the originator of implant contraception and co-developer of NORPLANT.

This year, too, the Foundation's trustees approved a major appropriation to continue an international post-marketing field study on NORPLANT with an early alert system for unexpected side effects or user complaints.

Funds are also included for field studies in China, Kenya, and Egypt to improve family planning services and to introduce advanced versions of NORPLANT and improved IUDs. If a contraceptive vaccine for women being tested in India proves effective, it too may be introduced in these sites. Developed by G. P. Talwar with Foundation support, the vaccine has passed initial safety tests, and its contraceptive effect can be reversed by



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not taking an annual booster shot. Like vaccines also being tested in the United States and Australia, the Indian vaccine causes the woman's immune system to produce antibodies that block a messenger hormone produced by fertilized eggs. Without this signal, implantation cannot take place and menstruation occurs as usual. This failure of fertilized eggs to implant occurs naturally about one out of three times.

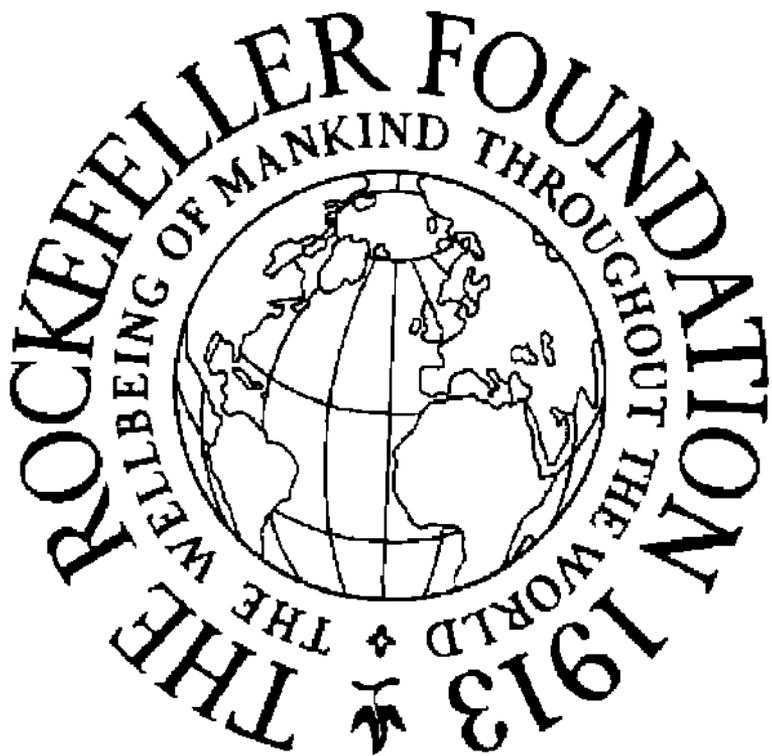
The South-to-South network of 12 developing-country population scientists was formed with Foundation funding in 1986. A wide range of collaborative research and training projects in reproductive health and fertility control have been conducted under the network's auspices in Brazil, China, the Dominican Republic, Egypt, India, Kenya, Mexico, Nigeria, Thailand, Zambia, and Zimbabwe.

This year South-to-South established a nonprofit organization to administer its finances, maintain a data analysis unit, organize meetings, provide purchasing services, initiate training activities, coordinate its ventures with other groups, and diversify its funding base. The new entity is based in Salvador, Brazil, and its executive director is O. A. Ladipo of Nigeria, on leave from the University of Ibadan, where he is professor and chairman of the department of obstetrics and gynecology.

This rapid, inexpensive new "dipstick" test for AIDS is being developed for eventual manufacture and use in the third world. Results from laboratory testing and field trials have been independently confirmed, and the detailed documentation needed by a manufacturer is being prepared.

Chemicals embedded in the comb change color when exposed to antibodies for the HIV-1 or HIV-2 AIDS virus in human blood. Cost per test, when the product is manufactured in a developing country, is expected to be a fraction of the cost of conventional tests, and testing takes 10 minutes rather than two hours.

The new technology is primarily intended for use in screening blood used for transfusions. It is being developed by the Program for Appropriate Technology in Health, in Seattle, with support from the Foundation and the International Development Research Centre of Canada.



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The Foundation is participating with a large group of other donor organizations in efforts to help African countries increase female enrollment in school, which lags behind that of African males and behind that of females in any other region of the world.

There are now proven links between mothers' formal education and their children's health and readiness for learning, between female education and reduced fertility, and between female education and productive self-employment both on and off farms. In Africa, however, school participation of females con-

Only 10 percent of African females in the appropriate age group attend secondary schools.

tinues to lag behind that of other regions of the developing world and behind that of African males.

In the primary school years, repetition and dropout rates are higher for females, and female achievement scores tend to be notably lower on average. But in succeeding years, the gap between male and female school participation is especially severe. Only 10 percent of African females in the appropriate age group attend secondary schools.

Building on preliminary work begun last year, a substantial appropriation was approved this year to underwrite the Foundation's participation as convener of the representatives of 19 donor agencies concerned about the educational plight of African females. The group coalesced as a subcommittee of the Donors Task Force on African Education, initiated by the World Bank in 1988.

The subcommittee is examining what would enable countries to design interventions, including practical measures that can increase the willingness of parents to send

their daughters to school and keep them there; ways of enhancing the numbers, quality, and professional standing of female teachers; and methods to combat the incidence of malnutrition in young girls.

The particular viewpoints and interests of individual donors on the overall issue differ widely, but a common commitment is emerging to help African countries build their own capability for devising and implementing policies to improve education that are sensitive to fiscal, demographic, and cultural realities.

The Foundation's funds will be used in four ways. One, to help support a multi-donor research grants program in Africa to explore the constraints and opportunities in accelerating African female education in specific country settings. Second, to ensure the participation of African scholars in projects analyzing existing large-scale data sets relevant to educational planning. Third, to assist the professional re-integration of a small number of African educational scholars who are returning home from doctoral studies abroad and have interests relevant to the field. And finally, to support a collaboration between government and educational leaders on policy and research topics key to improving female educational opportunities.

The Arts and Humanities

The Foundation's Arts and Humanities program seeks to encourage creative artists and scholars whose work can advance international and intercultural understanding in this country. Of particular interest is the flow of art and knowledge between developing-world cultures and the United States, and in increased opportunities through the arts and humanities for U.S. population groups whose ethnic and cultural roots are in the developing world.

During 1990, the Arts and Humanities division expended slightly more than \$1 million to explore future program possibilities in environmental ethics and in other applications of the arts and humanities that might foster the range of

Of particular interest is the flow of art and knowledge between developing-world cultures and the United States...

understanding and insight needed to help meet and resolve today's challenges to the global environment.

Yale University, for example, received major support to establish an interdisciplinary and comparative program in agrarian studies for U.S. and developing-world scholars in such disciplines as history, political science, literature, philosophy, economics, and anthropology. Plans are to build strong links with

developing-world institutions, starting with existing faculty ties to universities and research groups in South and Southeast Asia, China, and Brazil.

The Foundation's Humanities Fellowships annually enable 60 scholars at 26 institutions to pursue study and research that can further understanding of contemporary social and cultural issues and extend international or intercultural scholarship. Six new sites were added to the participating institutions this year: an urban cultural studies program at the City College of the City University of New York; the Research Institute for Inner Asian Studies at Indiana University; the Institute for Advanced Study and Research in the African Humanities at Northwestern University; the Department of American Studies and Department of African-American Studies at the State University of New York at Buffalo; the Chicano Studies Research Center at the University of California, Los Angeles; and the Program on South Asian Civilizations at the University of Chicago.

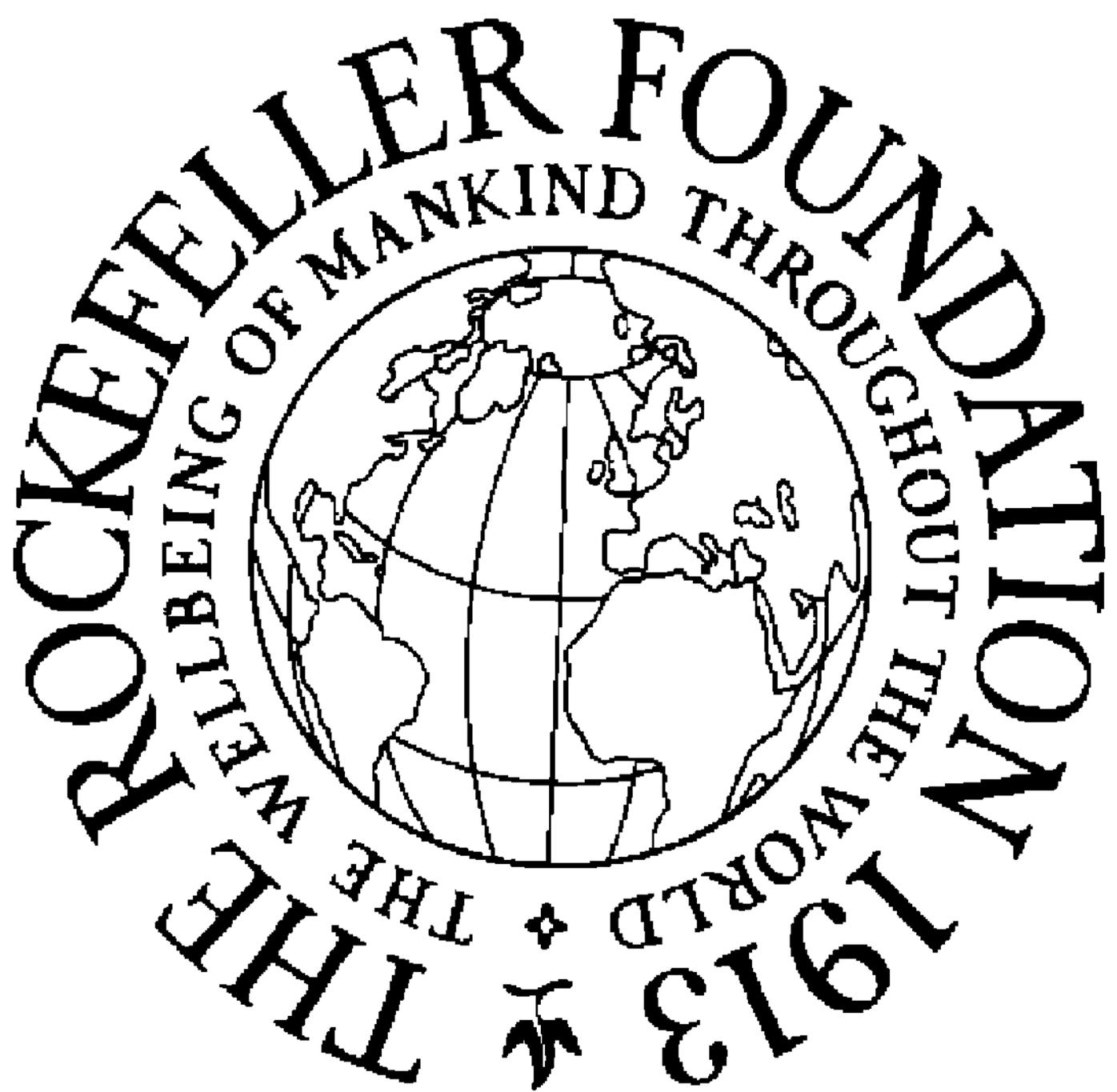
Over the past four years, the Foundation has supported the creation and dissemination of new work in the performing arts. The Multi-Arts Production Fund and the New Forms: Regional Initiative are key programs designed to assist artists and arts organizations across the country to undertake innovative projects representing the varied cultures of the nation and world.

This year, another major appropriation is being used to support selected domestic arts festivals celebrating cultural commonalities and

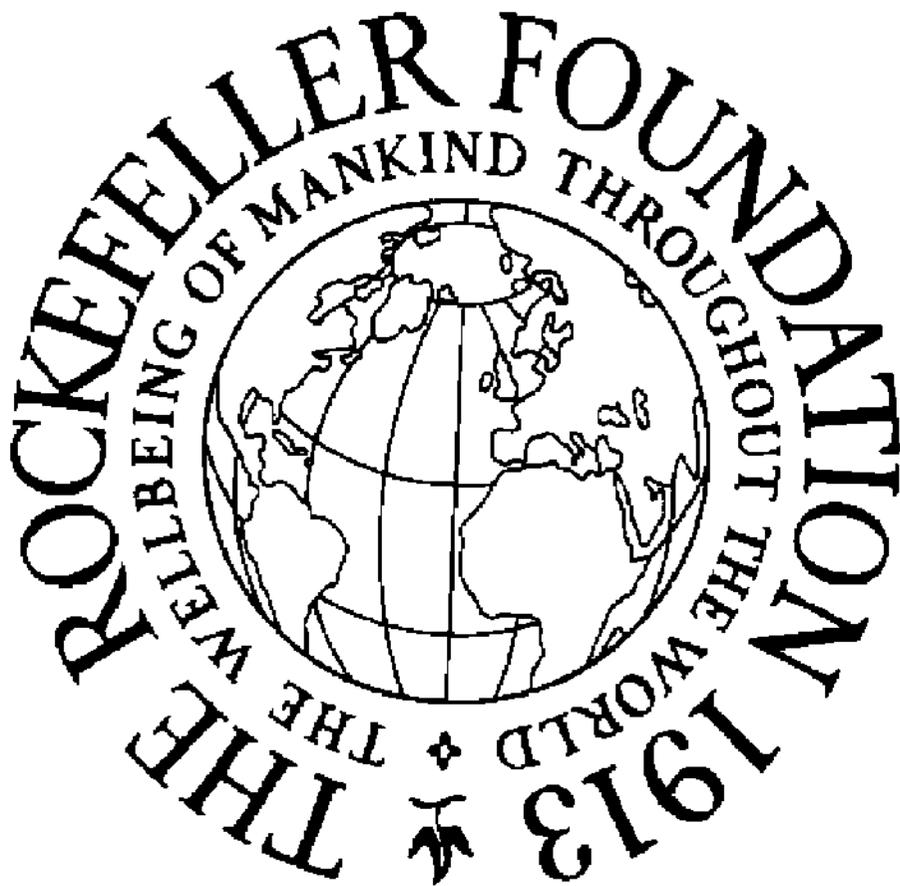


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Details and objects from Tropical Rainforests: A Disappearing Treasure, can only hint at the breadth and depth of the Smithsonian Institution exhibition that is touring the United States. With support from the Rockefeller and MacArthur foundations, Latin American scholars and museum professionals are creating versions of the exhibit in Spanish and Portuguese for a 10-nation tour of Central and South America.



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An exhibition of 400 paintings, pieces of sculpture, and other works reflecting 30 centuries of Mexican art opened this year in New York, and will go on next year to Los Angeles and San Antonio. To augment the exhibition and create a deeper understanding of Mexico, its people and culture, the Foundation has assisted an array of simultaneous educational and arts programs in the three cities—including concerts of Mexican regional music and dance, retrospectives of Mexican cinema, stage adaptations of classic Mexican drama, folk art demonstrations and exhibits and in New York a photography exhibition whose catalog is depicted above

differences. Varied festival objectives have included presenting work in an interdisciplinary context, highlighting the diverse artistic developments of a particular culture, comparing works of different cultures within a specific arts discipline, celebrating cultural achievement within a regional context, and providing an international forum for artistic interchange.

The American Dance Festival's International Choreographers Workshop draws promising choreographers from abroad to Durham, North Carolina, for an intensive six-week workshop. Foundation support, in partnership with the U.S. Information Agency (USIA), has enabled the program to include participants from China, the Soviet Union, Southeast Asia, Africa, and Latin America. The Workshop helped in the establishment of China's first modern-dance program and company, the Guangdong Chinese Modern Dance Company. Similar initiatives are under way in Argentina, Venezuela, Ghana, Zaire, and Soweto.

The Foundation has also supported festivals that seek to embed their activities in the cultural life of the community, as exemplified by the American Festival Project. This three-year project is administered by Appalshop in Whitesburg, Kentucky, in conjunction with six other companies representing diverse cultural heritages. Seven festival sites are planned across

the country and each will include local artists and community members reflecting the specific cultural concerns of the host regions

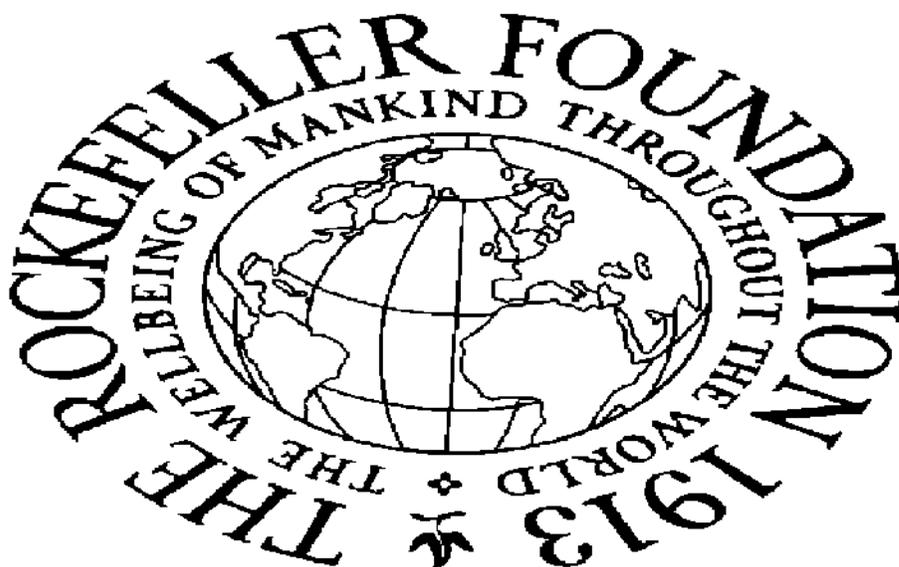
The Workshop helped in the establishment of China's first modern dance program and company...

The Foundation launched National Video Resources (NVR) early in 1990 to help increase the public's access to videocassettes of independent feature films, important documentaries, visual and performing arts programs and experimental film and video. For despite the widespread availability of videocassette recorders and the numbers of independent producers working throughout the world, most of the best works offering exposure to new ideas and other cultures are not easily available at affordable prices.

Projects started by NVR in its first year include

- assisting the Walker Art Center in Minneapolis to develop and test a model video rental store in the museum shop for independent and multi-cultural videos,
- curating the *Green Video Collection* (35-50 environmental tapes, including features, documentaries, music videos and children's productions) and underwriting its initial direct marketing campaign, and
- supporting promotional efforts for the release on videocassette of eight feature films produced by African filmmakers with special emphasis on reaching universities, colleges, and public libraries.

NVR has also underwritten publication of both *Independent*



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Producer's Guide to Distributors and Alternative Visions Distributing Independent Video in a Home Video World

The Foundation also funds Intercultural Film and Video Fellowships, an annual competitive program supporting innovative media artists whose work explores and interprets cross-cultural and environmental issues, both internationally and within the United States. In 1990, the Foundation launched an additional aspect: Stage II Awards designed to aid in the completion and promotion of such earlier Fellowship projects as Trinh T. Minh-ha's experimental documentary "Surname Viet, Given Name Nam," and Charles Burnett's feature film "To Sleep with Anger."

Each year, the Foundation also supports selected major media

A view of the Jenny Holzer installation that earned her the prize for best pavilion at the Venice Biennale. Exhibition of this work was made possible by the Fund for U.S. Artists at International Festivals and Exhibitions co-supported with the Pew Charitable Trusts, the National Endowment for the Arts, and the U.S. Information Agency. The Foundation also helped make possible the first exhibition at the Biennale of sub-Saharan African art—a presentation curated by the Studio Museum in Harlem and based on its show Contemporary African Artists: Changing Tradition.

productions or series dealing with intercultural understanding and intended for a national public television audience. This year, funds were approved for research and development of a comprehensive documentary series, planned by Media Resources Associates, about the history and culture of Native Americans.

Native American film professionals are to have key roles in developing the series, and it will draw upon the best of recent

“...the arts’ power to heal and help, teach and question is needed now more than ever.”

scholarship, much of it by Native Americans, in such fields as literature, history, anthropology, religious studies, and art history. Staff will also search out photographs, film footage, and sound recordings that have been preserved in the National Archives, the Library of Congress, and the National Parks Service, as well as in tribal and state archives and regional museums. All the information from the film series is to be incorporated by the new National Museum of the American Indian into its database and will be available to scholars and the public.

Two other initiatives focus on Chicano filmmaking. A grant to the Latino Consortium will support

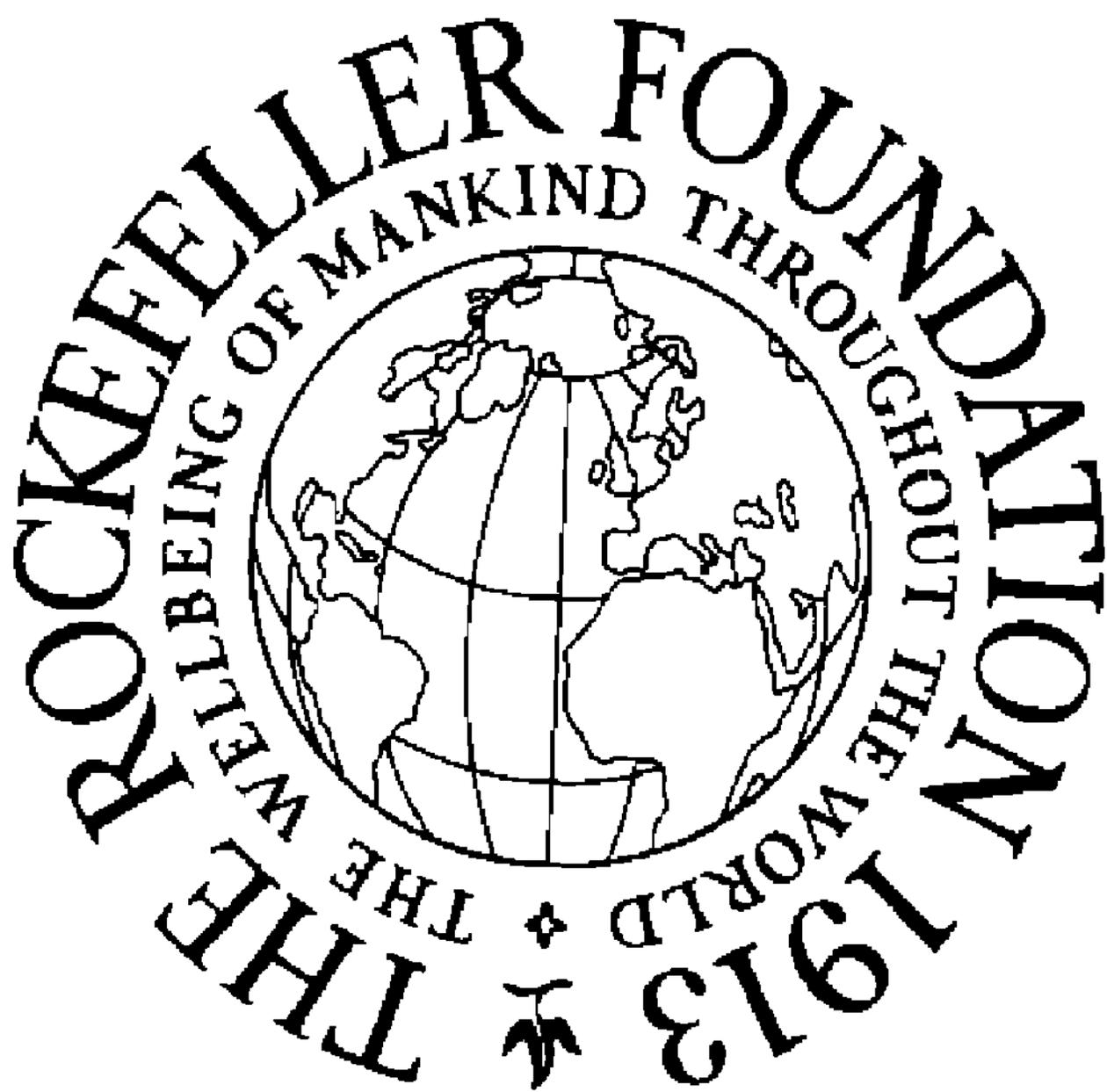
research and development of “The Story of the Chicano Civil Rights Movement,” intended for national public television. This four-part series will portray the political and cultural “Movimiento” of the late ’60s and early ’70s, to examine such issues as the struggles for educational reform and political empowerment, as well as the explosion of artistic expression inspired by these events. The Foundation also supported a conference at Colegio de la Frontera at Tijuana, entitled “Encuentro Quinceañero,” to examine the contribution made by Latino/Chicana and Mexican women, working in film and video, on both sides of the border. This gathering also serves as a pivotal model for the Foundation’s long-range efforts to internationalize its film and video initiatives.

Other grants and fellowships were also awarded in 1990 through a number of ongoing competitive arts and humanities programs. These include:

- 15 grants encouraging museums to explore innovative ways of presenting non-Western and American minority cultures. For example: a Polarities touring exhibition of contemporary Cuban art, and complementary activities promoting artist-to-artist dialogues between North Americans and Cubans.
- 13 grants, with NEA co-funding, enabling regional organizations to assist emerging American performing artists to develop new, interdisciplinary works and present them before audiences in their own



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Members of Australia's Woomera Mornington Island Culture Team were only a few of the more than 1,400 artists who participated in the 1990 Los Angeles Festival. In addition to dance, the festival featured music, film, video performance, theatre, and the visual and literary arts. The artists were drawn from China, Colombia, Soviet Asia, Cambodia, and 20 other countries on "the Pacific rim," to perform and exhibit in 36 locations in the city during the 17 day Festival. The Festival, which was assisted by the Foundation, presented both traditional and non-

traditional genres under one umbrella juxtaposing for example, the ritual performances of Korean shamans with the work of a Korean filmmaker dealing with the place of ritual and belief in the lives of ordinary people. A series of meetings of scholars that began at the Festival continues to analyze and critique the various models of presentation and consider the future of intercultural presentation.



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Jazz composer Hannibal Marvin Peterson's new one-hour work, *Africa Portrait*, was performed this year, for the first time, at Carnegie Hall by the American Composers Orchestra. The work is scored for a full symphony orchestra, a chorus, a four-piece jazz ensemble, a male blues singer, a female vocalist, and a guiro player. Peterson was completing a residency for jazz composers co-funded with the AT&T Foundation and the National Endowment for the Arts.

parts of the country. Beginning in 1991, the participating regional arts organizations will be able to make funds available to artists from all 50 states and Puerto Rico.

■ 31 grants, via the Multi-Arts Production Fund, in support of innovative performing-arts projects that explore diverse cultural heritages, ranging from funds to the Baltimore Opera for developmental workshops of "Amistad," composed by Anthony Davis with a libretto by Thulani Davis, to a grant to San Jose Taiko for a collaborative music/movement project.

And finally, public controversy continued throughout this year over the role of the government in supporting controversial art, as noted in the President's Review. Beyond the Foundation's actions described there, the American Assembly created a forum for reasoned discussion and debate on the subject by professional, business, academic, and

community leaders from across the country, representing a broad range of views and interests.

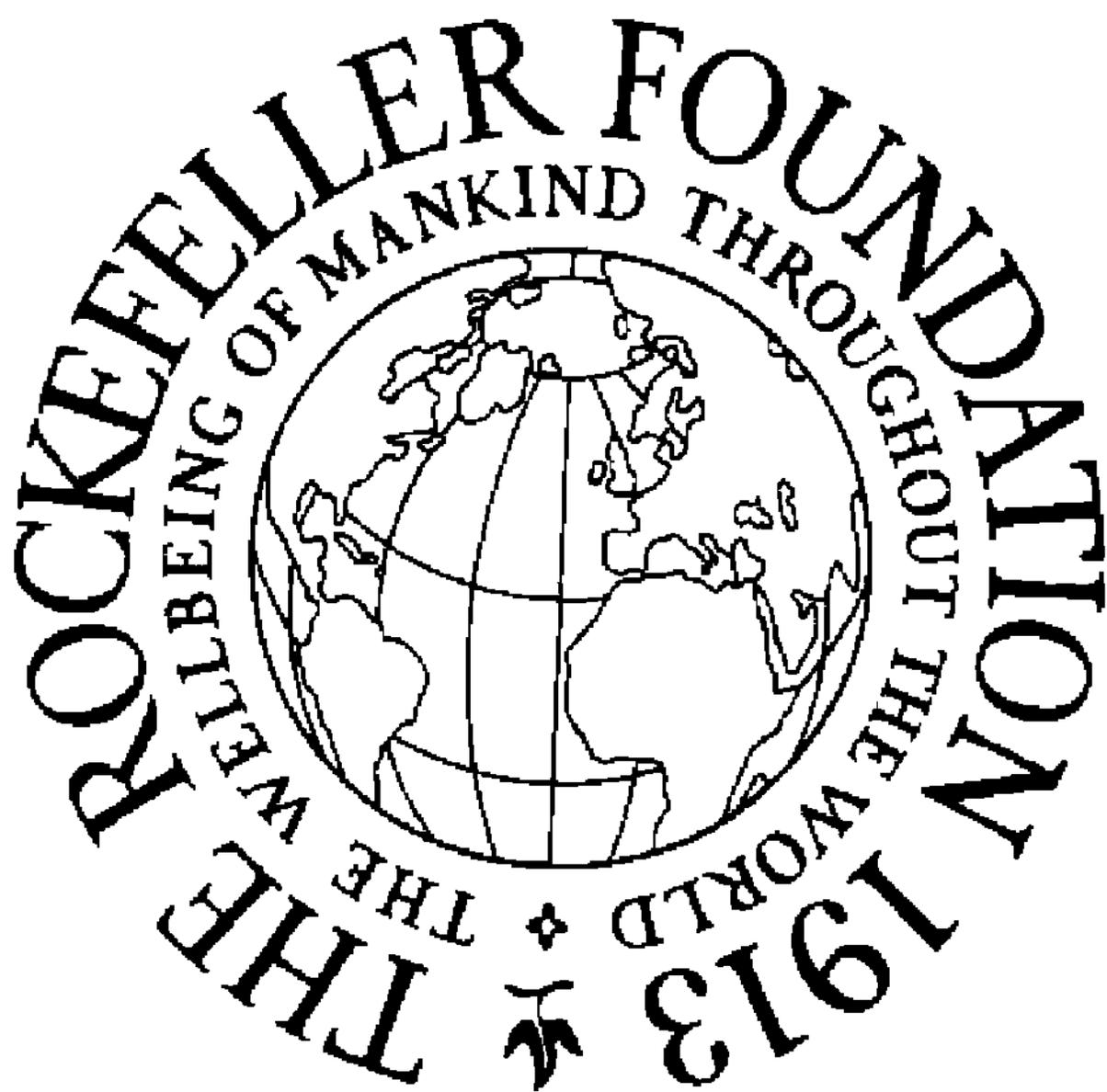
The role of government in the arts was addressed in seven local assemblies—in Chicago, Dallas, Kansas City, Los Angeles, Miami, Minneapolis, and Pittsburgh—and a national assembly in November. This program and its report (*The Arts & Government: Questions for the Nineties*. New York: The American Assembly, Columbia University, 1990.) were co-funded by the Foundation and the AT&T Foundation. The findings and recommendations speak to the NEA and its programs, state and local arts support, advocacy and political action, cultural diversity and government support, international cultural policy, tax policies, and the arts in education.

The final lines of the Assembly's report are particularly compelling: *Throughout the discussions, Assembly participants were well aware that in such a climate of scarcity, the structures that sustain the arts will need to be stretched even farther if current levels of service to the public are to be maintained. Imagination and ingenuity will be in particular demand. But the seriousness of the outlook only served to reinforce the conviction, evident throughout the discussions, that the arts' power to heal and help, teach and question is needed now more than ever.*



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Triumph of the Hands, one panel of Judith F. Baca's large-scale work during its display this year in Moscow's Gorky Park. At each stop on a 10-nation tour, assisted by the Foundation, local artists are adding to Ms. Baca's panels on war, peace, cooperation, interdependence, and spiritual growth.



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When neighborhood based, self help community development corporations borrow money and rehabilitate blighted, multi-family housing for low-income families, the result is neighborhood and human revitalization with staying power. Such successes, reflected in this New York neighborhood and others like it all across the country, prompted the Foundation to join with six other foundations and The Prudential in a \$625-million new initiative to accelerate the pace, scale, and impact of community development corporations in 20 cities.



Equal Opportunity

Over the past 25 years, community development corporations (CDCs) have proved themselves vital and enduring vehicles for neighborhood revitalization and empowerment in inner-city areas. Directed by people living and working within their boundaries, the more than 500 well-established CDCs in this country have gained distinction for their successes, creating new and renovated housing and business properties as well as building leadership, capital, and power in their communities.

The Ford Foundation has been a pioneer in sparking and sustaining the community development movement, but virtually all these organizations operate with a mix of public and private funding. Today, federal support for CDCs has diminished while support at the local level from the public and private sectors is steadily growing. This local momentum signals an important opportunity to accelerate the pace, scale, and impact of the CDC movement by strengthening mature CDCs, nurturing those just emerging, and helping them build their organizational capacities and expand the range of their programs.

To seize this opportunity, a new private-sector partnership was created in 1990 to begin operations early in 1991. The National Community Development Initiative will be capitalized with more than \$62.5 million in grants and program related investments, which will eventually generate approximately half a billion dollars in new funding for CDCs across the country. The Initiative is being created and funded by The Prudential and seven foundations.

These funds will be used by two national intermediaries, the Local Initiatives Support Corporation (LISC) and the Enterprise Foundation. LISC and Enterprise will assist CDCs in 15 to 20 cities to grow in scope and competence and to achieve higher levels of productivity and impact in revitalizing their communities through the development of housing and other capital projects.

In addition, the Federal Home Loan Mortgage Corporation (Freddie Mac) is cooperating to create a secondary market program for bank loans that, for the first time, will give CDCs regular access to the nation's capital market and ensure the availability of long-term, fixed-rate financing for community housing. This program will be administered by the Local Initiatives Managed Assets Corporation (LIMAC). By enabling LIMAC to purchase as much as a \$100 million in long-term, fixed-rate mortgage loans generated by banks for CDC and other low-income housing projects, Freddie Mac will, in effect, facilitate the recycling of the original funds for renewed community investment.

NCDI core funders

The Prudential	\$15,000,000
Lilly Endowment	15,000,000
The Rockefeller Foundation	15,000,000
The William and Flora Hewlett Foundation	6,000,000
Knight Foundation	5,000,000
The Pew Charitable Trusts	5,000,000
John D. and Catherine T. MacArthur Foundation	1,000,000
Surdna Foundation	500,000

On another program front, the Foundation launched a systematic effort to share findings from the rigorous evaluation by Mathematica Policy Research of welfare-to-work programs under the Foundation's Minority Female Single Parent program (MFSP). The study involved 4,000 women—most on welfare—in Atlanta, Providence, San Jose, and Washington, D.C. They sought special comprehensive job services offered by community organizations in these cities, funded by the Foundation, and agreed to be randomly assigned to the program or a control group.

First follow-up findings of how the women fared 12 months after application to the program cast serious doubt on whether the most commonly used welfare-to-work strategies really work for low-income mothers. These schooling-first strategies steer welfare recipients first to testing and remedial education, and only later into jobs or job training once they reach some level of educational proficiency.

The MFSP findings point to the promise of an alternative approach that starts job training immediately. There was a 27 percent improvement in the employment rate and a 47 percent increase in earnings for women who were in this program, compared with the control group. The program was developed by the Center for Employment Training (CET) in San Jose. No employment or earnings gains were found in the other cities, where the programs used the schooling-first approach.

Key principles of the San Jose training-first approach include:

- open to all—no testing or academic qualifications;
- begin with hands-on, day-long training tied to specific work skills required by industry;
- individualized, competency-based training;
- basic education embedded in job training;
- child care, counseling, and other support services; and
- businesslike style and operations.

The cost of this training-first program, about \$3,500 per participant, compares favorably with the cost of the schooling-first models in the study. Child-care subsidies and

... findings point to the promise of an alternative approach that starts job training immediately.

support services were important elements in all four programs.

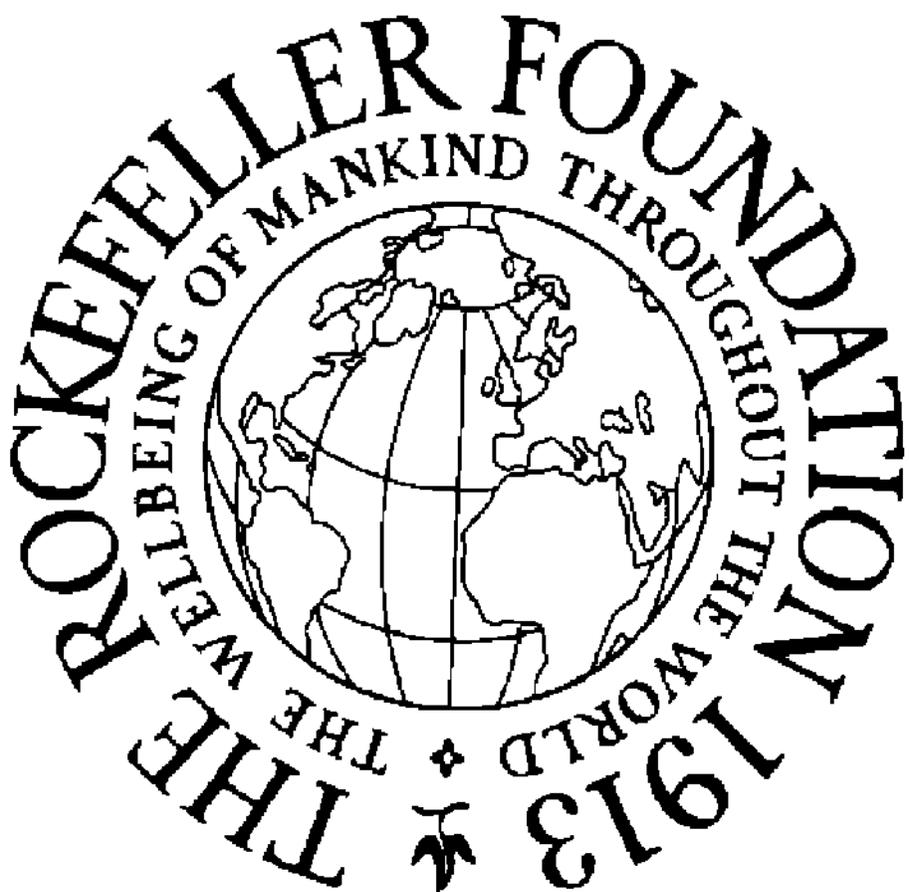
Longer-term follow-up studies, at 30 and 60 months, will look at retention of the positive impacts attributed to the training-first approach, and search for late-appearing effects from all the programs, as well as other issues.

The study has major implications for federal job-training and poverty efforts, especially for new state welfare-to-work programs under the

Job Opportunities and Basic Skills (JOBS) program, a major state-administered initiative receiving up to \$1 billion a year in federal support. The Foundation is undertaking broad dissemination of the MFSP findings in the hope that agencies planning education and training programs to help people get jobs will conduct further tests as well as consider these initial findings as they decide how to organize their services.

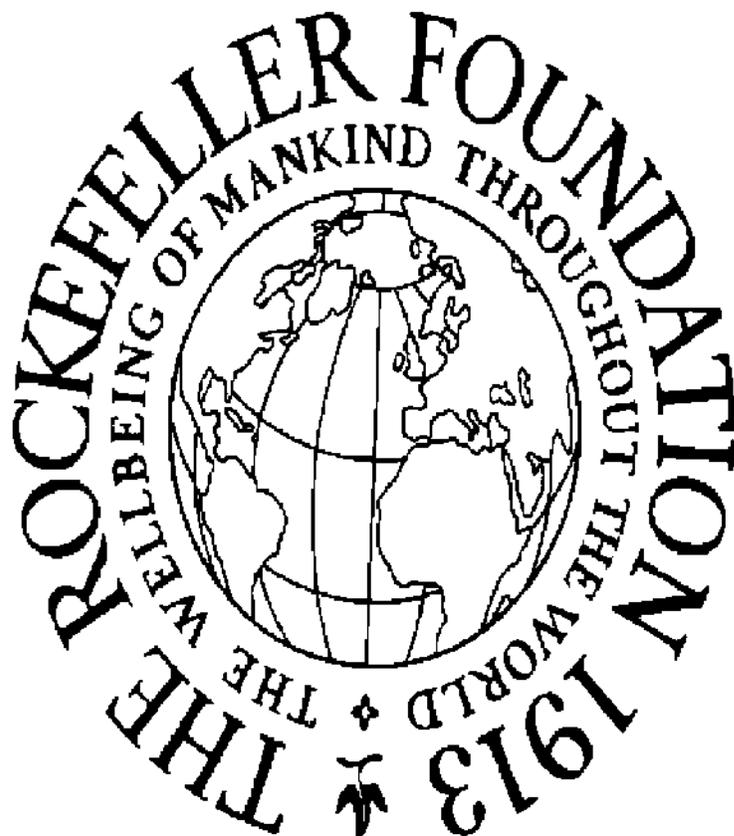
Representatives from the six community planning and action projects supported by the Foundation—in Boston, Cleveland, Denver, Oakland, San Antonio, and Washington—conducted two institutes during 1990 in conjunction with their efforts to mobilize the public and private sectors in their cities to understand and attack conditions contributing to persistent poverty.

In Oakland, the topic was school reform, including discussion of Dr. James Comer's school improvement approach, which the Foundation is helping bring into wider use (see page 43). The Oakland institute included school superintendents from Denver, Oakland, and San Antonio, as well as school board members, county supervisors, and city council members from several of the participating cities. The fall institute, in Boston, explored how community groups can work with the media in "Mobilizing Political Will: Addressing the Political Agenda." The projects' representations for this institute were expanded by state senators, academicians, documentary film and video directors, senior newspaper



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The Center for Employment Training in San Jose has pioneered an approach to job training and placement for minority female single parents that embeds basic education in the job training and achieves results that are drawing national attention. These results are emerging from an ongoing, rigorous evaluation of a multi-site, welfare-to-work program, both of which have been supported by the Foundation.



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editors, and other news media professionals.

Complementing the Community Planning and Action Program (CPAP), the Foundation also began supporting the start-up of the Fair Employment Council of Greater Washington, which is pursuing new strategies to expand equal employment opportunities in the D.C. metropolitan area. The Council, and a parallel effort in Chicago, will use employment discrimination audit methodology developed by three Foundation grantees—the Urban Institute’s project on persistent poverty, the Greater Washington Research Center’s community planning and action project, and the Washington Lawyers Committee for Civil Rights Under Law. Basically, it calls for testing and direct observation of the employment process rather than statistical data analyses that the courts have now rejected. The prototype has been tested in a study for the federal government’s General Accounting Office, and a 1990 grant is underwriting further development and application of the employment audit methodology by the Urban Institute.

The objective is creation of an “on-the-shelf” technology for use by all levels of government and by

private organizations interested in enforcing anti-discrimination employment laws. However, since Washington and Chicago are also included in a 25-city housing discrimination audit being conducted for the federal government by the Urban Institute, the Foundation-supported project will also permit comparisons of the data sets that could shed new light on the interaction of employment and housing discrimination.

The Washington CPAP project also announced and disseminated results from a Foundation-funded study of drug trafficking in D.C., which was conducted for the project by the Rand Corporation. Among the controversial and disquieting findings from the study, *Money from Crime*, is evidence that a large majority of young drug sellers simultaneously hold regular jobs. Other findings suggest that involvement in drug selling is much more widespread than previously thought, and that those selling drugs part-time netted on average \$24,000 a year. This was typically more money than they earned from their full-time jobs.

The Social Science Research Council, as part of its Foundation-supported effort to mobilize researchers around the study of issues of the underclass, has secured additional funds from the Harry Frank Guggenheim Foundation that allow 12 ethnographers who are

already working on the ecology of crime and drugs in five cities to collaborate, collect new data, and evaluate their work in a comparative framework.

In addition, the Foundation-supported project on the underclass at the Joint Center for Political and Economic Studies (JCPES) and the

Among the... findings... is evidence that a large majority of young drug sellers simultaneously hold regular jobs.

mayors of the 10 cities with the largest populations of blacks and with heavy concentrations of poverty have launched an initiative to share information, experience, and strategies for implementing anti-drug efforts. The first meeting drew mayors or key members of their staffs, including police chiefs, and heads of drug abuse prevention programs, from nine of the front-line cities. This initiative grew out of JCPES briefings for the U.S. Conference of Mayors and will seek to help the mayors find ways to focus more state and local resources on comprehensive, citywide drug prevention and treatment activities and to link public agencies more directly to existing networks of community-based treatment facilities. The advisory committee for this effort includes the mayors of Chicago, Houston, and Philadelphia.

JCPES also conducted a sixth round table, co-sponsored by the U.S. Department of Health and Human Services, that brought together researchers and policy-makers to review new findings on a

Just a few of the posters used in the adolescent pregnancy prevention project of the Children's Defense Fund that have captured the attention and thinking of teenagers nationally. The Foundation helped establish the Fund in 1973, and has been assisting the adolescent pregnancy prevention project for the past seven years.

broad range of behaviors associated with persistent urban poverty, including long-term welfare use, out-of-wedlock childbearing, and criminal activity.

Other returns on the Foundation's investments in programs and projects seeking to understand and attack root problems of persistent urban poverty were also visible in 1990:

- Foundation-funded perspectives on the underclass were clearly reflected in descriptions used in the President's 1991 federal budget document and a General Accounting Office report, *The Urban Underclass: Disturbing Problems Demanding Attention*, which also highlights a number of the Foundation's grantees and their programs.
- An American Enterprise Institute seminar attracted 40 senior federal executives to explore the effects of poverty, drugs, crime, and underclass lifestyles on children and on institutions providing education, health care, foster care, and child care. Much attention centered on whether de-categorizing existing services or establishing new services would bring more effective outreach to vulnerable children and families.
- And Morehouse College's Forum on African-American Males, which has also received support from the Ford Foundation, attracted researchers and policy analysts and activists to a first conference considering the relationship of the drug problem to the status of black men and then to a second meeting to consider educational and economic factors.

Morehouse also produced the first issue of *Challenge*, a journal focused on these and other issues affecting African-American males.

Under the Foundation's guideline for protecting basic rights, start-up funds were provided for the new Poverty and Race Research Action Council that emerged from a developmental effort assisted the previous year. It brings civil rights, civil liberties, legal services, and poverty advocacy groups concerned with minority opportunity together

Much attention centered on whether de-categorizing existing services or establishing new services would bring more effective outreach...

for the first time, nationally, to reach beyond their special interests and identify common target areas for litigation and/or policy advocacy, and to raise and channel funds for supportive data collection and policy analysis and for dissemination of the resulting information.

And finally, the American Civil Liberties Union Foundation received a major stabilization grant under a program already assisting the NAACP Legal Defense and Education Fund, the Lawyers Committee for Civil Rights Under Law, the Mexican American Legal Defense and Educational Fund, and the Puerto Rican Legal Defense and Education Fund. The objective is to help these organizations develop and implement financial and program strategies reducing their dependence on annual support of the kind previously provided by the Foundation.

School Reform

At the close of 1989 the Foundation launched a program to improve public education for children from poor families. It targets some eight million children who are at risk of failure or dropping out because of an assortment of problems, not the least of which is the widening chasm between schools and the cultures of children raised outside society's mainstream.

Much of the Foundation's effort is geared to help parents and communities create the conditions, climate, and demand for the reform of schools serving at-risk children, and to devise training and dissemination methods that will enable reform-minded educators to make the best practice the standard practice.

A principal thrust of the program is to broaden the reach of Dr. James

Comer's philosophy and of his School Development Program (SDP), a tested approach stressing children's psychological preparation for school and emphasizing the collaboration of school staff and parents in children's academic and social development.

Production of a 14-part, how-to videocassette series on SDP was nearly completed in 1990. The series conveys in detail the principles of SDP and then guides the viewer, step by step, through implementation. This is done with the images and voices of parents, teachers, and principals experienced with the SDP process. At year-end, attention was being given to devising strategies for the most effective use and distribution of this series and its accompanying manual.

In response to the soaring demand for SDP training, Dr. Comer and his staff are also creating an institute—jointly funded by the Foundation and the Melville Corporation—to equip senior officials from large school districts to conduct the kind of training for individual school teams that Dr. Comer formerly provided directly. This training will be coupled with the video series and manual to further increase the speed at which SDP can be spread.

The Foundation is also assisting Dr. Comer to introduce his philosophy into key to macro-education policy circles as well as micro-education practice. For example, the steering committee of the Education Commission of the State (ECS), comprised of governors and state education commissioners, devoted a significant portion of its December meeting to Dr. Comer's work. Com-

mittee members visited local SDP schools, viewed portions of the video series, and exchanged ideas with him. These and other efforts to reach education policymakers have been reinforced by substantial media coverage of his work.

Also with Foundation assistance in 1990, Howard University began working with the District of Columbia

A principal thrust... is to broaden the reach of Dr. James Comer's philosophy and of his School Development Program...

Committee on Public Education so that, by the fall, a dozen schools were involved in the SDP process. A second such partnership has been formed by Southern University and the New Orleans public schools.

Southern Connecticut State University and the New Haven school system are collaborating on new courses for future teachers and on in-service training for teachers that incorporate SDP strategies and techniques. Central State University in Ohio, which is creating a master's degree program in teaching, received Foundation support to develop SDP-type courses.



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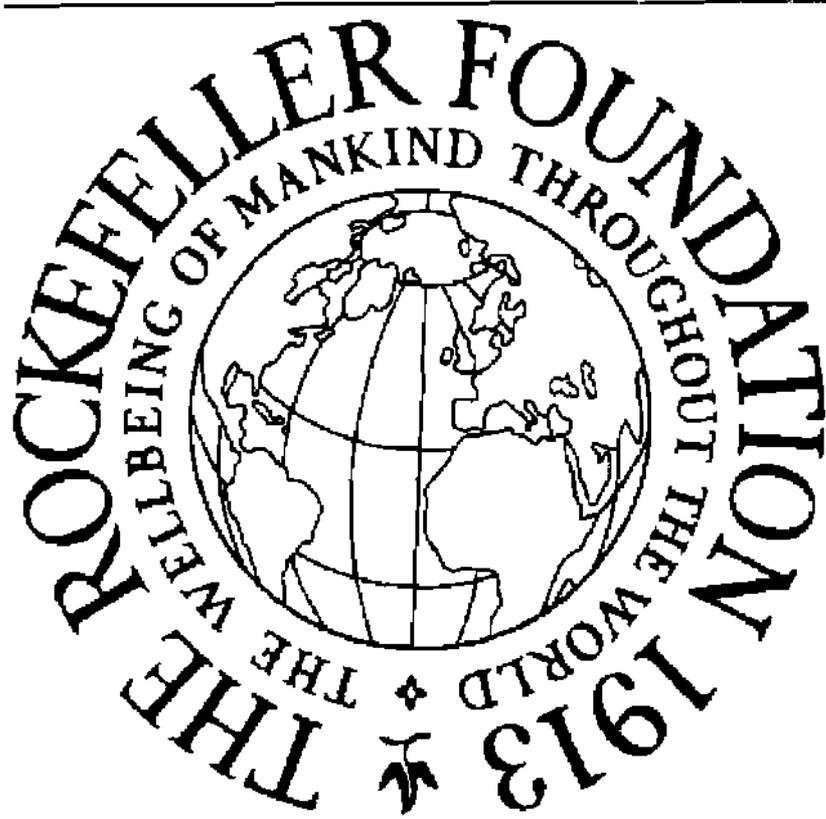
Part of the story of how to gain parental and family involvement in schools is told through scenes at the annual Father's Day breakfast of the Berkshire Elementary School in Prince Georges County, Maryland — featured in one of the 14-part, how-to videos the Foundation is preparing to accelerate widespread adoption of Dr. James Comer's School Development Program

Michigan State University and the University of New Mexico, with Foundation assistance, conducted initial summer leadership academies for school teams. Planning got under way to add a third academy in 1991, to be operated collaboratively by the Southern Educational Foundation, Virginia Commonwealth University, and the Richmond public schools.

In addition, a collaborative planning effort by the Institute for Educational Leadership, the Joint Center for Political and Economic Studies, and the McKenzie Group was funded to devise a strategy for identifying and preparing the next generation of urban school superintendents. Among the possible program ingredients is a training academy that would expose the candidates to many of the same issues and methods covered in the summer leadership academies.

The National Urban League, with a Foundation grant, selected and funded six local affiliates to begin mobilizing community support for school reform—in Austin, Flint, New Orleans, San Diego, Seattle, and Tacoma. Five are supported with Foundation funds; one is supported by the Melville Corporation.

A planning grant followed by a major school reform appropriation this year is underwriting a concerted effort in low-income Hispanic communities where language and cultural factors often create barriers



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A major dimension of the Foundation's program to benefit at-risk children is to help reform-minded educators to make the best practice the standard practice in public schools across the country

to parental participation in their children's public schools. The Texas Interfaith Education Fund is collaborating with Dr. Comer, drawing on his SDP philosophy and its own experience in community organizing, to develop collaborative relationships among administrators, teachers, local pastors, community leaders, and parents as the cornerstone of school reform.

During 1990, responsibility for two pre-existing grant initiatives were transferred from Arts and Humanities to the School Reform program—Arts PROPEL and CHART. Arts PROPEL is a collaboration between Harvard University and Educational Testing Service to

**The National Urban League
...selected and funded
six local affiliates to begin
mobilizing community
support for school reform...**

develop alternatives to standardized testing and other pupil-performance measures. The portfolio technique under intensive study and adaptation in this collaboration is illustrated at the right.

CHART is a network of collaborative projects to improve arts and humanities teaching and curricula in ways that foster multicultural and international understanding. Its sites include the school systems of Detroit, Los Angeles, Miami, New York, Philadelphia, Pittsburgh, St. Louis, San Francisco, Washington, D.C., and the states of Arkansas, Connecticut, New

Mexico, and South Carolina. The emphasis is evolving to encourage systemic change in the arts and humanities curricula and/or instructional philosophy of entire schools and districts. And collaboration will increase with other Foundation grantees to address the full spectrum of school reform issues, from effective school management to curricular and testing reform.

Students in the Arts Propel program engage in long-term projects in music, visual arts, and writing that allow them to exercise independent, critical thinking and to master skills and concepts rather than unconnected facts and procedures

The students keep portfolios of their work, which serve as records of their progress through the learning process. Portfolios may contain notes, drafts, sketchbooks, audio- or videotapes, personal statements, ideas for new work, rejected work, and assessment comments. The portfolios thus enable teachers as well as students to regularly assess progress and to pinpoint difficulties and accomplishments.

This series of drawings was taken from the portfolio of Rebecca Yaffe, grade 9, Schenley High School Teacher Center, Pittsburgh. They are from a semester-long project, developed and taught by Karen R. Price, requiring creation of a self-portrait based on study of expressionist art



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Other Interests and Initiatives

International Security

By year-end, the deadly potential inherent in the proliferation of nuclear, chemical, and biological weapons, and ballistic missile systems to deliver them, became terrifyingly real as the world prepared for war in the Mideast.

Beyond that war, one of the next major tests of humanity's will and ability to keep the nuclear genie under control, if not in the bottle, will come in 1995 when an extension conference is held by the signatory nations of the 1970 Non-Proliferation Treaty. Perceptions of the primary role of the Treaty have changed since it was negotiated in the 1960s—from a means to prevent the United States and the Soviet Union from drawing more of their allies into the nuclear weapons club, to a means to put international pres-

sure on a growing list of countries thought to have ambitions for nuclear weapons, to a means by which the security of non-nuclear countries might be reinforced by those with nuclear weapons. The two newer roles will be especially critical in the post-Cold-War uncertainties of the 1990s.

Until the Programme for Promoting Nuclear Non-Proliferation (PPNN) began operations in 1987, no entity actively supported the objectives of the Treaty system in the periods between quinquennial review conferences by disseminating reliable information or engaging in North-South dialogue about the Treaty and the technical and diplomatic issues of nuclear nonproliferation. The PPNN has proved its worth in a variety of effective activities, particularly for international networking

The central element of the organization is its Core Group of high-level experts from developing as well as industrial nations. This cadre gives general guidance to the PPNN, pools and exchanges information, and promotes the Treaty within their own geographic areas and professional fields.

A 1990 grant from the Foundation will help PPNN: 1. increase the role of developing countries in the oversight of its activities, 2. continue workshops for working level diplomats from developing and developed countries; 3. hold some of these meetings in the developing world, and 4. continue with its collection, exchange, analysis, and dissemination of relevant information.

Another threat to the Nuclear Non-Proliferation Treaty—besides the lack of expertise among nations needed to keep the Treaty and the Treaty processes alive—is the clandestine trade in technologies and materials essential to produce nuclear weapons and ballistic missiles. Non-governmental watchdog groups like the Wisconsin Project on Nuclear Arms Control have proved to be effective weapons for limiting this trade.

Gary Milhollin, a professor with degrees in engineering and law, and

National Public Radio's correspondent John Ydstie was in Saudi Arabia in August as a member of the Pentagon's press pool sent to cover the aftermath of the Iraqi invasion of Kuwait. At the outbreak of the crisis, he was the only radio reporter in the country, and his coverage was featured on NPR's news and information shows, which received renewed support from the Foundation this year.



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founder of the Wisconsin Project, was instrumental in uncovering and then working with governmental agencies to curb export and brokering activities in Norway and West Germany involving nuclear materials. Similarly, the Project recently

The Overseas Development Council constitutes a bridge between the world of ideas and action...

issued a report showing how foreign assistance helped India build its new Agni heavy missile.

In many cases, companies are taking advantage of weaknesses in national export laws and gaps between one country's laws and another's. These gaps may widen in 1992, when the European Community (EC) abolishes trade restrictions among its members. A Foundation grant will help the Wisconsin Project continue its work on exposing trade in nuclear-weapon and ballistic-missile technologies, with a special focus on EC countries to encourage strengthening of their export laws.

Study and planning also began in 1990 on the idea of an independent agency that could, on a global basis, monitor and publicize the development, sale and transfer of arms, particularly weapons of mass destruction, and key weapons technologies. Responsibility and funds for undertaking the task and reporting back to the Foundation in the coming year were given to the New York University Center for War, Peace, and the News Media and its executive director, Robert Manoff.

Special Interests and Explorations

The Foundation's Special Interests and Explorations (SIE) fund is primarily used for grants to a small number of important projects that could otherwise not be assisted because they do not meet the funding guidelines of the Foundation's principal programs.

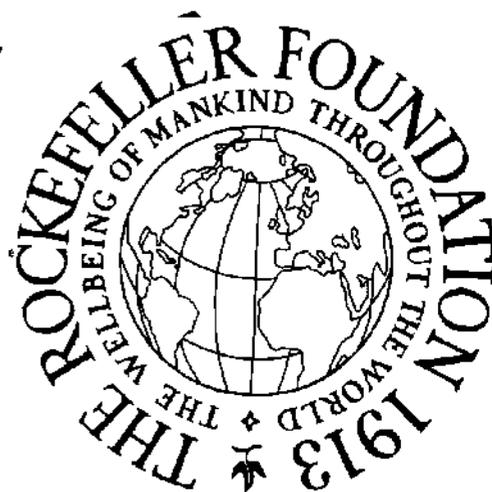
The largest of the year's SIE grants went to the Overseas Development Council, which was established, in 1969, by the Ford and Rockefeller foundations to increase public understanding of the broad range of problems facing developing countries and to strengthen U.S. relations with the developing world.

ODC constitutes a bridge between the world of ideas and action by translating academic research and policy analysis into usable information and recommendations for policymakers through focused studies, publications, policy seminars, and active participation in policy debates. This latest grant is to assist ODC to refocus its programs over the next three years around four themes: restarting global economic growth, promoting political pluralism and democracy, fostering development cooperation among donor and recipient nations, and promoting understanding in developed and developing countries of the linkages between development and the environment.

At the beginning of 1979, three years after the Grameen Bank was founded by Muhammad Yunus in Bangladesh, it was still a one-man

operation with less than 100 borrowers. But today Dr. Yunus and his staff of almost 10,000 lend over \$70 million annually to some 700,000 borrowers, virtually all of whom are landless women. As part of the Foundation's commitment to work with other U.S. foundations over the next several years in supporting the establishment of indigenous, independent philanthropic organizations in the developing world, a grant was made to help the Grameen Trust, of Bangladesh, promote the replication of its micro-credit and social development program in other developing countries. At the end of 1990, a number of other U.S. foundations and international donor organizations were also considering Trust requests for seed capital.

Another SIE grant within this area of interest, to the Esquel Group



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The public television documentary "Mandela—Free at Last" was produced with Foundation assistance by the Emmy Award-winning news series "South Africa Now," and is being distributed on videocassette

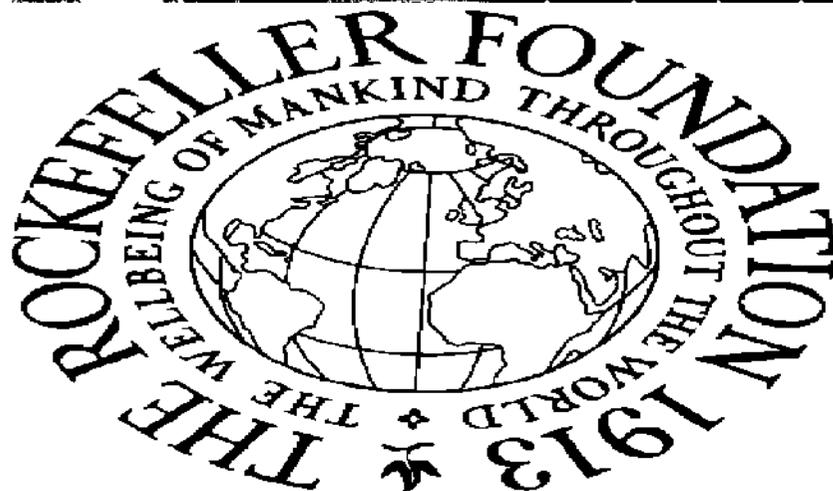
Foundation, is underwriting a feasibility study for the creation of an independent foundation that could promote social and economic development in Ecuador.

Other SIE grants included support for:

- continuation and expansion of Africa News Service, publishers of *Africa News* magazine, contingent upon the raising of matching funds;
- litigation activities and technical and strategy assistance by the American Civil Liberties Union's Reproductive Freedom Project in protecting women's Constitutional rights to make personal choices about their own reproductive health; and
- a variety of activities of the Institute for a Democratic Alternative for South Africa that is encouraging and mapping the evolution of a democratic, nonracial society in South Africa, with an emphasis on the economic issues raised by the transition to a post-apartheid society.

The Bellagio Study and Conference Center

The Foundation's Bellagio Study and Conference Center, on Lake Como, Italy, was host this year to 26 conferences with a total of 583 participants from 70 countries. These conferences ranged from "The Role of Economics in Managing Environmental Problems" to "Human Consciousness and the Brain," and from "The Politics of Induced



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Fertility Change in Developing Countries" to "The Political Economy of Eastern Europe."

A total of 147 scholars and artists from 20 countries also were in residence to work on their own month-long projects. These included a number of non-fiction books, including a collection of profiles showing how politics in India touches the lives of individuals, a biography of James Forrestal, and a textbook on sustainable agriculture; several novels, plays, and collections of poetry; a number of music compositions, including a symphony; articles on the politics of policy reforms in developing nations; and a variety of paintings and drawings.

A staff committee of the Foundation reviews applications for conferences and residencies, which are then selected by the committee on a competitive basis. Conferences are usually scheduled for three days, and the numbers of participants, limited to 25, must include substantial international representation. The month-long residencies are intended for scholars, artists, and others whose projects do not require laboratory or extensive library resources.

A separate annual report detailing activities of the Bellagio Center is published by the Foundation.

Finding Joseph Roan in Fredricksburg, Virginia, was a joyful moment for Soviet journalist Yelena Khanga, one of the Foundation's seven 1990-91 Warren Weaver Fellows. She is writing a book about her family as part of the little-known story of black Americans in the Soviet Union before World War II. Mr. Roan is the last survivor of the group of black Americans that Ms. Khanga's grandfather, the late Oliver Golden, led to the Soviet Union in 1931. Mr. Roan lived there seven years before returning with his family to the United States, but Mr. Golden and his wife became Soviet citizens and lived there the remainder of their lives.

1990 Grants and Fellowships

**International Program to Support Science-Based
Development 50**

Agricultural Sciences Grants 50

Health Sciences Grants 58

Population Sciences Grants 66

Global Environmental Program Grants 72

Special Programming Grants 75

Fellowships 80

Arts and Humanities Grants 85

Equal Opportunity Grants 95

School Reform Grants 99

International Security Grants 101

Other Interests and Initiatives Grants 102

The Foundation's principal work is done through appropriations, each of which authorizes more than \$100,000 for a specific programmatic purpose and is approved by the Board of Trustees.

Direct appropriations are approved by the Board as grants to specific institutions. Other appropriations are approved by the Trustees for subsequent allocation by the staff. Within the approved purpose and dollar total, the staff allocates these appropriations as a series of grants after they have reviewed proposals, selected the recipients, and determined the grant amounts and specific activities to be funded.

Appropriations in the lists that follow include bracketed figures showing the year and total authorized amount of the appropriations; if allocations have been made, that information also is included.

The other items—those without bracketed information in the grant lists that follow—are grants-in-aid. The staff is authorized each year to make a limited number of grants-in-aid to institutions and individuals, in amounts of \$100,000 or less, for purposes within the Foundation's guidelines.

International Program to Support Science-Based Development

This program provides focus for three of the Foundation's divisions—agricultural sciences, health sciences, and population sciences—and the global environmental initiative.

The objective is to help the developing world, on its own terms, to use modern science and technology to increase people's access to food, health, reproductive choice, education, housing, and employment opportunity. Within this context, the challenge before the world community, and a principal emphasis of this program, is to promote a more equitable sharing of the world's resources while avoiding environmentally unsound development practices.

Agricultural Sciences Grants

The agricultural sciences division supports work using biotechnology to improve crops that are developing country staples; improving family food production systems in Africa; and increasing knowledge for the management of natural resources.

Applying Biotechnology to Developing-Country Food Crops

Basic and Applied Rice Biotechnology

[1990 - \$3,000,000, in addition to remaining funds from prior year appropriations]

To support research and training at advanced laboratories and international agricultural research centers participating in the Foundation's program on rice biotechnology

Commonwealth Scientific and Industrial Research Organization (CSIRO), Canberra, Australia \$192,600

For research on screening for genetic variation in osmotic adjustment, dehydration tolerance, and epidermal conductance in rice

Foundation-administered projects \$70,000
Program support expenses

Hokkaido University, Sapporo, Japan \$50,000
For research on the genetic transformation of rice

Institut National de la Recherche Agronomique (INRA), Paris, France \$100,000
For research on altering pattern formation in rice root systems using genes from the plant pathogen *Agrobacterium rhizogenes*

International Center for Tropical Agriculture (CIAT), Cali, Colombia \$180,000
For research on anther culture in rice breeding

John Innes Foundation, Norwich, England \$464,000
For research at the John Innes Institute on the molecular biology of rice tungro viruses

Kansas State University, Manhattan \$105,000
For research on genes responsible for resistance to the sheath blight pathogen of rice

For research on the isolation and characterization of avirulence genes from *Xanthomonas campestris pv oryzae* \$150,000

Kyoto Prefectural University, Japan \$4,900
For research to improve the digestibility and nutritive quality of rice storage proteins through genetic engineering

Louisiana State University, Baton Rouge \$6,000
For research on the heritability of somaclonal variation in rice

Michigan State University, East Lansing \$100,000
For research on natural and genetically engineered variation of betaine accumulation in rice

For research on the genetic characterization of biotype formation in brown planthopper, a major pest of rice in several developing countries \$38,140

Pennsylvania State University, University Park \$49,000
For research to assess under field conditions the variation in agronomic traits of rice (*Oryza sativa*) caused by the incorporation of foreign DNA

Stanford University, California \$250,000
For research on the genetic engineering of rice with an emphasis on cold tolerance

State University of Ghent, Belgium \$250,000
For research to enhance stress tolerance in rice via transformation and tissue-specific gene expression

State University of Leiden, Netherlands <i>For research on the genetic manipulation of rice</i>	\$316,340	Crop Genetic Maps [1990 - \$600,000] <i>To enable scientists from third-world, crop-breeding institutions to participate in the development of molecular genetic maps, and to help them make use of the resulting technology on their return home</i>	
Swiss Federal Institute of Technology (ETH Zurich), Switzerland <i>For research on the development of a genetic transformation system for <u>indica</u> rice varieties</i>	\$115,000		
Texas Tech University, Lubbock <i>For research on the use of molecular tools for genetic analysis of root penetration in rice</i>	\$150,000	Christian Ademola Fatokun, University of Ibadan, Nigeria <i>To study <u>Vigna</u> biotechnology under the direction of Nevin Dale Young, Department of Plant Pathology, University of Minnesota</i>	\$28,590
University of Durham, England <i>For research on genetically engineered resistance in rice to the brown planthopper</i>	\$309,300	Bhavanishankara Gowda, University of Mysore, India <i>To study sorghum biotechnology at Texas A&M University, College Station</i>	\$24,550
University of Georgia, Athens <i>For research on the molecular characterization of rice regulatory genes and unstable phenotypes arising from wide hybrid crosses</i>	\$165,000	Jia Jizeng, Chinese Academy of Sciences, Beijing <i>To study RFLP technology applied to wheat germ-plasm at Cambridge Laboratory, Norwich, England</i>	\$25,500
University of Missouri-Columbia <i>For research on cytokinins and the control of rice endosperm development for increased potential</i>	\$136,370	Lalitha Sunil Kumar, National Chemical Laboratory, Pune, India <i>To study <u>Vigna</u> biotechnology at the University of Minnesota, St Paul</i>	\$28,000
<i>For research on the development, characterization, and mapping of DNA markers in the genus <u>Oryza</u></i>	\$100,000		
University of Paris, France <i>For use by its Jacques Monod Institute to conduct research on the molecular characterization of rice hoja blanca virus</i>	\$38,500	Desiree Menancio-Hautea, University of the Philippines, Los Baños <i>To study <u>Vigna</u> biotechnology under the direction of Nevin Dale Young, Department of Plant Pathology, University of Minnesota</i>	\$30,700
University of Washington, Seattle <i>For research on the requirements of Agrobacterium-mediated transformation of rice via rice tungro agroinfection</i>	\$109,000		
University of Wisconsin-Madison <i>Toward the costs of a molecular and genetic analysis of mechanisms controlling pathogen virulence in <u>Magnaporthe grisea</u>, the fungus causing rice blast disease</i>	\$150,000	Environmental Defense Fund, New York, New York <i>In support of a research project on the environmental oversight of biotechnology</i>	\$30,000
Washington State University, Pullman <i>For research on the characterization of the rice blast fungus, <u>Pyricularia oryzae</u>, from upland rice screening sites</i>	\$150,000	Mr Erwidodo, Government of Indonesia <i>To complete a study at Michigan State University entitled "Panel Data Analysis on Farm-Level Efficiency, Input Demand, and Output Supply of Rice Farms in West Java"</i>	\$3,450
Washington University, St. Louis, Missouri <i>For research on the molecular biology of rice tungro viruses</i>	\$362,000	Genetic Map of Rice [1988 - \$1,000,000] <i>To support the further development of rice molecular genetic maps and markers, and their use in rice breeding and rice genetic engineering</i>	
Center for Research and Advanced Studies of the National Polytechnic Institute (CINVESTAV), Mexico City, Mexico [1990 - \$210,000] <i>To support a collaborative research project on engineering proprietary genes for virus resistance into Mexican potato varieties, and thereby help a new organization carry out its first attempt at responsible transfer and application of proprietary biotechnologies to agricultural problems in developing countries</i>	\$210,000	International Rice Research Institute (IRRI), Manila, Philippines <i>For research on the application of RFLPs in plant breeding</i>	\$100,000
		Indian Council of Agricultural Research, New Delhi, India <i>Toward the costs of an international symposium, "Rice Research New Frontiers"</i>	\$25,000

Indian Society of Seed Technology, New Delhi <i>Toward the costs of holding an international conference on seed science and technology</i>	\$12,000	Montana State University, Bozeman <i>To develop a cooperative study with the International Potato Center (CIP), Lima, Peru, on agricultural chemical use and sustainability of Andean potato production</i>	\$12,930
International Institute of Tropical Agriculture (IITA), Ibadan, Nigeria <i>Toward the costs of a biotechnology workshop and training program for African scientists</i>	\$11,000	Scott Rozelle, Cornell University, Ithaca, New York <i>To develop a research/training project on China's rice research program, cooperative among the departments of economics at the China National Rice Research Institute, the International Rice Research Institute, and the Food Research Institute at Stanford University</i>	\$5,800
John Innes Foundation, Norwich, England <i>To support biotechnology research at the John Innes Institute on new sources of resistance to maize streak, a serious problem in Africa</i>	\$150,000	Stanford University, California <i>For use by Prof John H. Barton for analysis of the regulatory and intellectual property issues significant to developing countries' plant biotechnology research</i>	\$7,600
Mahidol University, Bangkok, Thailand <i>Toward the costs of an international conference on Biotechnology and Environmental Sciences Molecular Approaches</i>	\$3,460	Purdue University, West Lafayette, Indiana <i>For research on the genetic characterization of Sorghum bicolor</i>	\$70,000
Nitrogen Fixation in Non-Legumes [1990 - \$470,000] <i>To support research aimed at introducing symbiotic biological nitrogen fixation into non-legume food crops</i>		Rice Biotechnology at International Centers [1990 - \$1,000,000] <i>To support research at international centers participating in the Foundation's rice biotechnology program</i>	
Universidad Nacional Autonoma de Mexico, Mexico City <i>For research on gene amplification in Rhizobium and its role in rice nodulation</i>	\$100,000	International Center for Tropical Agriculture (CIAT), Cali, Colombia <i>For biotechnology research on rice RFLP mapping, rice hoja blanca virus, and rice anther culture</i>	\$104,500
North Carolina State University, Raleigh <i>To develop sustainable agricultural systems for the western Amazon as a way of slowing continuous deforestation in the region</i>	\$900,000	International Rice Research Institute (IRRI), Manila, Philippines <i>For the continuation of research on wide hybridization and rice genetics, the application of molecular techniques to rice pathology, and evaluation of Bacillus thuringiensis strains for insect pest control</i>	\$600,000
Plant Biotechnology Policy in Developing Countries [1989 - \$400,000, in addition to remaining funds from prior year appropriations] <i>To assist developing countries in determining priorities for their investments in agricultural biotechnology</i>		Toward the costs of training courses in rice biotechnology for scientists from India	\$5,823
Wojciech J. Florkowski, University of Georgia, Griffin <i>To develop a research project involving analysis of research prioritization in the rice biotechnology program, with particular emphasis on India</i>	\$5,100	United Nations Industrial Development Organization (UNIDO), Vienna, Austria <i>For use by its International Centre for Genetic Engineering and Biotechnology, New Delhi, India, for research on the enhancement of insect resistance in rice, with special reference to gall midge</i>	\$287,300
Gadjah Mada University, Yogyakarta, Indonesia <i>For a study estimating potential gains in rice research in Indonesia</i>	\$60,000	Studies on the Impact of Agricultural Technical Change [1989 - \$400,000, in addition to remaining funds from prior year appropriations] <i>To support comprehensive studies on the impact of agricultural research in developing countries as a basis for long term agricultural research policy</i>	
International Rice Research Institute (IRRI), Manila, Philippines <i>For a study of the constraints on higher rice yield in different rice production environments in Tamil Nadu State and the larger Southern India region</i>	\$50,000		

Science-Based Development/Agricultural Sciences, continued

Foundation-administered project <i>For the publication of results of research on rice in India</i>	\$5,990	Chinese Academy of Agricultural Sciences, Beijing <i>For use by its Biotechnology Research Center for research to protect transgenic rice plants against lepidopteran insects</i>	\$100,000
International Rice Research Institute (IRRI), Manila, Philippines <i>For a study of the differential impact of modern rice technology in favorable and unfavorable production environments and limited rural factor markets in China</i>	\$50,000	Chinese Academy of Sciences, Guangzhou <i>For research by the Shanghai Institute of Plant Physiology on regulation of the expression of the rice waxy gene</i>	\$36,000
Transfer of Rice Biotechnology <i>[1990 - \$1,000,000, in addition to remaining funds from prior year appropriations] To help developing countries establish the scientific capacity and research programs necessary to utilize and advance rice biotechnologies</i>		<i>For use by its Institute of Microbiology for research on the genetic engineering of rice for resistance to rice stripe and rice dwarf viruses</i>	\$75,000
		<i>For research by the Shanghai Institute of Plant Physiology on rice protoplasts</i>	\$60,000
Association of Rice Research Workers, Cuttack, India <i>In support of its quarterly journal, <u>Oryza</u></i>	\$30,000	<i>For use by the South China Institute of Botany for research to induce and develop a new cytoplasm source of male sterility in <u>indica</u> rice by tissue and cell culture</i>	\$30,000
Bangladesh Rice Research Institute, Dhaka <i>Toward the development of biotechnology for rice improvement in Bangladesh</i>	\$132,000	<i>For use by its Institute of Genetics for research on the improvement of rice by gene transformation</i>	\$75,000
Beijing University, China <i>For research on the molecular cloning of genes encoding anti-rice leaf blight and fungal blast disease proteins</i>	\$150,000	Foundation-administered projects <i>Program support expenses for the Foundation's rice biotechnology program in India</i>	\$37,000
Bose Institute, Calcutta, India <i>For research on the production of transgenic <u>indica</u> rice plants with useful genes</i>	\$114,260	<i>For costs of the Fourth Annual Meeting of the Foundation's Program of Rice Biotechnology</i>	\$126,944
Center of Research and Advanced Studies of the National Polytechnic Institute (CINVESTAV), Mexico City, Mexico <i>For research on a biochemical and molecular approach to increase rice productivity by manipulating sucrose</i>	\$107,800	<i>For costs related to publication and distribution of a book entitled "Rice Biotechnology"</i>	\$20,000
		<i>For a laboratory training course on protoplast regeneration of <u>indica</u> rice</i>	\$32,000
Chen Mingshun, China National Rice Research Institute, Hangzhou <i>For doctoral studies in biochemistry at Kansas State University</i>	\$26,020	Foundation for Research in Applied Biology (FIBA), Mar del Plata, Argentina <i>For use by its Center of Biological Research for research on a biochemical and molecular approach to increase rice productivity by manipulating sucrose metabolism</i>	\$107,600
China National Center for Biotechnology Development, Beijing <i>Toward the costs of supporting a comprehensive Chinese research network on rice biotechnology</i>	\$30,000	Fudan University, Shanghai, China <i>For research on a novel system for gene transfer in rice</i>	\$60,000
China National Rice Research Institute, Hangzhou <i>For research leading to the application of novel strategies in rice improvement in China</i>	\$100,000	Huazhong Agricultural University, Wuhan, China <i>For research on RFLP mapping and identifying the gene for photoperiod-sensitive male sterility in rice</i>	\$60,000
		International Rice Research Institute (IRRI), Manila, Philippines <i>Toward the costs of training courses in rice biotechnology for scientists from India</i>	\$50,677
		Kasetsart University, Bangkok, Thailand <i>Toward the costs of research on the genetic transformation of rice for resistance to ragged stunt virus</i>	\$90,000

For research on rice varietal improvement for higher protein content through direct gene transfer	\$50,000	South China Agricultural University, Guangzhou	\$36,000
Li Liangcai, Institute of Genetics, Beijing, China To enable him, as a visiting scientist research fellow in rice biotechnology, to study rice transformation with RTBV coat protein gene under the direction of Roger N Beachy, Washington University	\$32,700	For research on detecting and following the inheritance of important rice genes by linkage with RFLP and isozyme markers	
Li Xiang-hui, Institute of Genetics, Beijing, China For extension of his Visiting Scientist Research Fellowship in Rice Biotechnology to study protoplast uptake of chimeric genes and regeneration in the genetic transformation of rice plants at Washington State University	\$7,900	SPIC Science Foundation, Madras, India Toward the costs of research on the characterization of the mitochondrial genome in rice and its role in the expression of cytoplasmic male sterility	\$35,000
Li Xiu-Qing, Beijing University, China To enable him, as a visiting scientist research fellow in rice biotechnology, to study plant tissue culture/molecular biology under the direction of Thomas K Hodges, Purdue University	\$16,180	United Nations Industrial Development Organization (UNIDO), Vienna, Austria For use by its International Centre for Genetic Engineering and Biotechnology, New Delhi, India, to conduct three laboratory courses on rice biotechnology for researchers from developing countries	\$85,580
Mahidol University, Bangkok, Thailand For research on the identification and characterization of genes involved in disease resistance in rice	\$60,000	University of Calcutta, India Toward the costs of developing RFLP probes using repetitive DNA sequences of rice ribosomal RNA genes	\$100,000
For research on RFLP-facilitated mapping of genetic loci responsible for photoperiod and sensitivity fragrance in rice	\$60,000	University of Costa Rica, San José For research on the molecular characterization of rice hoja blanca virus	\$66,550
National Chemical Laboratory, Pune, India For research in rice biotechnology	\$104,000	University of Dhaka, Bangladesh For research on the genetic manipulation of Bangladeshi rice varieties to increase their tolerance of salt	\$63,550
Osmania University, Hyderabad, India For research on the genetic and physiological aspects of anther culture in <i>indica</i> rice	\$65,000	University of Hyderabad, India For research on genetic and molecular biology approaches to the identification and isolation of transposable elements in rice	\$100,000
Pritilata Nayak, Bose Institute, Calcutta, India To study the development of techniques for the production of transgenic rice plants at Purdue University, West Lafayette, Indiana	\$34,900	University of Madras, India For research on the biological control of rice blast disease with fluorescent pseudomonads	\$60,000
Qin Rui Zhen, Chinese Academy of Agricultural Sciences, Beijing For research on the mechanisms of differentiation of plant cell culture systems	\$1,200	University of the Philippines, Los Baños Toward the costs of the Philippine Research Program on Rice Biotechnology	\$150,000
Research Laboratory for Agricultural Biotechnology and Biochemistry, Kathmandu, Nepal To enable one of its staff members to attend a three-month training program in rice anther culture at the International Rice Research Institute, Philippines	\$9,000	University of the Punjab, Lahore, Pakistan For research on the development of genetic resistance to common pests of rice through expression of <i>Bacillus thuringiensis</i> toxin genes	\$184,800
For research on anther culture techniques to increase the efficiency of rice breeding	\$20,000	Zhejiang Agricultural University, Hangzhou, China For research on proteins antagonistic to rice bacterial leaf blight and the genes encoding the proteins, in collaboration with the China National Rice Research Institute	\$45,000
		Zheng Kangle, China National Rice Research Institute, Hangzhou To study the tagging of agronomically important genes to RFLP markers, under the direction of Gary Kochert, Department of Botany, University of Georgia	\$35,500

Zhongsan University, Guangzhou, China <i>For research on the molecular biology of wide-compatibility genes in rice.</i>	\$60,000	[1990 - \$366,000] <i>To develop improved food legume varieties and production techniques acceptable to small farmers.</i>	\$366,000
Zhu Lihuang, Academia Sinica, Beijing, China <i>For research on the further development of the RFLP genetic map of rice.</i>	\$10,000	International Institute of Tropical Agriculture (IITA), Ibadan, Nigeria [1990 - \$500,000] <i>To determine the importance of banana pests in highland East Africa, obtain an ecological understanding of their effects in constraining banana output, and develop a biological control program aimed at the most important pests.</i>	\$500,000
United Nations Industrial Development Organization (UNIDO), Vienna, Austria <i>For use by its International Centre for Genetic Engineering and Biotechnology, New Delhi, India, toward the costs of a conference on molecular approaches to plant stress.</i>	\$2,290	International Laboratory for Research on Animal Diseases (ILRAD), Nairobi, Kenya [1990 - \$350,000] <i>To continue support for its work on identifying the factors most likely to influence implementation of livestock disease control in Africa and assessing the probable impact of improved control in epidemiological, economic, social, and environmental terms.</i>	\$350,000
University of Georgia, Athens <i>Toward a research project on the molecular tagging of genes controlling apomixis.</i>	\$90,000	International Maize and Wheat Improvement Center (CIMMYT), Mexico City, Mexico <i>For the development of a cereal grains policy analysis network for Southern and Eastern Africa.</i>	\$30,000
Washington University, St. Louis, Missouri <i>To develop and evaluate DNA-based molecular techniques for the identification and systematic analysis of cassava and its wild relatives.</i>	\$24,500	Louis Kangethe, Nairobi, Kenya <i>For seed and nursery studies of two important semiarid tree species, <i>Diospyros mespiliformis</i> and <i>D. scabra</i>.</i>	\$42,000
Strengthening Food Production Systems in Africa			
Eduardo Mondlane University, Maputo, Mozambique <i>To develop a research agenda for its Faculty of Agriculture and Forest Studies.</i>	\$7,000	Kenya Agricultural Research Institute, Nairobi <i>Toward the costs of a national conference on plant and animal biotechnology.</i>	\$5,000
Food and Agriculture Organization of the United Nations, Rome, Italy <i>Toward the costs of a meeting of the Special Commission on Environment of the Amazon Cooperation Treaty. (Joint grant with Global Environment for a total of \$90,000.)</i>	\$20,000	Firmino Mucavele, Eduardo Mondlane University, Maputo, Mozambique <i>For a comparative analysis of technical and economical efficiency in farm management economics in Mozambique.</i>	\$9,600
Foundation-administered projects <i>Foundation-sponsored study on the postharvest aspects of food production in Africa as a step in developing an analytical framework for evaluating the dynamics of African agricultural systems.</i>	\$75,000	National Institute of Agricultural Research, Ministry of Agriculture, Maputo, Mozambique <i>For the development of a Documentation and Information Centre for the Agricultural Sector.</i>	\$25,000
<i>Toward the costs of a forum on alternatives for strengthening postgraduate education and training in Eastern and Southern Africa.</i>	\$15,000	National Museums of Kenya, Nairobi <i>For a conference on research needs regarding use of wildlife for sustainable development.</i>	\$20,000
Reuben Joshua Gambang'adi, Dar es Salaam, Tanzania <i>For participation in a Harvard Institute for International Development workshop on food and agricultural policy analysis.</i>	\$6,500	Overseas Development Institute, London, England <i>For the Malawi and Zimbabwe components of a study of the structure and performance of the seed sector in Eastern and Southern Africa.</i>	\$45,000
Government of Malawi [1990 - \$350,000, in addition to remaining funds from prior year appropriations] <i>To continue to strengthen the capacity of Malawi to design and conduct a maize research program that addresses the needs of smallholders.</i>	\$350,000		

Soils Research in Africa [1989 - \$200,000, in addition to remaining funds from prior year appropriations] To strengthen international soils research efforts directed toward sustainable crop production systems for Africa		University of Zimbabwe, Harare For a project on rural household food security in Zimbabwe	\$35,000
Edinburgh School of Agriculture, Scotland For use by the International Benchmark Sites Network for Agrotechnology Transfer (IBSNAT) project for a cooperative study with the Government of Malawi on agrotechnology transfer using biological modeling	\$110,000	Winrock International Institute for Agricultural Development, Morrilton, Arkansas Toward the costs of an assessment of animal agriculture in Africa	\$50,000
Foundation-administered project Toward the costs of a feasibility study by the International Fertilizer Development Center, the Tropical Soils Biology and Fertility Program, and the International Board for Soils Research and Management on the possibilities for establishing cooperative field work	\$30,000	Increasing Knowledge for the Management of Natural Resources	
Ohio State University, Columbus For a study of long-term agronomic experiments and options for sustainable soil and waste management in the tropics	\$52,000	Asian Institute of Technology, Bangkok, Thailand Toward the costs of the 1990 Asian Farming Systems Research and Extension Symposium	\$15,000
University of California, Davis For a research project to upgrade library materials in the Faculty of Veterinary Medicine, Makerere University, Kampala, Uganda	\$1,500	Richard Critchfield, Berkeley, California For research and writing on rural development in the third world	\$20,000
University of Malawi, Lilongwe [1990 - \$160,000] To strengthen its master's degree teaching in agriculture and related fields by enhancing opportunities for faculty and graduate student research on priority problems	\$160,000	Foundation-administered project Toward the costs of a Foundation-conducted Agricultural Media Seminar on important research in ensuring adequate world food supplies	\$50,000
For use by its Bunda College of Agriculture for research on integrated management of maize stalkborers in Malawi	\$8,000	Government of Malawi [1990 - \$316,000] To strengthen the Department of Agricultural Research's agroforestry program, aimed at improving productivity on small farms	\$316,000
For use by the Library of the Bunda College of Agriculture in developing a database on maize in Malawi	\$9,163	Indian Society of Soil Science, New Delhi, India To enable Indian scientists to participate in the 14th International Congress of Soil Science	\$12,000
University of Wisconsin-Madison To provide academic enrichment to African graduate students enrolled in agricultural programs in United States universities with a view to improving the quality and relevance to African development of their doctoral research	\$450,000	International Board for Soil Research and Management, Bangkok, Thailand [1990 - \$216,700] To help develop the capacity of researchers in Uganda and Tanzania to evaluate the sustainability of alternative agricultural land management systems	\$216,700
		International Centre for Integrated Mountain Development, Kathmandu, Nepal Toward the costs of an international symposium on strategies for sustainable mountain agriculture	\$15,000
		International Fund for Agricultural Research, Arlington, Virginia For use by the International Program for Tropical Tree Crops Conservation and Development for a study of bamboo and rattan	\$25,000
		International Potato Center (CIP), Lima, Peru To develop and apply a methodology for assessing the production, environmental, and health effects of intensive-input agriculture in a developing country on a social as well as private basis (Joint project with Montana State University)	\$140,453

International Union of Forestry Research Organizations, Vienna, Austria <i>Toward the costs of participation by developing-country nationals in its XIXth World Congress</i>	\$15,000	University of Illinois, Urbana-Champaign <i>To permit participation by developing-country scientists in the "Uniformity by 2000 Program," an international workshop on maize and soybean quality</i>	\$11,000
Measuring Agricultural Constraints in Eastern and Southern Africa <i>[1990 - \$700,000]</i> <i>To develop analytic tools that will measure the extent of physical, biological, and socioeconomic constraints on agricultural production as guides for research and technology application in Eastern and Southern Africa</i>		University of Minnesota, Minneapolis <i>For use by its Hubert H. Humphrey Institute of Public Affairs toward the work of the Agriculture 2000 Task Force</i>	\$50,000
Foundation-administered projects <i>Toward the costs of two workshops on measuring macro-level constraints in Eastern and Southern African farming systems</i>	\$60,000	Wye College, University of London, England <i>[1990 - \$110,000]</i> <i>To provide fellowships enabling developing-country professionals to enroll in its Programme in Agricultural Development for External Students</i>	\$110,000
<i>Commissioned development of a geographically referenced information system for evaluating macro-level constraints in African farming systems</i>	\$50,000	Yale University, New Haven, Connecticut <i>To establish an interdisciplinary and comparative program for U.S. and third-world scholars in agrarian studies (Joint appropriation with Special Programming and Arts and Humanities, for a total of \$200,000)</i>	\$50,000
International Laboratory for Research on Animal Diseases (ILRAD), Nairobi, Kenya <i>For a workshop on the use of Intelligent Geographic Information Systems for increased sustainable agricultural productivity in Africa</i>	\$95,000	Fellowships	
Overseas Development Institute, London, England <i>For a study of environmental management in Kenya</i>	\$65,000	Biotechnology Career Fellowships <i>(Jointly funded with Health Sciences and Population Sciences for a total of \$1,100,000)</i>	\$453,400
Michigan State University, Ann Arbor <i>To enable nationals from developing countries to participate in the 10th Annual Symposium of the Association for Farming Systems Research/Extension</i>	\$15,000	Social Science Fellowships in Agriculture <i>[1990 - \$360,000, in addition to remaining funds from prior year appropriations]</i> <i>To advance understanding of agricultural performance in Africa through collaborative interdisciplinary research between African and U.S. scholars</i>	
Montana State University, Bozeman <i>To develop and apply a methodology for assessing the production, environmental, and health effects of intensive-input agriculture in a developing country on a social as well as private basis (Joint project with International Potato Center)</i>	\$114,047	Program support expenses	\$29,000
Henry Kanjobe Mwandemere, Lilongwe, Malawi <i>For research on the management of tropical soils</i>	\$8,800		
K. S. Puri, New Delhi, India <i>For a research study on the dimensions of a long-range land-use policy in India</i>	\$33,620		
Resources for the Future, Washington, D.C. <i>Toward the activities of the International Policy Council on Agriculture and Trade</i>	\$40,000		
University of California, Davis <i>For use by the Genetic Resources Conservation Program toward the costs of an International Short Course on Plant Genetic Resources Conservation</i>	\$20,000		

Health Sciences Grants

The health sciences division supports work that uses pharmacology and vaccinology to treat and prevent major diseases of the developing world. The division also supports work that builds capacity in the developing world for population-based health care.

Enhancing National Capacity for Population-Based Health Care

African Medical and Research Foundation, U.S.A., New York, New York \$5,000
Toward publication of a bibliography of sources on sexuality and health in sub-Saharan Africa

The Aga Khan Foundation, U.S.A., Washington, D.C. \$100,000
In support of the "Primary Health Care Management Advancement Programme" (MAP)

American College of Physicians, Philadelphia, Pennsylvania \$25,000
Toward the development of an international health action program in two developing countries

American Society of Tropical Medicine and Hygiene, Cleveland, Ohio \$10,000
Toward the costs of enhancing the quality and relevance of its annual meeting so as to attract young investigators and developing-country scientists

Emory University, Atlanta, Georgia [1990 - \$55,000] \$55,000
To provide bridging support for A Public Health Summer Fellowship Program for Minority Students (joint appropriation with Equal Opportunity, for a total of \$110,000)

\$24,800
Toward the start-up costs of a training course in outbreak epidemiology for international health professionals

The ETV Endowment of South Carolina, Inc., Spartanburg \$25,000
For use by South Carolina Educational TV toward the distribution and promotion costs of a program series entitled "The Planned Miracle"

Foundation for International Scientific Cooperation (U.S. Committee for Scientific Cooperation with Vietnam), Ann Arbor, Michigan \$65,000
To improve the disease surveillance system of Vietnam

Gadjah Mada University, Yogyakarta, Indonesia \$9,350
Toward a collaborative study with Yale University on bronchial asthma and atopy as risk factors for dengue hemorrhagic fever and dengue shock syndrome in Indonesia

Harvard University, Cambridge, Massachusetts [1990 - \$200,000] \$200,000
To help the Commission on Health Research for Development promote action by the world community to enhance investment in and demonstrate the effectiveness of health research for and by developing countries

\$95,000
For a project entitled "Strengthening and Replicating New Programs in International Health"

\$50,000
Toward the costs of a meeting on "Outpatient Hospitals: Their Role in Health Systems in Developing Countries"

Henry M. Jackson Foundation for the Advancement of Military Medicine, Rockville, Maryland \$12,400
In support of an international conference, "Emerging Problems in Food-Borne Parasitic Zoonoses," held at Chiang Mai University, Thailand, November 14-17, 1990.

International Clinical Epidemiology Network (INCLEN) \$4,500,000, in addition to remaining funds from prior year appropriations] \$4,500,000
To continue support for core activities of the International Clinical Epidemiology Network (INCLEN) that link 27 clinical epidemiology units in developing countries with five clinical epidemiology resource and training centers, and for the training provided by the centers at the Universities of Pennsylvania, North Carolina at Chapel Hill, Newcastle, Australia, and Toronto, Canada

Chulalongkorn University, Bangkok, Thailand \$43,200
In support of its new master's degree program in Health Development.

\$5,000
In support of a study examining the social factors and health beliefs related to measles immunization among slum children

Science-Based Development/Health Sciences, continued

<i>Toward continuing support of its Clinical Epidemiology Unit</i>	\$25,000	Makerere University, Kampala, Uganda <i>For a research project in clinical epidemiology entitled "A Qualitative Study of Sexual Behavior Among Selected High-Risk Groups for HIV Transmission in Rakai District of Uganda"</i>	\$5,000
<i>For a clinical epidemiology research project entitled "Impact of Cranial CT Scan on the Management of Patients Presenting with Head Injury or Seizures"</i>	\$5,000	<i>Toward continuing support of its Clinical Epidemiology Unit</i>	\$25,000
Escola Paulista de Medicina, Sao Paulo, Brazil <i>Toward continuing support of its Clinical Epidemiology Unit</i>	\$50,000	<i>For a research project in health economics entitled "The Economic Impacts of Acquired Immunodeficiency Syndrome (AIDS) in Mulago Hospital, Uganda"</i>	\$5,000
<i>For a research project in health economics entitled "Utility Assessment of AIDS Outcomes"</i>	\$5,000	McMaster University, Hamilton, Canada <i>To enable one of its faculty members to spend a sabbatical at Gadjah Mada University, Yogyakarta, Indonesia, collaborating on a research project involving issues in health policy development</i>	\$17,500
<i>For a research project in clinical epidemiology entitled "The Feasibility of the Brazilian version of the Revised Composite International Diagnostic Interview"</i>	\$4,000	<i>To enable a biostatistician on its Health Sciences Faculty to teach at several INCLEN sites during his sabbatical</i>	\$26,300
Gadjah Mada University, Yogyakarta, Indonesia <i>Toward the costs of a pilot study on the social and medical organization of emergency medical services in urban Indonesia</i>	\$20,000	Ohio State University, Columbus <i>For a Bellagio conference on the use of drugs and vaccines in developing countries, held April 16-20, 1990</i>	\$40,000
<i>Toward continuing support of its Clinical Epidemiology Unit</i>	\$50,000	<i>In support of INCLEN's Seed Grant Program in Pharmacoepidemiology</i>	\$80,000
Hospital General de México, Mexico City <i>Toward continuing support of its Clinical Epidemiology Unit</i>	\$25,000	Pontifici Universidad Javeriana, Bogota, Colombia <i>For a research project in clinical epidemiology entitled "Social Factors and Scales of Severity Involved in Three Types of Injury in Colombia"</i>	\$5,000
<i>For a research project in clinical epidemiology entitled "An Economic Evaluation to Assess Whether Alcohol Taxes Pay for the Excess Utilization of the Health System Due to Alcohol Consumption"</i>	\$5,000	<i>Toward continuing support of its Clinical Epidemiology Unit</i>	\$50,000
International Epidemiological Association, Los Angeles, California <i>Toward the travel costs of third-world epidemiologists participating in the IEA regional meeting held in Los Angeles, August 5-9, 1990</i>	\$35,000	<i>For a research project in clinical epidemiology entitled "Identification of White Hypertension, WCH, a Cost Effectiveness Analysis"</i>	\$5,000
Johns Hopkins University Baltimore, Maryland <i>For the Johns Hopkins/INCLEN collaborative project to broaden and strengthen the INCLEN fellowship and training components and to provide long-term support for Clinical Epidemiology Unit research and teaching activities</i>	\$50,000	Shanghai Medical University, China <i>Toward continuing support of its Clinical Epidemiology Unit</i>	\$50,000
Khon Kaen University, Thailand <i>Toward continuing support of its Clinical Epidemiology Unit</i>	\$25,000	Suez Canal University, Ismailia, Egypt <i>Toward continuing support of its Clinical Epidemiology Unit</i>	\$25,000
Mahidol University, Bangkok, Thailand <i>For a workshop on health social sciences in clinical epidemiological studies, held April 19-21, 1990</i>	\$6,900	<i>For a research project in clinical epidemiology entitled "Risk Factors for Recurrent Kidney Stones"</i>	\$5,000
<i>Toward continuing support of its Clinical Epidemiology Unit</i>	\$25,000	Universidad de la Frontera, Temuco, Chile <i>For a research project in clinical epidemiology entitled "Two Strategies of Routine Testing at Admission to an Internal Medicine Ward"</i>	\$5,000
		<i>Toward continuing support of its Clinical Epidemiology Unit</i>	\$25,000

For a research project in clinical epidemiology entitled "The Effectiveness of Tricyclic Antidepressants in the Treatment of the Persistent Pain Associated to Rheumatoid Arthritis"	\$5,000	University of North Carolina at Chapel Hill In support of a doctoral dissertation study comparing standards, practice patterns, and costs of upper gastrointestinal endoscopy in the United States and Mexico	\$25,000
For a research project in clinical epidemiology entitled "Identifying High-Risk Patients for Gallbladder Cancer by Ultrasonography"	\$5,000	Toward the costs of the first phase of an internal evaluation of INCLEN	\$35,000
Universidade Federal Do Rio De Janeiro, Brazil For a research project in clinical epidemiology entitled "Arterial Hypertension and socioeconomic status on employers of the University Hospital"	\$5,000	To continue support for the Clinical Epidemiology Resource and Training Center (CERTC) established at this university as part of the Foundation's International Clinical Epidemiology Network (INCLEN)	\$1,010,000
For a research project in clinical epidemiology which examines the sensitivity of colposcopic biopsy for the diagnosis of preclinical invasive cancer	\$5,000	University of Pennsylvania, Philadelphia To continue support for the Clinical Epidemiology Resource and Training Center (CERTC) established at this university as part of the Foundation's International Clinical Epidemiology Network (INCLEN)	\$1,200,000
University of Chile, Santiago Toward continuing support of its Clinical Epidemiology Unit	\$50,000		
For a research project in clinical epidemiology on the male role in family planning	\$5,000	University of the Philippines System, Manila Toward continuing support of its Clinical Epidemiology Unit	\$25,000
University of Health Sciences, Madras, India Toward continuing support of the Clinical Epidemiology Unit at its Madras Medical College	\$25,000	University of Toronto, Canada In support of its short course in Health Care Evaluation and Management Skills for physicians and health administrators in developing countries	\$203,000
For support of a research project in clinical epidemiology at its Madras Medical College entitled "Treatment of Bacterial Meningitis Drug Trial-Cefuroxime"	\$5,000	University of Yaoundé, Cameroon Toward continuing support of its Clinical Epidemiology Unit	\$25,000
For a research project in clinical epidemiology at its Madras Medical College entitled "Comparison of Phenobarbital, Phenytoin, and Carbamazepine in Generalized Tonic Clonic Seizures in Children"	\$5,000	University of Zimbabwe, Harare For a research project in clinical epidemiology entitled "Modifiable Predictors of Low Birth Weight in the Zimbabwean Cities of Harare and Bulawayo"	\$5,000
University of Nairobi, Kenya For a research project in clinical epidemiology entitled "Anti Malarial Chemoprophylaxis in Adults with Sickle Cell Anemia in Kenya A Randomized Clinical Trial"	\$5,000	West China University of Medical Sciences, Chengdu Toward continuing support of its Clinical Epidemiology Unit	\$50,000
For a research project in health economics entitled, "Potential Resource Savings by Introducing a Hospice Program into the Kenyan Health Care System"	\$5,000	Foundation administered projects Toward the costs of the eighth annual meeting of INCLEN, held in Puebla, Mexico, January 1990	\$60,000
University of Newcastle, Australia In support of the social science training component at its Clinical Epidemiology Resource and Training Center (CERTC)	\$100,000	Toward the costs associated with INCLEN presidency	\$33,120
To continue support for the Clinical Epidemiology Resource and Training Center (CERTC) established at this university as part of the Foundation's International Clinical Epidemiology Network (INCLEN)	\$490,000	Costs of INCLEN interchange activities	\$50,000
		For committee meetings of the Clinical Epidemiology Resource and Training Center's advisory committee	\$30,000
		Evaluation of the program	\$65,000
		Expenses related to social science and biostatistics meetings within the Network	\$30,000
		Toward the costs of the ninth annual meeting of INCLEN, held in Mombasa, Kenya, January 20-26, 1991	\$200,000

Johns Hopkins University, Baltimore, Maryland <i>Toward the costs of a United States-China Anti-Smoking project development workshop</i>	\$43,200	Yale University, New Haven, Connecticut <i>In third-year support for a research project on the molecular epidemiology of dengue virus</i>	\$30,000
McMaster University, Hamilton, Canada <i>For continued support of the "University Partnerships in Essential Health Research"</i>	\$50,000	Foundation-administered project <i>For the local purchase and installation of three CD ROM equipment work stations at Gadjah Mada University (Indonesia), Pontificia Universidad Javeriana (Colombia), and Universidad Autonoma de San Luis Potosi (Mexico) to enable them to contract for hardware maintenance, assure software supplies, and arrange for local training</i>	\$15,800
National Academy of Sciences, Washington, D C <i>Toward continued development of the Institute of Medicine's Division of International Health and its external advisory board</i>	\$100,000	Preventing Developing-Country Diseases Through Vaccinology and Pharmacology	
Satellife, Cambridge, Massachusetts <i>Toward the pilot phase of a communications network connecting five universities in East and Southern Africa (Joint grant with Global Environment, for a total of \$65,000)</i>	\$5,000	Roy Acheson, Cambridge, England <i>To enable him to write a biography of Wickliffe Rose, who was largely responsible for the early successes of the Foundation's international health programs</i>	\$30,000
Task Force for Child Survival, Atlanta, Georgia <i>[1990 - \$250,000 in addition to remaining funds from prior year appropriations] To continue its technical assistance to the Ugandan Ministry of Health for reestablishment of the country's primary health care system</i>	\$250,000	American Society for Circumpolar Health, Anchorage, Alaska <i>In support of an international seminar on alveolar hydatid disease, held in Anchorage, June 7-8, 1990</i>	\$5,000
United Nations Children's Fund (UNICEF), New York, New York <i>Toward the organization of the World Summit for Children, to be held in New York, September 29-30, 1990</i>	\$50,000	Centers for Disease Control, Atlanta, Georgia <i>Toward support of a collaborative research project between the United States and the Soviet Union to sequence strains of the variola virus (Joint grant with Special Interests and Explorations, for a total of \$60,000)</i>	\$30,000
Université du Benin, Cotonou <i>For a short course in demography and health planning, to be held January 29-February 17, 1990, at its facilities in Lomé, Togo</i>	\$55,000	Cold Spring Harbor Laboratory, New York <i>Toward the costs of publishing the proceedings of the 1990 Conference on modern approaches to new vaccines</i>	\$20,000
University of California, San Francisco <i>[1990 - \$1,065,000, in addition to remaining funds from prior year appropriations] To continue support for the Pew Charitable Trusts/Rockefeller Foundation program aims at mobilizing academic teaching and research institutions in North America to assume national leadership roles in implementing equitable, cost-effective health care and health promotion practices</i>	\$1,065,000	Harvard University, Cambridge, Massachusetts <i>For completion of a research project on visceral leishmaniasis in Brazil, conducted collaboratively by the Harvard School of Public Health, the University of Virginia, and the Federal University of Ceara, Brazil</i>	\$25,000
<i>To plan an evaluation of Child Survival programs in selected South Asian and African countries</i>	\$36,000	Health Sciences for the Tropics <i>[1990 - \$1,900,000 in addition to remaining funds from prior year appropriations] To strengthen the capacity of developing countries to conduct research on major tropical diseases through North-South and South-South research partnerships</i>	
University of Ibadan, Nigeria <i>Toward strengthening the research capabilities of the Ibarapa Community Health Program</i>	\$25,000		
World Health Organization, Geneva, Switzerland <i>Toward the costs of publishing and disseminating an international health systems newsletter, "Bridge"</i>	\$60,000		

Brown University, Providence, Rhode Island Toward support of a research project entitled "A Multidisciplinary Approach to Philippine Schistosomiasis"	\$48,600	New York University, New York Toward support of a research project entitled "Immunobiology of Malaria and Chagas' Disease"	\$145,400
Case Western Reserve University, Cleveland, Ohio Toward support of a research project entitled "Epidemiology and Host-Parasite Relationship in Schistosomiasis Haematobia"	\$84,000	Stanford University, Palo Alto, California Toward support of a research project entitled "The Application of Biotechnology to the Enteric Infections of Childhood"	\$74,000
Center for Genetic Engineering and Biotechnology Investigations (CEIINGEBI), Cuernavaca, Mexico Toward support of a research project entitled "The Application of Biotechnology to the Enteric Infections of Childhood"	\$211,800	Universidade Federale do Ceara, Fortaleza, Brazil Toward support of a research project entitled "Recognition, Pathogenesis and Control of Enteric Infections Causing Prolonged Diarrhea in Northeastern Brazil"	\$88,200
Christian Medical College and Hospital, Vellore, India Toward support of a research project entitled "Diarrheal Disease Basic Mechanisms of Host Response A Molecular, Clinical and Epidemiologic Approach"	\$72,500	Universita di Roma, Italy Toward support of a research project entitled "Malaria Control through Modification of <i>Anopheles</i> <i>Gambiae</i> Vector Populations"	\$109,000
Robert W Gwadz, Ph D , National Institutes of Health, Bethesda, Maryland Toward support of a research project entitled "Malaria Control through Modification of <i>Anopheles</i> <i>Gambiae</i> Vector Populations"	\$92,800	University of California, Los Angeles Toward support of a research project entitled "Pathogenic Kinetoplastids The Polymerase-Chain- Reaction Amplification of Parasite-Specific DNA Sequences as a New Tool for Diagnostic, Epidemiological and Phylogenetic Studies of Kinetoplastid Protozoa"	\$121,000
Harvard University, Cambridge, Massachusetts Toward support of a research project entitled "A China-U S Partnership for Training and Research on Schistosomiasis and Filariasis"	\$84,000	University of California, San Francisco Toward support of a research project entitled "Protozoan Intestinal Diseases Biology & Epidemiology"	\$90,000
Institut Pasteur, Lille, France Toward support of a research project entitled "Immunity and Morbidity in Human Schistosomiasis"	\$40,700	Toward support of a research project entitled "Drug Development and Resistance in <i>Plasmodium</i> "	\$55,000
Institut Pasteur, Paris, France Toward support of a research project entitled "A Molecular Approach to Immunology and Epidemiology of Human Vivax Malaria"	\$95,400	University of Cambridge, England Toward support of a research project entitled "Immunity and Morbidity in Human Schistosomiasis"	\$50,000
Medical Research Council, Fajara, Banjul, The Gambia Toward support of a research project entitled "Study of the Epidemiology and Immune Responses to Potential Candidate Vaccine Antigens for <i>P. falciparum</i> Blood Stage Vaccine"	\$39,000	University of Edinburgh, Scotland Toward support of a research project entitled "A Molecular Approach to Immunology and Epidemiology of Human Vivax Malaria"	\$52,000
New England Medical Center Hospitals, Inc , Boston, Massachusetts Toward support of a research project entitled "Diarrheal Disease Basic Mechanisms and Host Response A Molecular, Clinical and Epidemiologic Approach"	\$72,500	University of Oxford, England Toward support of a research project entitled " <i>P. falciparum</i> Malaria in Melanesia and Polynesia A Study of the Pathophysiology and Genetic Factors Involved in Individual Susceptibilities"	\$95,000
		University of Stockholm, Sweden Toward support of a research project entitled "Study of the Epidemiology and Immune Responses to Potential Candidate Vaccine Antigens for <i>P. falciparum</i> Blood Stage Vaccine"	\$60,000
		University of Virginia, Charlottesville Toward support of a research project entitled "Recognition, Pathogenesis and Control of Enteric Infections Causing Prolonged Diarrhea in Northeastern Brazil"	\$126,900

<p>Walter & Eliza Hall Institute of Medical Research, Melbourne, Australia Toward support of a research project entitled "A Multidisciplinary Approach to Philippine Schistosomiasis."</p>	\$38,500	<p>IAF Biovac Inc., Quebec, Canada To make viral vaccine production a generic and technically accessible process available at moderate cost to developing countries.</p>	\$950,000
<p>International Society for Infectious Diseases, Boston, Massachusetts To enable scheduled speakers from developing countries to attend its 1990 Congress, held in Montreal, Canada, July 15-19, 1990.</p>	\$24,800	<p>Task Force for Child Survival, Atlanta, Georgia Toward the costs of the second year of the Vaccine Development Project.</p>	\$92,900
<p>Johns Hopkins University, Baltimore, Maryland To enable Dr. David Perez-Morga to continue his postdoctoral research within the School of Medicine.</p>	\$25,600	<p>World Health Organization (WHO), Geneva, Switzerland [1990 - \$350,000, in addition to remaining funds from prior year appropriations]</p> <p>To continue support for an essentially independent, special program of WHO aimed at expediting basic and developmental research on vaccines against selected third-world diseases.</p>	\$350,000
<p>For final year support to enable Dr. Gordon Ada to serve as Visiting Professor in the Department of Immunology and Infectious Diseases at the School of Hygiene and Public Health.</p>	\$35,000	<p>[1990 - \$250,000, in addition to remaining funds from prior year appropriations]</p> <p>To continue support for two applied research programs focused on reducing the number of vaccine doses required to achieve full immunization and on improving the technology for delivery of stable and potent vaccines to target populations. (Joint appropriation with Population Science, for a total of \$500,000.)</p>	\$250,000
<p>McGill University, Montreal, Canada For support of collaborative research projects relevant to the health care of Ethiopians.</p>	\$50,000	<p>Foundation-administered projects</p> <p>Toward meeting expenses related to the Children's Vaccine Initiative meeting at the Seven Springs Conference Center, Mt. Kisco, New York, February 3-5, 1991.</p>	\$25,000
<p>Task Force for Child Survival, Atlanta, Georgia Toward the costs of the Child Survival conference in Bangkok, Thailand and the Talloires targets.</p>	\$22,500	<p>For travel expenses for third-world participants, per diems, and meeting room expenses for the oral rabies vaccination meeting held in Atlanta, Georgia, in November 1990.</p>	\$10,000
<p>University of California, San Diego Toward travel expenses in connection with planning for the development of an Institute of Biomedical Sciences at the Faculty of Medicine, University of Costa Rica.</p>	\$5,000	Family and Community-Based Health Initiatives	
<p>University of Dar es Salaam, Tanzania For use by its Mubimbili Medical Center toward the costs of establishing a laboratory for clinical research appropriate to the health care needs of Tanzania.</p>	\$25,000	<p>AIDS and Reproductive Health [1990 - \$750,000, in addition to remaining funds from prior year appropriations]</p> <p>To support multidisciplinary research on AIDS and reproductive health by developing-country scientists. (Joint appropriation with Population Sciences, for a total of \$1,500,000.)</p>	
<p>University of Michigan, Ann Arbor For support of a collaborative pilot project entitled "Development of a Respiratory Syncytial Vaccine."</p>	\$15,000	<p>American Foundation for AIDS Research, New York, New York To support the African Technical Assistance Workshop under AmFAR's international program. (Joint allocation with Population Sciences, for a total of \$60,420.)</p>	\$30,210
<p>University of Texas Medical Branch at Galveston Toward support of a research project entitled "Pathogenesis of Dengue Hemorrhagic Fever."</p>	\$30,000		
<p>Vaccine Production Technology Transfer [1990 - \$1,000,000, in addition to remaining funds from prior year appropriations]</p> <p>To make viral vaccine production a generic and technically accessible process available at moderate cost to developing countries.</p>			

Australian National University, Canberra <i>Toward support of the West African Research Group on Sexual Networking (Joint allocation with Population Sciences, for a total of \$60,000)</i>	\$30,000	Community-based Control of Dengue <i>[1990 - \$600,000, in addition to remaining funds from prior year appropriations] To continue support for community-based approaches to control of <u>Aedes aegypti</u>, the urban mosquito vector of dengue fever</i>	
Centro Medico A S I A , Quito, Ecuador <i>For a study of HIV-1 seroprevalence in prostitutes working in clandestine night clubs (Joint allocation with Population Sciences, for a total of \$14,780)</i>	\$7,390	Johns Hopkins University, Baltimore, Maryland <i>In second-year support for a research and training project testing community-based approaches to control of the urban mosquito vector of dengue fever, a disease now endemic in many tropical countries</i>	\$950,000
Columbia University, New York, New York <i>To train a Ugandan physician in the kinetics of complement and complement receptors in HIV-infected individuals (Joint allocation with Population Sciences, for a total of \$10,220)</i>	\$5,110	Pan American Health Organization, Washington, D C <i>Toward the costs of a community-based <u>Aedes aegypti</u> control project in Honduras</i>	\$200,000
Harvard University, Cambridge, Massachusetts <i>To enable the School of Public Health to arrange meetings and provide communications facilities for the AIDS and Reproductive Network (Joint allocation with Population Sciences, for a total of \$125,000)</i>	\$50,000	Harvard University, Cambridge, Massachusetts <i>For use by the Center for Population Studies at its School of Public Health toward the publication costs of the June 1989 Health Transition workshop proceedings (Joint grant with Population Sciences, for a total of \$25,000)</i>	\$12,500
Johns Hopkins University, Baltimore, Maryland <i>To enable David Serwadda of Makerere University, Kampala, Uganda, to complete analysis of data from the Rakai AIDS project and obtain additional epidemiology and research management training within the School of Hygiene and Public Health (Joint allocation with Population Sciences, for a total of \$43,420)</i>	\$21,710	The Health Transition Program <i>[1989 - \$175,000, in addition to remaining funds from prior year appropriations] In support of a health transition program which will build the human capital for understanding and guide the social and biomedical interventions needed to advance better health at low cost in the developing countries (Joint appropriation with Population Sciences, for a total of \$350,000)</i>	
University of California, San Francisco <i>Supplemental funding for a collaborative study with Makerere University, Kampala, Uganda, to identify factors that intensify heterosexual transmission of human immunodeficiency virus (Joint allocation with Population Sciences, for a total of \$60,000)</i>	\$30,000	Australian National University, Canberra <i>[1990 - \$155,000, in addition to remaining funds from prior year appropriations] To establish a new international journal, "Health Transition Review" (Joint appropriation with Population Sciences, for a total of \$310,000)</i>	\$155,000
University College, London <i>Toward the costs of a collaborative AIDS research project, in Abidjan, Ivory Coast, to examine the morbidity anatomy of HIV-1 and HIV-2 infections (Joint allocation with Population Sciences, for a total of \$60,000)</i>	\$25,000	<i>For continued support of its Health Transition Centre (Joint allocation with Population Sciences, for a total of \$244,500)</i>	\$122,250
University of Dar es Salaam, Tanzania <i>For a study by the Muhimbili Medical Centre on co-factors for HIV 1 infection among women attending selected family planning clinics in Dar es Salaam (Joint allocation with Population Sciences, for a total of \$120,000)</i>	\$60,000	Foundation-administered projects <i>Toward the costs of the January 30, 1990, donor's meeting and consultant activities (Joint allocation with Population Sciences, for a total of \$50,000)</i>	\$25,000
		<i>Network steering committee meetings and workshops (Joint allocation with Population Sciences, for a total of \$90,000)</i>	\$45,000
		<i>For development activities, consultants, and site visits (Joint allocation with Population-Science for a total of \$10,000)</i>	\$5,000

Institut du Sahel, Bamako, Mali <i>For use by its Centre d'Etudes et de Recherche sur la Population pour le Developpement in developing a health transition pilot project in Mali (Joint grant with Population Sciences, for a total of \$30,000)</i>	\$15,000	Women for Women's Health Program <i>[1990 \$350,000, in addition to remaining funds from prior year appropriations] To assist Malawi and Uganda to develop the capacity for training increased numbers of nurse-midwives and upgrading their skills and status as a way of bringing about sustained reductions in maternal mortality and morbidity (Joint appropriation with Population Sciences, for a total of \$650,000)</i>	
International Women's Health Coalition, New York, New York <i>[1990 - \$150,000, in addition to remaining funds from prior year appropriations] To continue support for the Coalition's reproductive health program in selected countries of sub Saharan Africa (Joint appropriation with Population Sciences, for a total of \$300,000)</i>	\$150,000	Case Western Reserve University, Cleveland, Ohio <i>To cover the first-year costs of assigning two faculty members of its School of Nursing to Uganda to help develop a B S in Nursing program at Makerere University, Kampala</i>	\$75,000
Nigerian Institute for Social and Economic Research, Ibadan <i>To host an August 1990 meeting of a Nigerian task force to set priority research design themes for the development of a health transition pilot project (Joint grant with Population Sciences, for a total of \$13,500)</i>	\$6,750	International Council of Nurses, Geneva, Switzerland <i>Toward the costs of an August 1990 workshop in Malawi on "Nursing Regulation and Development of Nursing Standards "</i>	\$15,000
The Population Council, New York, New York <i>For the development of a microcomputer software system for Thailand and Indonesia (Joint grant with Population Sciences, for a total of \$50,000)</i>	\$25,000	University of Pennsylvania, Philadelphia <i>To cover the first-year costs of assigning three faculty members of its College of Nursing to the Kamuzu College of Nursing, University of Malawi, primarily to help design, implement, and teach a new B S in Nursing program at Kamuzu, and to provide master's degree training at Pennsylvania for four Malawian nursing faculty members</i>	\$210,000
Program for Appropriate Technology in Health (PATH), Seattle, Washington <i>To test further and develop introduction strategies for its dipstick assay for HIV screening in the developing world (Joint grant with Population Sciences, for a total of \$84,140)</i>	\$42,070		
Research and Policy Boards <i>[1990 \$750,000, in addition to remaining funds from prior year appropriations] To continue support for the national health and family planning boards in Thailand and Mexico (Joint appropriation with Population Sciences, for a total of \$1,400,000)</i>		Fellowships	
Mexican Health Foundation, Mexico City <i>For use by the Advisory Board in Epidemiology in funding epidemiological research and holding periodic meetings of the Board</i>	\$350,000	Biotechnology Career Fellowships <i>(Jointly funded with Agricultural Sciences and Population Sciences for a total of \$1,100,000)</i>	\$319,700
University of Alabama, Tuscaloosa <i>For a study of vesico vaginal fistula in northern Nigeria (Joint grant with Population Sciences, for a total of \$64,640)</i>	\$32,320		

Population Sciences Grants

The population sciences division seeks to enhance reproductive choice in the developing world by supporting work to develop new contraceptive technologies, increase the availability of existing technologies, and identify the constraints, risks, and barriers that affect contraceptive use.

The division also supports selected developing countries in strengthening the professional competence needed to establish population policies and effective management of family-planning programs.

Developing Technology for Fertility Regulation			
All-India Institute of Medical Sciences, New Delhi	\$14,000	Marine Biological Laboratory, Woods Hole, Massachusetts	\$99,000
<i>To enable Indian scientists to participate in an international conference on frontiers in reproductive physiology</i>		<i>For studies of gossypol action on Spisula sperm</i>	
Catholic University of Chile, Santiago	\$4,850	National Institute of Immunology, New Delhi, India	\$300,000
<i>For a pilot study to be conducted in the faculty of biological sciences on the endocrine role played by the mammary gland during lactation</i>		<i>[1990 - \$300,000, in addition to remaining funds from prior year appropriations]</i>	
Columbia University, New York, New York	\$48,940	<i>To provide research support for the Institute's program in vaccine development directed toward fertility regulation</i>	
<i>For a study of growth factor activity in the mammalian testes, to be conducted in its College of Physicians and Surgeons</i>		National Museums of Kenya, Nairobi	\$54,000
Contraceptive Introduction Projects [1990 - \$2,000,000]		<i>To strengthen the reproductive biology program in the Institute of Primate Research</i>	
<i>To promote field studies and operations research in developing countries as their family planning programs introduce new contraceptive methods (Grants will be made in subsequent years)</i>		The Population Council, New York, New York	\$56,000
Cornell University, Ithaca, New York	\$50,000	<i>For research on human antisperm antibodies and the development of an antifertility vaccine</i>	
<i>For a collaborative program between Cornell University Medical College and the Institute of Materia Medica and Family Planning Research of the Zhejiang Academy of Medicine in the clinical pharmacology of contraception</i>		<i>For study of the structure, function, and effects on fertility of a progesterone inhibitor found in bovine follicular fluid</i>	\$66,000
<i>To enable the New York Hospital-Cornell Medical Center to investigate the safety and acceptability of a spermicidal and virucidal compound known as gossypol vaginal cream</i>	\$35,000	<i>For a study of sperm immobilizing factor found in human serum</i>	\$55,000
Instituto Nacional de la Nutricion Salvador Zubiran, Mexico City, Mexico	\$300,000	Research on Topics Related to the Clinical Applications of Gossypol	
<i>[1990 - \$300,000, in addition to remaining funds from prior years appropriations]</i>		<i>[1990 - \$500,000, in addition to remaining funds from prior year appropriations]</i>	
<i>To renew support for the Institute's research and training program in human reproductive biology</i>		<i>To support research on the antifertility and antiviral activity of gossypol</i>	
Johns Hopkins University, Baltimore, Maryland	\$65,000	Brigham and Women's Hospital, Boston, Massachusetts	\$43,320
<i>For a study of the histological and physiological regulation of the corpus luteum</i>		<i>To develop a model in the rat to evaluate gossypol's antifertility effects</i>	
		Chiba University, Japan	\$50,000
		<i>For a study of gossypol's effects on the differentiation of type A spermatogonia</i>	

Cornell University, Ithaca, New York <i>For gossypol research at the New York Hospital-Cornell Medical Center</i>	\$40,000	Research and Training in the Population Sciences in Sub-Saharan Africa <i>[1989 - \$1,250,000, in addition to remaining funds from prior year appropriations]</i>	
Foundation-administered project <i>For the purchase of gossypol to be used in research on its antifertility and antiviral activity</i>	\$20,000	<i>To continue to strengthen the capacity of African institutions and improve understanding of population trends in sub-Saharan Africa</i>	
North Carolina State University, Raleigh <i>For a study of gene regulation in rat spermatocytes after the cessation of gossypol treatment</i>	\$59,430	Addis Ababa University, Ethiopia <i>To enable a member of the medical faculty to attend a reproductive biology course in Makerere University organized by the Commonwealth Regional Health Secretariat of East, Central, and Southern Africa</i>	\$5,330
Tel Aviv University, Israel <i>For a study of gossypol's effects on sperm thiol status, protein behavior, and fertilizing ability</i>	\$66,000	National Museums of Kenya, Nairobi <i>For a workshop at the Institute of Primate Research on the preparation and application of monoclonal antibodies for research in reproductive biology</i>	\$39,800
Uzbek Academy of Sciences, Tashkent, USSR <i>For a study at its Institute of Bioorganic Chemistry on gossypol's structure and antifertility action</i>	\$50,000	Nigerian Fertility Society, Jos <i>For a meeting on fertility regulation, to be held in conjunction with the African Fertility Society</i>	\$14,680
<hr/> Research Support for Population Scientists in Reproductive Biology and Policy Studies Returning to Developing Countries <i>[1989 - \$500,000, in addition to remaining funds from prior year appropriations]</i> <i>To provide research support for population scientists returning to their home countries at the completion of fellowships (Other grants from this appropriation are listed under the division's second guideline, Improving Population Policies and Programs)</i>		<hr/> South-to-South Cooperation in the Population Sciences and Reproductive Health <i>[1990 - \$2,000,000, in addition to remaining funds from prior year appropriations]</i>	
Alexandria University, Egypt <i>For research on male fertility to be conducted in the Faculty of Medicine</i>	\$34,000	Asociación Dominicana Pro-Bienestar de la Familia, Inc , Santo Domingo, Dominican Republic <i>For a phase I clinical trial with an anti-LHRH vaccine developed at the National Institute of Immunology, New Delhi, India</i>	\$26,950
Banaras Hindu University, Varanasi, India <i>For a research project entitled "Interspecific Embryo Transfer and Management of Subsequent Pregnancy in the Recipient Animal"</i>	\$62,430	Catholic University of Chile, Santiago <i>To enable its Department of Endocrinology to train a colleague from the Shanghai Institute of Planned Parenthood Research, China</i>	\$16,120
Catholic University of Chile, Santiago <i>For a study to be conducted at the Faculty of Biological Sciences on the effects of human tubal fluid on sperm function</i>	\$30,000	Centro de Pesquisa e Assistencia em Reprodução Humana (CPARH), Salvador, Brazil <i>For a study of hormone levels in women using a single subdermal contraceptive implant containing nomegestrol acetate</i>	\$45,200
University of Buenos Aires, Argentina <i>For a study in the Faculty of Pharmacy and Biochemistry on oxidative damage to sperm and its relevance to human fertility</i>	\$35,000	<i>To enable the Center to coordinate an international multicenter study to develop a single contraceptive implant containing nomegestrol acetate</i>	\$28,000
University of Chile, Santiago <i>For research on the acrosome reaction in human sperm</i>	\$25,000	Chinese Academy of Sciences, Beijing <i>To enable the Shanghai Institute of Materia Medica to conduct clinical trials using gossypol as a gynecological agent</i>	\$19,300
		Foundation-administered projects <i>Meetings and consultants</i>	\$200,000

Universidad Nacional Autonoma de Mexico, Mexico City <i>To enable its Faculty of Chemistry to synthesize the antiprogesterin steroid 4-hydroxyandrostene-3,17 dione for use by the South-to-South group</i>	\$40,000	Center for Population Options, Washington, D C <i>For an international forum on adolescent fertility, held in September 1990</i>	\$10,000
Universidad Católica de Valparaiso, Chile <i>For a study of metabolic and membrane transport strategies to the study of male reproduction</i>	\$33,000	Emory University, Atlanta, Georgia <i>For a project entitled "Family Planning An International Perspective"</i>	\$10,800
Universidad Nacional de Cuyo, Mendoza, Argentina <i>For a workshop on modern light microscopy and video analysis, to be held at the Institute of Histology and Embryology</i>	\$28,700	Family Care International, New York, New York <i>To support a conference on Safe Motherhood for countries in the SADCC (Southern Africa Development Coordination Conference) region</i>	\$10,000
University of Pennsylvania, Philadelphia <i>[1990 - \$500,000, in addition to remaining funds from prior year appropriations] To enable the University to train physicians and scientists from Africa and Latin America in reproductive biology and fertility regulation.</i>	\$500,000	Foundation-administered project <i>For a joint task force to develop a project to plan the organization and evaluation for the introduction of new contraceptives in China</i>	\$3,000
<i>For a meeting on uterine and embryonic factors in early pregnancy, held at the Bellagio Study and Conference Center in October 1990</i>	\$48,200	Harvard University, Cambridge, Massachusetts <i>For a study to be conducted in its School of Public Health on contraceptive failure in China</i>	\$49,630
<i>For a study of placental morphogenesis to be conducted in the School of Medicine</i>	\$60,000	International Union for the Scientific Study of Population, Liège, Belgium <i>To enable participants from developing countries to attend a seminar entitled "The Fertility Transition in Latin America"</i>	\$25,000
University of Salzburg, Austria <i>For clinical and animal studies conducted at the Department of Zoology using research protocols and products developed by investigators associated with the South-to-South program.</i>	\$20,000	<i>To strengthen population libraries in African countries and to hold a workshop in Zimbabwe on demographic surveys</i>	\$50,000
University of Siena, Italy <i>To enable developing-country scientists to attend the Sixth International Congress on Spermatology</i>	\$25,000	International Women's Health Coalition, New York, New York <i>To support a conference entitled "Reproductive Tract Infections in the Third World: National and International Policy Implications"</i>	\$50,000
World Health Organization (WHO), Geneva, Switzerland <i>[1990 - \$250,000, in addition to remaining funds from prior year appropriations] To continue support for two applied research programs focused on the number of vaccine doses required to achieve full immunization and on improving the technology for delivery of stable and potent vaccines to target populations. (Joint appropriation with Health Sciences, for a total of \$500,000)</i>	\$250,000	Latin American Social Science Research Council, Buenos Aires, Argentina <i>For its regional collaborative program on population</i>	\$100,000
Improving Population Policies and Programs		National Academy of Sciences, Washington, D C <i>To enable Africans to participate in the Academy's Panel on Population Dynamics of Sub-Saharan Africa.</i>	\$50,000
Academia Mexicana de Investigacion en Demografia Medica, A.C., Mexico City <i>To hold a workshop to reduce rates of maternal and child mortality in Latin America</i>	\$50,000	National Archives Trust Fund Board, Washington, D.C <i>Toward the collection and publication of the papers of Margaret Sanger (Joint grant with Arts and Humanities, for a total of \$30,000.)</i>	\$15,000
		National University of Benin, Cotonou <i>To evaluate the effectiveness of a program designed to lower the rates of maternal mortality in Cotonou</i>	\$19,480
		Population Crisis Committee, Washington, D.C. <i>For the preparation of population policy information kits and their distribution in developing countries</i>	\$50,000

Population Resource Center, New York, New York <i>In support of its informational programs on global population issues.</i>	\$50,000	R. Wong and R. Levine, Johns Hopkins University, Baltimore, Maryland <i>For a study of household structure in urban Mexico and its implications for women's child care and market activities.</i>	\$39,340
Princeton University, New Jersey <i>For a study of birth-spacing and infant health in the Philippines.</i>	\$48,750	Research Support for Population Scientists in Reproductive Biology and Policy Studies Returning to Developing Countries <i>(Other grants from this appropriation are listed under the division's first guideline, Developing Technology for Fertility Regulation.)</i>	
<i>For a study in the Office of Population Research on fertility and family formation in communities in western Mexico.</i>	\$40,700		
<i>To enable the Office of Population Research to develop statistical models for demographic data.</i>	\$35,170	International Institute of Population Sciences, Bombay, India <i>For a research project entitled "Birth Interval Dynamics in the Study of Fertility: Estimation and Analysis."</i>	\$24,930
Research on Evaluation of Family Planning Programs in Developing Countries <i>[1989 - \$500,000, in addition to remaining funds from prior year appropriations]</i> <i>To identify, through case studies of family planning programs in selected developing countries, the key elements that policy personnel and program managers need to consider for strengthening national population programs.</i>		Research and Training in the Population Sciences in Sub-Saharan Africa <i>(Other grants from this appropriation are listed under the division's first guideline, Developing Technology for Fertility Regulation.)</i>	
Cairo Demographic Centre, Egypt <i>For a study of the quality of family planning services in Egypt.</i>	\$75,600	Africa Press Trust, Lusaka, Zambia <i>For a workshop on population and media issues.</i>	\$35,000
Foundation-administered project <i>Personnel and publication costs.</i>	\$60,000	Commonwealth Regional Health Community Secretariat for East, Central, and Southern Africa, Arusha, Tanzania <i>For a study of the risk factors associated with maternal mortality in Lesotho, Malawi, Uganda, and Zambia.</i>	\$90,750
Research on the Relationship between the Status of Women in Developing Countries and Fertility <i>[1990 - \$300,000, in addition to remaining funds from prior year appropriations]</i> <i>To continue support for research on women's status and fertility in developing countries.</i>		B. J. Feyisetan, O. A. Ogunbameru, and E. O. Ojofeitimi, Obafemi Awolowo University, Ile-Ife, Nigeria <i>For a study of the impact of cultural beliefs and practices on child health among the Yoruba.</i>	\$48,930
T. E. Fricke and W. G. Axinn, University of Michigan, and I. Shrestha, Integrated Development Systems, Kathmandu, Nepal <i>For a study of the effects of women's autonomy on fertility, the adoption of contraception, and the desire for children among the Tamang of Nepal.</i>	\$59,410	Makerere University, Kampala, Uganda <i>For a study of the determinants of high fertility in Ankole, Uganda.</i>	\$38,340
Mahidol University, Bangkok, Thailand <i>To study the interrelationships between child care arrangements, women's status, and fertility in urban Thailand.</i>	\$5,520	G. E. O. Ogum and A. O. Okeke, Anambra State University of Technology, Awka, Nigeria <i>For a study of how female student-teachers in Anambra and Imo States of Nigeria perceive Nigeria's population policy.</i>	\$6,480
University of Michigan, Ann Arbor <i>For a comparative study of women's status and fertility in five Asian countries.</i>	\$190,200	A. Okore, A. Okorafor, and P. Nwakeze, University of Nigeria, and D. Gurak, Cornell University, Ithaca, New York <i>For a study of the health-seeking behavior of mothers and child survival in Anambra State, Nigeria.</i>	\$79,330
University of Pennsylvania, Philadelphia <i>For a comparative study of women's status and fertility in five Asian countries.</i>	\$109,800	South-to-South Cooperation in the Population Sciences and Reproductive Health <i>(Other grants from this appropriation are listed under the division's first and third guidelines, Developing Technology for Fertility Regulation and Family and Community-based Health Initiatives.)</i>	

Centro de Pesquisa e Assistencia em Reprodução Humana (CPARH), Salvador, Brazil To enable the Center to participate in an international multicentered study using a low dose of gossypol as a male contraceptive	\$93,350	Harvard University, Cambridge, Massachusetts To enable the School of Public Health to arrange meetings and provide communications facilities for the AIDS and Reproductive Health Network (Joint allocation with Health Sciences, for a total of \$125,000)	\$75,000
University of Lagos, Nigeria To enable its Department of Obstetrics and Gynecology to participate in an international study to quantify the health benefits of contraceptive counseling for young women at risk of repeated abortions	\$12,800	Johns Hopkins University, Baltimore, Maryland To enable David Serwadda to complete epidemiology and research management training at the School of Hygiene and Public Health (Joint allocation with Health Sciences, for a total of \$43,420)	\$21,710
University of Zimbabwe, Harare To enable its Department of Obstetrics and Gynecology to participate in an international study to quantify the health benefits of contraceptive counseling for young women at risk of repeated abortions	\$6,190	University of California, San Francisco Supplemental funding for a collaborative study with Makerere University, Kampala, Uganda, to identify factors that intensify heterosexual transmission of human immunodeficiency virus (Joint allocation with Health Sciences, for a total of \$60,000)	\$30,000
University of North Carolina at Chapel Hill For a project at the Carolina Population Center designed to strengthen multidisciplinary population study programs	\$24,800	University College, London, England Toward the costs of a collaborative AIDS research project, in Abidjan, Ivory Coast, to examine the morbidity anatomy of HIV-1 and HIV-2 infections. (Joint allocation with Health Sciences, for a total of \$120,000)	\$25,000
The World Bank, Washington, D C For its program to improve the implementation of population programs in sub-Saharan Africa in the 1990s	\$25,000	University of Dar es Salaam, Tanzania For a study by the Muhimbili Medical Centre on co-factors for HIV-1 infection among women attending selected family planning clinics in Dar es Salaam (Joint allocation with Health Sciences, for a total of \$120,000)	\$60,000
Family and Community-based Health Initiatives			
AIDS and Reproductive Health [1990 - \$750,000, in addition to remaining funds from prior year appropriations] To support multidisciplinary research on AIDS and reproductive health by developing-country scientists (Joint appropriation with Health Sciences, for a total of \$1,500,000)			
American Foundation for AIDS Research, New York, New York To support the African Technical Assistance Workshop under AmFAR's international program (Joint allocation with Health Sciences, for a total of \$60,420)	\$30,210	Harvard University, Cambridge, Massachusetts For use by the Center for Population Studies at its School of Public Health toward the publication costs of the June 1989 Health Transition workshop proceedings (Joint grant with Health Sciences, for a total of \$25,000)	\$12,500
Australian National University, Canberra Toward support of the West African Research Group on Sexual Networking (Joint allocation with Health Sciences, for a total of \$60,000)	\$30,000	Health Transition Program [1989 - \$175,000, in addition to remaining funds from prior year appropriations] In support of a health transition program which will build the human capital for understanding and guide the social and biomedical interventions needed to advance better health at low cost in the developing countries (Joint appropriation with Population Sciences, for a total of \$350,000)	
Centro Medico A S I A , Quito, Ecuador For a study of HIV-1 seroprevalence in prostitutes working in clandestine night clubs (Joint allocation with Health Sciences, for a total of \$14,780)	\$7,390	Australian National University, Canberra [1990 - \$155,000, in addition to remaining funds from prior year appropriations] To establish a new international journal, "Health Transition Review" (Joint appropriation with Health Sciences, for a total of \$310,000)	\$155,000
Columbia University, New York, New York To train a Ugandan physician in the kinetics of complement and complement receptors in HIV-infected individuals (Joint allocation with Health Sciences, for a total of \$10,220)	\$5,110		

For continued support of its Health Transition Centre. (Joint allocation with Health Sciences, for a total of \$244,500.) \$122,250

Foundation-administered projects
Toward the costs of the January 30, 1990 donor's meeting and consultant activities. (Joint allocation with Health Sciences, for a total of \$50,000) \$25,000

Network steering committee meetings and workshops. (Joint allocation with Health Sciences, for a total of \$90,000.) \$40,000

Institut du Sahel, Bamako, Mali \$15,000
For use by its Centre d'Etudes et de Recherche sur la Population pour le Developpement (CERPOD) in developing a Health Transition pilot project in Mali. (Joint grant with Health Sciences, for a total of \$30,000.)

International Women's Health Coalition, New York, New York \$150,000
[1990 - \$150,000, in addition to remaining funds from prior year appropriations]
To continue support for the Coalition's reproductive health program in selected countries of sub-Saharan Africa. (Joint appropriation with Health Sciences, for a total of \$300,000.)

Nigerian Institute of Social and Economic Research (NISER), Ibadan \$6,750
To host a Nigerian task force meeting to prioritize research design themes for the development of a Health Transition pilot project. (Joint grant with Health Sciences, for a total of \$13,750.)

Population Council, New York, New York \$25,000
For the development of a microcomputer software system for Thailand and Indonesia. (Joint grant with Health Sciences, for a total of \$50,000.)

Program for Appropriate Technology in Health (PATH), Seattle, Washington \$42,070
To test further and develop introduction strategies for its dipstick assay for HIV screening in the developing world. (Joint grant with Health Sciences, for a total of \$84,140.)

To assess the feasibility of establishing a model program for the control of sexually transmitted diseases in selected African countries. \$86,340

Research and Policy Boards
[1990 - \$650,000, in addition to remaining funds from prior year appropriations]
To continue support for the national health and family planning boards in Thailand and Mexico. (Joint appropriation with Health Sciences, for a total of \$1,400,000.)

South-to-South Cooperation in the Population Sciences and Reproductive Health
(Other grants from this appropriation are listed under the division's first and second guidelines, Developing Technology for Fertility Regulation and Improving Population Policies and Programs.)

Instituto Nacional de La Nutricion Salvador Zubiran, Mexico City, Mexico \$33,700
To evaluate the antiviral activity of gossypol in men infected with HIV.

University of Alabama, Tuscaloosa \$32,320
For a study of vesico-vaginal fistula in northern Nigeria. (Joint grant with Health Sciences, for a total of \$64,640.)

University of Nairobi, Kenya \$100,000
For a study in its Department of Medical Microbiology on the rate of development of symptomatic HIV-1-related disease in African women.

Women for Women's Health
[1990 - \$300,000, in addition to remaining funds from prior year appropriations]
To help Malawi and Uganda develop the capacity for training increased numbers of nurse-midwives and upgrading their skills and status as a way of bringing about sustained reduction in maternal mortality and morbidity. (Joint appropriation with Health Sciences, for a total of \$650,000.)

Case Western Reserve University, Cleveland, Ohio \$75,000
To help Uganda develop the capacity to train larger numbers of nurse-midwives and upgrade their skills and status. (Joint allocation with Health Sciences, for a total of \$150,000.)

International Council of Nurses, Geneva, Switzerland \$15,000
Toward the costs of a workshop in Malawi on "Nursing Regulation and Development of Nursing Standards." (Joint allocation with Health Sciences, for a total of \$30,000.)

University of Pennsylvania, Philadelphia \$210,000
To help Malawi develop the capacity to train larger numbers of nurse-midwives and upgrade their skills and status. (Joint allocation with Health Sciences, for a total of \$420,000.)

Fellowships

Biotechnology Career Fellowships \$83,200
(Jointly funded with Agricultural Sciences and Health Sciences, for a total of \$1,100,000.)

Global Environmental Program Grants

The global environmental program supports work promoting the skills, attitudes, relationships, and institutions necessary for environmentally sound international development. Science-focused activities within this new initiative are carried out through the agricultural, health, and populations sciences divisions.

African Centre for Technology Studies, Nairobi, Kenya <i>For a conference on "Global Warming and Climate Change: Perspectives from Africa," held in Nairobi, May 2-4, 1990.</i>	\$100,000	A China Initiative, Beijing [1990 - \$200,000] <i>To support an "International Workshop on Strategies and Policies of Environmental Protection for China," to be coordinated by the Chinese National Environmental Protection Agency and the Development Research Center of the State Council of China.</i>	
American Academy of Arts and Sciences, Cambridge, Massachusetts <i>Toward a conference on US-USSR environmental-protection institutions to be held at Bellagio, Italy, in August 1991.</i>	\$25,000	Climate Institute, Washington, D.C. <i>To prepare and conduct senior-level policy briefings in major developing countries that are a focus of its global environmental activity.</i>	\$100,000
Asia Society, New York, New York <i>Toward the costs of organizing a public education program on environmental activism in Asia.</i>	\$40,000	Committee of Soviet Scientists, Moscow, The Soviet Union <i>Toward planning and organizational activities for participation in the 21st Century Leadership Development Program.</i>	\$50,000
Bellagio Series on the Environment [1989 - \$525,000] <i>To fund a special series of ten Bellagio conferences on the environment.</i>		Conservation International, Washington, D.C. <i>Toward the establishment of an ad hoc Ecosystem Conservation Task Force to search for solutions to the rapid destruction of North America's temperate rainforests.</i>	\$50,000
International Foundation for the Survival and Development of Humanity, San Francisco, California <i>For a seminar entitled "Energy Efficiency for a Sustainable World," held at the Bellagio Study and Conference Center, June 25-30, 1990.</i>	\$33,000	<i>To develop markets and ecologically sound production systems for tropical forest products.</i>	\$75,000
International Institute for Environment and Development, London, England <i>Toward a meeting which assessed the role of economics in managing environmental problems, held at the Bellagio Study and Conference Center, April 8-12, 1990.</i>	\$46,500	Conservation Law Foundation, Inc., Boston, Massachusetts <i>Toward the development of a nationwide energy-efficiency program in Jamaica.</i>	\$100,000
Tata Energy Research Institute, New Delhi, India <i>For a meeting entitled "Developing Country Perspectives for Protecting the Global Commons," held at the Bellagio Study and Conference Center, November 26-30, 1990.</i>	\$54,000	Consultative Group on Biological Diversity, New York, New York <i>Toward its 1990-91 program activities.</i>	\$40,000
Biomass Users Network, Inc., Washington, D.C. [1990 - \$375,000] <i>To strengthen its capacity to help developing countries plan and implement science-based projects that utilize renewable resources for ecologically sound economic development.</i>	\$375,000	Cornell University, Ithaca, New York <i>Toward planning activities for a collaborative program with the University of São Paulo, Brazil, on global environmental accords. (Joint grant with Arts and Humanities, for a total of \$30,000.)</i>	\$15,000
<i>For evaluation of sugarcane-to-energy technologies.</i>	\$63,000		

Earth Day 1990, Stanford, California <i>To provide support for Earth Day 1990 activities in developing countries.</i>	\$50,000	Massachusetts Institute of Technology, Cambridge <i>To develop a model to assess the impact of greenhouse gas emissions constraints on economic development in India.</i>	\$67,050
Environmental Defense Fund, New York, New York <i>To facilitate participation by nongovernmental organizations, particularly from developing countries, in the process of formulating an international accord on climate change.</i>	\$85,000	National Academy of Engineering Fund, Washington, D.C. <i>In support of an International Workshop on Chlorofluorocarbon Substitution Technology Transfer, co-sponsored by the United Nations Environmental Program and the U.S. National Academy of Engineering Fund.</i>	\$84,000
Environmental and Energy Study Institute, Washington, D.C. <i>Toward the travel expenses of parliamentarians from developing and Eastern European nations who participated in the Interparliamentary Conference on the Global Environment, held April 29-May 2, 1990, in Washington, D.C.</i>	\$25,000	Natural Resources Defense Council, New York, New York <i>To implement an energy-efficiency demonstration project with USSR GOSSTROI, in Tallinn, Estonia, and to establish a nationwide database of environmental problems in the Soviet Union with the Socio-Ecological Union.</i>	\$95,000
Food and Agriculture Organization of the United Nations, Rome, Italy <i>Toward the costs of a meeting of the Special Commission on Environment of the Amazon Cooperation Treaty. (Joint grant with Agricultural Sciences, for a total of \$90,000.)</i>	\$70,000	People's Government of the Hainan Province, China <i>For the first meeting of the "International Advisory Council on the Economic Development of Hainan in Harmony with the Natural Environment," held in Haikou City, Hainan, September 12-15, 1990.</i>	\$50,000
Indira Gandhi Institute of Development Research, Bombay, India <i>Toward the costs of a research study on "Sustainable Development, Global Commons and India's Policy Options."</i>	\$20,000	People's University of China, Beijing <i>Toward the costs of translating into Chinese and publishing in China 15 Resources for the Future books on environmental and natural resources economics.</i>	\$50,000
INFORM Inc., New York, New York <i>Toward the costs of an outreach project in Mexico to introduce leaders from industry, government, and nongovernmental organizations to concepts of industrial toxic waste reduction.</i>	\$70,000	Princeton University, New Jersey <i>For a summer school on science and world affairs. (Joint grant with Special Interests and Explorations, for a total of \$50,000.)</i>	\$25,000
Institute for Research on Public Policy, Ontario, Canada <i>To conduct a research project leading to the publication of a book entitled <u>The Politics of Prevention: The Greening of Politics and the Politics of Greening.</u></i>	\$100,000	Resources Development Foundation, New York, New York <i>To assist developing countries in selecting energy supply and transmission systems.</i>	\$50,000
Institute of Amazon Studies, Curitiba, Brazil <i>Toward a conference to be held in Brazil in 1991 on extractive reserves in the Brazilian Amazon.</i>	\$15,000	Rocky Mountain Institute, Snowmass, Colorado <i>To meet preliminary research and administrative expenses of Phase I of the Bombay Efficient Lighting Large-Scale Experiment (BELLE), which is being managed in the United States by the Rocky Mountain Institute.</i>	\$25,000
International Institute for Energy Conservation, Washington, D.C. <i>Toward development of a CFC-free, energy-efficient refrigerator for manufacture in India.</i>	\$50,000	SatelLife, Cambridge, Massachusetts <i>Toward the pilot phase of a communications network connecting five universities in East and southern Africa. (Joint grant with Health Sciences, for a total of \$65,000.)</i>	\$60,000
Leadership Development Program [1990 - \$1,000,000] <i>To initiate the "21st Century Leadership Development Program," a global network of leaders dedicated to environmentally sound development strategies. (Grants will be made in subsequent years.)</i>			

Scientific Committee on Problems of the Environment (SCOPE), Paris, France <i>For a workshop on "Recent Approaches and Methods for the Sustainable Use of Land in Latin America," held in Chile, July 1990.</i>	\$50,000	University of São Paulo, Brazil <i>Toward the costs of a field course on groundwater pollution, a joint project of the University and Canada's International Development Research Centre, held in São Paulo in September 1990.</i>	\$25,000
Social Science Research Council, New York, New York <i>For two meetings of the SSRC Committee for Research on Global Environmental Change.</i>	\$14,000	U.S. Energy Program [1990 - \$2,200,000] <i>To establish the Energy Foundation and its program on U.S. energy efficiency and renewable energy sources — a collaborative initiative with the MacArthur Foundation and the Pew Charitable Trusts.</i>	
Tata Energy Research Institute, New Delhi, India <i>Toward operating funds of its project, Tata Energy and Resources Institute, in Washington, D.C.</i>	\$50,000	Trust for Public Land, San Francisco, California <i>Toward operating costs of the energy project.</i>	\$200,000
Tufts University, Medford, Massachusetts <i>For a conference on "The Role of University Presidents in Environmental Management and Sustainable Development," held in Talloires, France, October 3-7, 1990.</i>	\$50,000	Women USA Fund, Inc., New York, New York <i>To increase women's global participation and influence in environmental policymaking and activities.</i>	\$25,000
United Nations Conference on Environment and Development [1990 - \$490,000] <i>To strengthen selected activities that advance the interests of developing countries in the preparatory work of the 1992 United Nations Conference on Environment and Development.</i>		The World Bank, Washington, D.C. <i>For a workshop in the spring of 1991 to review The World Bank's study on the efficiency and environmental impact of coal use in the People's Republic of China.</i>	\$20,000
International Nongovernmental Support Fund, Washington, D.C. <i>For internships to facilitate the participation by young scientists and nongovernmental organization leaders from the developing countries in the substantive affairs of the Conference.</i>	\$150,000	World Meteorological Organization, Geneva, Switzerland <i>To cover the travel expenses of developing-country participants in upcoming meetings of the Intergovernmental Panel on Climate Change.</i>	\$50,000
<i>Toward the establishment of an advanced information-processing, telecommunications, and electronic-conferencing system to facilitate participation by developing-country organizations in the preparatory process for the Conference.</i>	\$190,000	World Resources Institute, Washington, D.C. [1990- \$300,000] <i>To enable economists in Mexico and India to collaborate with the World Resources Institute on introducing into national income accounts adjustments that reflect natural resource exploitation.</i>	\$300,000
United Nations Centre on Transnational Corporations, New York, New York <i>To facilitate, in preparation for the Conference, discussions regarding various policy options for accelerating the transfer of environmentally sound technologies on terms favorable to developing countries.</i>	\$150,000		
University of California, Hastings College of the Law, San Francisco <i>Toward Hastings International and Comparative Law Review's symposium, "International Environmental Law: Global Trends and Policy," held in San Francisco on February 23, 1991.</i>	\$2,000		

Special Programming Grants

Special programming supports a small number of projects in science-based development that cross the traditional boundaries of the agriculture, health, and population divisions.

<p>Africa Leadership Foundation, New York, New York Toward the 1990 activities of the Africa Leadership Forum, including its sponsorship of efforts to mediate in the civil war in Sudan</p>	\$50,000	<p>Adesegun Akin-Olugbade, doctoral candidate from Nigeria, award administered by Harvard University, Cambridge, Massachusetts To conduct dissertation research at the African Development Bank Research Title "Feasibility of Region Wide Banking in West Africa Comparative Analysis of Laws and Regulations Governing the Entry and Operations of Banks in Anglophone and Francophone West Africa"</p>	\$18,500
<p>African Academy of Sciences, Nairobi, Kenya [1990 - \$400,000, in addition to remaining funds from prior year appropriations] To support the Academy's efforts to develop a core program of activities designed to mobilize and strengthen the African scientific community's contribution to development</p>	\$400,000	<p>Alemaya University of Agriculture, Ethiopia For administrative costs associated with Yohannes Kebede's affiliation with the university</p>	\$2,500
<p>Toward a pre-feasibility study for the African Foundation for Research and Development</p>	\$25,000	<p>Adewale Johnson Alonge, doctoral candidate from Nigeria, award administered by Iowa State University, Ames To conduct dissertation research at the International Institute of Tropical Agriculture, Ibadan Research Title "An Evaluation of the Adoption of Agronomic Technologies Developed by the International Institute of Tropical Agriculture by Farmers in Southwestern Nigeria"</p>	\$22,200
<p>African Dissertation Internship Awards [1990 - \$1,000,000, in addition to remaining funds from prior year appropriations] To enable outstanding African graduate students enrolled in North American universities to undertake supervised doctoral research in Africa, as a means of increasing the relevance of their work to a future career in that region</p>		<p>Daniel Ayana, doctoral candidate from Ethiopia, award administered by the University of Illinois, Urbana-Champaign To conduct dissertation research at Addis Ababa University Research Title "Land and the Development of Coffee as a Cash Crop in Modern Ethiopia 1896-1974"</p>	\$25,100
<p>Zeinab Abdel-Sayed, doctoral candidate from Sudan, award administered by Cornell University, Ithaca, New York To conduct dissertation research at the Ministry of Health's Children's Emergency Hospital in Khartoum, Sudan Research Title "Study of the Determinants Involved in the Etiology of Maramus and Kwashiorkor in Sudanese Children"</p>	\$28,335	<p>Bayero University, Kano, Nigeria For administrative costs associated with Safianu Rabiu's affiliation with the university</p>	\$2,500
<p>Addis Ababa University, Ethiopia For administrative costs associated with Daniel Ayana's affiliation with the university</p>	\$2,500	<p>Tadesse Berisso, doctoral candidate from Ethiopia, award administered by Michigan State University, East Lansing To conduct dissertation research at Addis Ababa University, Ethiopia Research Title "Villagization in Ethiopia The Case of Jemjem Province"</p>	\$26,400
<p>For administrative costs associated with Tadesse Berisso's affiliation with the university</p>	\$2,500		
<p>For administrative costs associated with Guluma Gemedda's affiliation with the university</p>	\$2,500		
<p>For administrative costs associated with Derege Kebede's affiliation with the university</p>	\$2,500	<p>Salina Jepkoech Cheserem, doctoral candidate from Kenya, award administered by McGill University, Montreal, Canada To conduct dissertation research at the Jomo Kenyatta University College of Agriculture and Technology Research Title "Primary Schooling, Petty Trading, and Women's Autonomy in Rural Kenya"</p>	\$26,500
<p>African Academy of Sciences, Nairobi, Kenya To continue to explore and institute mechanisms for ensuring the integration of the Foundation's African Dissertation Internship awardees into the African scientific community once they have finished their graduate work</p>	\$35,000		

Chitedze Agricultural Research Station, Lilongwe, Malawi <i>For administrative costs associated with Allan James Chiyembekeza's affiliation with the university</i>	\$2,500	International Institute of Tropical Agriculture, Ibadan, Nigeria <i>For administrative costs associated with Adewale Johnson Alonge's affiliation with the university</i>	\$2,500
Allan James Chiyembekeza, <i>doctoral candidate from Malawi, award administered by the University of Florida, Marianna</i> <i>To conduct dissertation research at the Chitedze Agricultural Research Station Research Title "Inheritance of Components of Resistance to Late Leafspot in Peanut"</i>	\$25,800	Jomo Kenyatta University College of Agriculture and Technology, Nairobi, Kenya <i>For administrative costs associated with Salina Jepkoech Cheserem's affiliation with the university</i>	\$2,500
John Peter Esele, <i>doctoral candidate from Uganda, award administered by Texas A&M University, College Station</i> <i>To conduct dissertation research at the Ministry of Agriculture Research Title "The Genetics of Grain-Mold Resistance in Sorghum"</i>	\$29,200	Derege Kebede, <i>doctoral candidate from Ethiopia, award administered by Harvard University, Cambridge, Massachusetts</i> <i>To conduct dissertation research at Addis Ababa University, Ethiopia Research Title "Risk Factors for Acute Lower Respiratory Infections in Children"</i>	\$28,000
Peter Maina Gatongi, <i>doctoral candidate from Kenya, award administered by McGill University, Montreal, Canada</i> <i>To conduct research at the Kenya Agricultural Research Institute Research Title "The Significance of Hypobiosis in the Epidemiology and Control of Gastrointestinal Nematodes of Small Ruminants in a Marginal Area of Kenya"</i>	\$29,000	Yohannes Kebede, <i>doctoral candidate from Ethiopia, award administered by McGill University, Montreal, Canada</i> <i>To conduct dissertation research at the Alemaya University of Agriculture, Ethiopia Research Title "The Micro Economics of Household Decision Making The Adoption of Vertisol Management, Forage and Cattle Related Technologies Among Small Holder Mixed Farmers in the Central Ethiopian Highlands"</i>	\$28,600
Guluma Gameda, <i>doctoral candidate from Ethiopia, award administered by Michigan State University, East Lansing</i> <i>To conduct dissertation research at Addis Ababa University Research Title "Land, Agriculture, and Society in Southwestern Ethiopia, c 1850-1974"</i>	\$24,100	Lucy Abosede Kehinde, <i>doctoral candidate from Nigeria, award administered by the University of Illinois, Urbana-Champaign</i> <i>To conduct dissertation research at the Nigerian Institute of Social and Economic Research, Ibadan Research Title "The Influence of Extension and Other Information Sources on the Adoption of a New Technology A Study of the Adoption of Soybean Production Technology and Utilization Among Small-Scale Farmers in Southwestern Nigeria"</i>	\$28,600
Gamal Hamid, <i>doctoral candidate from Sudan, award administered by University of California, Los Angeles</i> <i>To conduct research at the University of Khartoum, Sudan Research Title "An Investigation into Household Sustenance Activities and Involuntary Migration in Sub-Saharan Africa"</i>	\$21,200	Kenya Agricultural Research Institute, Nairobi <i>For administrative costs associated with Patrick Sankale Shompole's affiliation with the university</i>	\$2,500
Institut National de Recherches Agronomiques du Niger, Niamey <i>For administrative costs associated with Christophe G L Zaongo's affiliation with the university</i>	\$2,500	<i>For administrative costs associated with Peter Maina Gatongi's affiliation with the university</i>	\$2,500
Institut Supérieur Scientifique, Nouakchott, Mauritania <i>For administrative costs associated with Amadou Khoudiedji Thiame's affiliation with the university</i>	\$2,500	Peter Kima, <i>doctoral candidate from Cameroon, award administered by Hahnemann University, Philadelphia, Pennsylvania</i> <i>To conduct dissertation research at the University of Yaoundé, Cameroon Research Title "Identification of Malarial Antigens Inducing Protective Cell-Mediated Immune Responses"</i>	\$28,600
		Augustine Konneh, <i>doctoral candidate from Liberia, award administered by Indiana University, Bloomington</i> <i>To conduct dissertation research at Fourah Bay College, Sierra Leone Research Title "Indigenous Capitalists and Entrepreneurs The Role of Mandinka in the Economic Development of Liberia, 1870-1990"</i>	\$24,700

Lily Mafela, <i>doctoral candidate from Botswana, award administered by Northwestern University, Evanston, Illinois</i> <i>To conduct dissertation research at the University of Botswana, Gaborone Research Title "Gender and Ideology Colonialism and Women's Education in Botswana"</i>	\$23,200	Safianu Rabiou, <i>doctoral candidate from Nigeria, award administered by Old Dominion University, Norfolk, Virginia</i> <i>To conduct dissertation research at Bayero University, Kano, Nigeria Research Title "The Ecology of Three Species of Rodents in Natural and Agricultural Fields in Northern Nigeria."</i>	\$27,400
Makerere University, Kampala, Uganda <i>For administrative costs associated with Fred Wabwire-Mangen's affiliation with the university</i>	\$2,500	Patrick Sankale Shompole, <i>doctoral candidate from Kenya, award administered by Washington State University, Pullman</i> <i>To conduct dissertation research at the Kenya Agricultural Research Institute Research Title "Evaluation of the Protective Immune Response in Calves Induced by Conserved Babesia Babemina Infected Erythrocyte Surface Antigens"</i>	\$28,500
Sipho Masilela, <i>doctoral candidate from Nigeria, award administered by the University of Iowa, Iowa City</i> <i>To conduct dissertation research at the University of Nairobi, Kenya Research Title "Communication Strategies for Community Participation in Project Decision Making A Comparative Case Study in Nairobi, Kenya"</i>	\$24,400	Amadou Khoudiedji Thiam, <i>doctoral candidate from Mauritania, award administered by Clark University, Worcester, Massachusetts</i> <i>To conduct dissertation research at the Institut Supérieur Scientifique, Mauritania Research Title "Remote Sensing and Geographic Information Systems for Monitoring Land Degradation in Southern Mauritania"</i>	\$27,800
Ministry of Agriculture, Entebbe, Uganda <i>For administrative costs associated with John Peter Esele's affiliation with the university</i>	\$2,500	University of Botswana, Gaborone <i>For administrative costs associated with Lily Mafela's affiliation with the university</i>	\$2,500
Ministry of Agriculture, Livestock, and Forestry, Kigali, Rwanda <i>For administrative costs associated with Vincent Nyamulinda's affiliation with the university</i>	\$2,500	University of Khartoum, Sudan <i>For administrative costs associated with Gamil Hamid's affiliation with the university</i>	\$2,500
Ministry of Health, Khartoum, Sudan <i>For administrative costs associated with Zeinab Abdel-Sayed's affiliation with the hospital</i>	\$2,500	University of Liberia, Monrovia <i>For administrative costs associated with Moses Moroe Zinnab's affiliation with the university</i>	\$2,500
Lucy N Ngoh, <i>doctoral candidate from Cameroon, award administered by the University of Texas at Austin</i> <i>To conduct dissertation research at the University of Yaoundé, Cameroon Research Title "A Study of the Comprehension of Antibiotic Instructions and Their Utilization in a Primary Health Care Setting in Cameroon"</i>	\$26,500	University of Nairobi, Kenya <i>For administrative costs associated with Sipho Masilela's affiliation with the university</i>	\$2,500
Nigerian Institute of Social and Economic Research, Ibadan <i>For administrative costs associated with Lucy Abosede Kehinde's affiliation with the Institute</i>	\$2,500	University of Yaoundé, Cameroon <i>For administrative costs associated with Peter Kima's affiliation with the university</i>	\$2,500
Njala University College, Sierra Leone <i>For administrative costs associated with Moses Moroe Zinnab's affiliation with the university</i>	\$500	<i>For administrative costs associated with Lucy N Ngoh's affiliation with the university</i>	\$2,500
Vincent Nyamulinda, <i>doctoral candidate from Rwanda, award administered by Clark University, Worcester, Massachusetts</i> <i>To conduct dissertation research at the Ministry of Agriculture, Livestock, and Forestry, Rwanda Research Title "Assessing Soil Erosion, Conservation, and Agriculture in Cropping Systems of Northern Rwanda"</i>	\$28,800	Fred Wabwire-Mangen, <i>doctoral candidate from Uganda, award administered by Johns Hopkins University, Baltimore, Maryland</i> <i>To conduct dissertation research at Makerere University, Kampala, Uganda Research Title "Maternal and Placental Risk Factors for Vertical Transmission of HIV-1 Infection in Uganda"</i>	\$26,900

Christophe G L Zaongo, <i>doctoral candidate from Burkina Faso, award administered by Texas A&M University, College Station</i> <i>To conduct dissertation research at the Institut National de Recherches Agronomiques du Niger</i> <i>Research Title "The Interactive Effects of Water and Nutrients on Sorghum Growth in a Sahelian Soil-Plant-Atmosphere Continuum"</i>	\$28,700	University of Zimbabwe, Harare <i>Toward the costs of enabling certain key African educators to participate in the Harare Generator, an international conference on innovation in science and education, held at the University of Zimbabwe in January 1991</i>	\$28,000
Moses Moroe Zinnah, <i>doctoral candidate from Liberia, award administered by the University of Wisconsin-Madison</i> <i>To conduct dissertation research at the University of Liberia, Monrovia</i> <i>Research Title "An Analysis of Factors Influencing Small Farmers' Adoption of Improved Swamp Rice Production Practices in an Integrated Agricultural Development Project in Liberia"</i>	\$15,000	Foundation-administered projects <i>Program support expenses</i>	\$100,000
Foundation-administered projects <i>To enable African host-institution supervisors to attend the interns' dissertation defense</i>	\$10,000	<i>Costs of a workshop on popularization of science and technology in West Africa</i>	\$15,000
<i>Program support expenses</i>	\$25,000	<hr/> Beyond Child Survival Program [1988 - \$485,000] <i>To help developing countries generate and use information on program management and mothers' behavior to improve nutritional status for high-risk preschool children, thereby ensuring that technical knowledge about nutritional deficiencies can be translated into action</i>	
<hr/> African Economic Research Consortium Program [1990 - \$200,000, in addition to remaining funds from prior year appropriations] <i>To support the introduction of a new training program within the African Economic Research Consortium designed to help build human capital in economic policy research and policy management in sub-Saharan Africa</i>		Foundation-administered project <i>Honoraria, technical assistance, and travel expenses related to consultants' analyses of past attempts to institutionalize nutrition data</i>	\$39,000
Foundation-administered project <i>Program support expenses</i>	\$700,000	<hr/> Council for the Development of Economic and Social Research in Africa (CODESRIA), Dakar, Senegal <i>Toward the costs of a conference entitled "Academic Freedom Research and the Social Responsibility of the Intellectual in Africa," held November 26-29, 1990, in Uganda</i>	\$60,000
<hr/> African Forum for Children's Literacy in Science and Technology [1990 - \$400,000, in addition to remaining funds from prior year appropriations] <i>To generate popular understanding in Africa among children and young adults of the practical applications of science and technology</i>		<hr/> Cornell University, Ithaca, New York <i>For an analysis of the relationship between child anthropometry and mortality in northern Malawi</i>	\$50,650
Makerere University, Kampala, Uganda <i>Toward the costs of expanding Mindsacross, a project designed to encourage primary and secondary school students in Africa to practice and consolidate their skills in functional and conceptual literacy</i>	\$54,000	<hr/> Female Participation in African Education [1990 - \$1,000,000, in addition to remaining funds from prior year appropriations] <i>To improve understanding of sex differences in school participation in sub-Saharan Africa and help African countries design and test policies to increase female attendance and educational performance</i>	
Mazingira Institute, Nairobi, Kenya <i>Toward the costs of Mazingira Magazine, an interactive comic strip publication</i>	\$75,000	Foundation-administered projects <i>Program support expenses</i>	\$30,000
University of Dar es Salaam, Tanzania <i>Toward the costs of continuing a science camp for high school students in Tanzania, spreading the benefits to a larger population, and laying the foundation for national and village science centers</i>	\$70,000	<i>Costs of a workshop on constraints to female education in sub-Saharan Africa</i>	\$27,700

International African Institute, London, England <i>Toward a seminar on Healing the Social Wounds of War, to be held in Namibia in November/December 1991</i>	\$30,000	Research Foundation of the City University of New York, New York <i>Toward travel expenses of participants in the Edward Bouchet International Conference on Physics and Technology, held at the University of Ghana in Accra, August 14-17, 1990</i>	\$14,250
International Development Conference, Washington, D C <i>Toward expenses of the 1991 International Development Conference, "From Cold War to Cooperation Dynamics of a New World Order," held in Washington, D C, January 23-25, 1991</i>	\$10,000	University of Lagos, Nigeria <i>Toward the publication and distribution of a manuscript entitled "Science and Technology Education in Africa Case Studies of Seven Sub-Saharan Countries"</i>	\$7,500
International Institute for Environment and Development (IIED), Washington, D C [1987 - \$325,000] <i>To expand its program for helping developing countries organize national forest policy reviews</i>		A Voice for Africa in the U S [1988 - \$1,200,000] <i>To strengthen a voice for Africa in the United States, with particular focus on the U S foreign and development policy communities</i>	
<i>To enable IIED to expand its program for helping developing countries organize national forest policy reviews</i>	\$400,000	Bryn Mawr College, Pennsylvania <i>For a study on teaching about Africa in U S public schools</i>	\$37,105
Makerere University, Kampala, Uganda [1986 - \$350,000] <i>To support research and training initiatives at Makerere that further the goals of a science-based development strategy for Uganda</i>		The World Bank, Washington, D C <i>Toward the operation and maintenance of an information system on donors' assistance to African education</i>	\$40,000
<i>For continued support of the research program of the Makerere Institute of Social Research</i>	\$15,259	<i>Toward the costs of a joint conference with the Rockefeller Foundation to develop a research program on "The Role of the Private Sector in Providing Health, Education, and Other Social Services in Developing Countries," held at the Bellagio Study and Conference Center, October 22-26, 1990</i>	\$38,600
<i>To develop models for increasing efficiency in the teaching process through the use of technology</i>	\$100,000	Yale University, New Haven, Connecticut [1990 - \$45,000] <i>To establish an interdisciplinary and comparative program for United States and third-world scholars in agrarian studies (Joint appropriation with Arts and Humanities and Agricultural Sciences, for a total of \$200,000)</i>	\$45,000
Reflections on Development Program [1990 - \$680,000, in addition to remaining funds from prior year appropriations] <i>To encourage outstanding third-world scholars to focus on the most recent lessons, experiences, and challenges to development in different developing countries, and in the process to foster greater collaboration among scholars across countries and regions</i>			
Kwame A Ninsin, Legon, Ghana <i>To publish a book entitled <u>The Informal Sector in Ghana's Political Economy</u></i>	\$6,000		
Foundation-administered project <i>Travel expenses associated with the conference held at the end of the fellowship period</i>	\$55,000		
The Regents of the University of California, Los Angeles <i>Toward a social science symposium, "Intergenerational Relations and Ecology," to be held in Western Kenya in August 1991</i>	\$29,000		

Advanced Training Fellowships

Agricultural Sciences

Cameroon

Martin Ngon à Yassi, molecular biology of plant viruses
Appointed from University of Yaoundé, Cameroon
Place of study Washington University, St. Louis, Missouri

China

Deng Wanyin, plant molecular biology
Appointed from Institute of Genetics, Academia Sinica, Beijing
Place of study University of Washington, Seattle

Fan Zaifeng, genetic engineering of rice for disease resistance
Appointed from China National Rice Research Institute, Hangzhou
Place of study University of East Anglia, Norwich, United Kingdom

Hu Tianhua, genetic engineering of rice
Appointed from Beijing University
Place of study Washington University, St. Louis, Missouri

Li Liangcai, rice biotechnology
Appointed from Institute of Genetics, Academia Sinica, Beijing
Place of study Washington University, St. Louis, Missouri

Li Xiu-Qing, rice biotechnology
Appointed from Beijing University
Place of study Purdue University, West Lafayette, Indiana

Liu Dong, plant molecular genetics
Appointed from Shanghai Institute of Plant Physiology
Place of study Purdue University, West Lafayette, Indiana

Wang Hong, molecular biology
Appointed from Beijing Plant Cell Bioengineering Laboratory
Place of study Yale University, New Haven, Connecticut

Wang Mingbo, molecular biology
Appointed from Chinese Academy of Agricultural Sciences, Beijing
Place of study University of Durham, United Kingdom

Xiao Jinua, plant breeding
Appointed from Hunan Hybrid Rice Research Center, Changsha
Place of study Cornell University, Ithaca, New York

Ye Qiaolun, agricultural economics
Appointed from Stanford University, California
Place of study Stanford University

Zhong Heng, cellular biology
Appointed from Institute of Botany, Academia Sinica, Beijing
Place of study Michigan State University, East Lansing

Zou Jitao, rice biotechnology
Appointed from Institute of Botany, Academia Sinica, Beijing
Place of study Yale University, New Haven, Connecticut

Colombia

Alejandro Calderon-Urrea, plant science molecular genetics
Appointed from International Center for Tropical Agriculture (CIAT), Cali
Place of study Yale University, New Haven, Connecticut

India

C. S. Anuratha, rice biotechnology/molecular biology
Appointed from University of Madras
Place of study Kansas State University, Manhattan

Vijay Kumar Chowdhury, genetics
Appointed from Haryana Agricultural University
Place of study Purdue University, West Lafayette, Indiana

Gurpreet S. Khehra, rice biotechnology
Appointed from Punjab Agricultural University, Ludhiana
Place of study University of Nottingham, United Kingdom

Yogesh Ramswarup Mawal, characterization of seed storage proteins of rice
Appointed from National Chemical Laboratory, Pune
Place of study Cornell University, Ithaca, New York

Kottaram K. Narayanan, plant molecular biology
Appointed from SPIC Science Foundation, Madras
Place of study Stanford University, California

Jyoti Ranjan Rout, rice biotechnology
Appointed from Central Rice Research Institute, Cuttack
Place of study University of California, Davis

Ajanahalli R. Sadananda, genetics
Appointed from Indian Agricultural Research Institute, New Delhi
Place of study University of Georgia, Athens

Sarat Chandra Sahu, molecular biology/genetics
Appointed from Central Rice Research Institute, Cuttack
Place of study Washington State University, Pullman

Ramasamy Samiyappan, plant pathology
Appointed from Tamil Nadu Agricultural University, Coimbatore
Place of study Kansas State University, Manhattan

Kenya

Steven Were Omamo, agricultural economics
Appointed from Egerton University, Njoro
Place of study Stanford University, California

Korea

Choi Seong Ho, plant genetics and breeding
Appointed from Rural Development Administration, Suweon
Place of study Kansas State University, Manhattan

Malawi

Zakia R G Chalira, economics
Appointed from Ministry of Finance, Lilongwe
Place of study University of Manchester, United Kingdom

Mali

Niama Nango Dembélé, agricultural economics.
Appointed from Ministry of Finance and Commerce, Bamako
Place of study Michigan State University, East Lansing

Mozambique

Admir Pancas Mahomed Bay, agronomy and seed physiology
Appointed from Eduardo Mondlane University, Maputo
Place of study Cornell University, Ithaca, New York

Nepal

Ganesh Dahal, biotechnology of rice viruses
Appointed from Tribhuvan University, Kathmandu
Place of study John Innes Institute, Norwich,
United Kingdom

Nigeria

Christian A Fatokun, Vigna biotechnology.
Appointed from University of Ibadan
Place of study University of Minnesota, St Paul

Philippines

Rhodora Romero Aldemita, plant physiology
Appointed from Philippine Rice Research Institute, Manila
Place of study Purdue University, West Lafayette, Indiana

Reynaldo V Eborá, entomology
Appointed from University of the Philippines, Los Baños
Place of study Michigan State University, East Lansing

Desiree Menancio-Hautea, Vigna biotechnology
Appointed from University of the Philippines, Laguna
Place of study University of Minnesota, St Paul

Edilberto D Redona, plant breeding and genetics
Appointed from Philippine Rice Research Institute, Manila
Place of study University of California, Davis

Leocadio S Sebastian, plant breeding and genetics
Appointed from Philippine Rice Research Institute, Manila
Place of study Cornell University, Ithaca, New York

Thailand

Julapark Chunwongse, rice biotechnology
Appointed from Kasetsart University, Bangkok
Place of study Cornell University, Ithaca, New York

Patchara Verakalasa, molecular entomology
Appointed from Chulalongkorn University, Bangkok
Place of study Michigan State University, East Lansing

Watanalai Panbangred, rice biotechnology
Appointed from Mahidol University, Bangkok
Place of study Salk Institute, La Jolla, California

Uganda

Flavia Kabeere, seed technology
Appointed from Ministry of Agriculture, Kampala
Place of study Massey University, Palmerston North,
New Zealand

United States

Michael Champoux, plant breeding
Appointed from Kansas State University, Manhattan
Place of study International Rice Research Institute,
Los Baños

Zimbabwe

Julia Bonga, plant pathology.
Appointed from University of Zimbabwe, Harare
Place of study Ohio State University, Columbus

Zwenhamo Albert Chiteka, agronomy
Appointed from Crop Breeding Institute, Harare
Place of study University of Florida, Gainesville

Chrispen Sukume, agricultural economics
Appointed from University of Zimbabwe, Harare
Place of study Oregon State University, Corvallis

Health Sciences

Sazawal, Sunil, Clinical Epidemiology
Appointed from All India Institute of Medical Sciences,
New Delhi
Place of Study McMaster University, Hamilton, Ontario,
Canada and Johns Hopkins University, Baltimore, Maryland

Population Sciences

Argentina

Rubén Hugo Ponce, reproductive biology
Appointed from National University of Córdoba
Place of study University of Hawaii, Honolulu

Chile

Hugo Guillermo Sankan Cardenas, reproductive biology
Appointed from Instituto Chileno de Medicina Reproductiva,
Santiago
Place of study University of Texas Health Science Center,
Houston

Ivonne Rosa Szasz Pianta, demography
Appointed from El Colegio de México, Mexico City
Place of study United Nations Organization, Santiago

China

Gu Yanmin, population and development
Appointed from Cornell University, Ithaca, New York
Place of study Cornell University, Ithaca, New York

Guo Shenyang, demography
Appointed from Population Research Institute, Fudan
Place of study Brown University, Providence, Rhode Island

He Zhigang, reproductive biology.
Appointed from Nanjing Medical College
Place of study University of Pennsylvania, Philadelphia

Liang Zhi-Guo, reproductive biology.
Appointed from National Research Institute for
Family Planning, Beijing
Place of study The Population Council, New York, New York

Ma Rong, demography.
Appointed from Beijing University
Place of study Harvard University, Cambridge, Massachusetts

Qiu Yilan, demography.
Appointed from People's University of China, Beijing
Place of study University of Southern California, Los Angeles

Wang Ai-Wei, reproductive biology.
Appointed from Harvard Medical School,
Boston, Massachusetts
Place of study Harvard Medical School,
Boston, Massachusetts

Wang Yan, reproductive health.
Appointed from Beijing Medical University
Place of study Johns Hopkins University,
Baltimore, Maryland

Ye Wenzhen, demography.
Appointed from Xiamen University
Place of study Princeton University, New Jersey

Colombia

Arismentdy Luis Fernando Botero, reproductive biology.
Appointed from Javeriana University, Bogotá
Place of study University of Maryland, Baltimore

France

Barbieri Magali, demography.
Appointed from University of California–Berkeley
Place of study Centre Français sur la Population et le
Développement, Paris

Ghana

Kofi Darkwa Benefo, demography.
Appointed from University of Michigan, Ann Arbor
Place of study University of North Carolina at Chapel Hill

India

Hira Lal Sharma, demography.
Appointed from Jawagarkak Nehru Krishi Vishwa Vidyayala,
Jabalpur
Place of study University of Pennsylvania, Philadelphia

Sudha Shreeniwas, sociology.
Appointed from University of Michigan, Ann Arbor
Place of study University of Michigan

Kaushalendra Kumar Singh, social science statistics.
Appointed from Banaras Hindu University, Varanasi
Place of study University of North Carolina at Chapel Hill

Shio Kumar Singh, reproductive biology.
Appointed from Banaras Hindu University, Varanasi
Place of study Landeskrankenanstalten, Salzburg, Austria

Mahendra Kumar Thakur, reproductive biology.
Appointed from Banaras Hindu University, Varanasi
Place of study The Population Council, New York, New York

Kenya

Evasius K. Bauni, demography.
Appointed from Kenyatta University, Nairobi
Place of study London School of Hygiene and
Tropical Medicine, United Kingdom

Mexico

Maria Irma Villalpando Fierro, reproductive biology.
Appointed from Universidad Nacional Autónoma de México,
Mexico City
Place of study Royal Victoria Hospital, Montreal, Canada

New Zealand

Alexandra A. Brewis, anthropology
Appointed from University of Arizona, Tucson
Place of study University of Arizona

Nigeria

Bolaji Fapohunda, development sociology.
Appointed from University of Ibadan
Place of study Cornell University, Ithaca, New York

Adekunbi K. Omideyi, demography and social statistics.
Appointed from Obafemi Awolowo University, Ile-Ife
Place of study Cornell University, Ithaca, New York,
and University of Pennsylvania, Philadelphia

Bankole Olusiji Oke, reproductive biology.
Appointed from University of Ibadan
Place of study Georgetown University Medical Center,
Washington, D C

Philippines

Josefina Valera-Cabigon, demography.
Appointed from University of the Philippines,
Diliman, Quezon City
Place of study Australian National University, Canberra

Sri Lanka

Weraduwege Indralal De Silva, demography.
Appointed from University of Colombo, Sri Lanka
Place of study Australian National University, Canberra

Sudan

Hassan Musa Yousif, demography.
Appointed from University of Gezira, Wadmedani
Place of study Brown University, Providence, Rhode Island

Thailand

Kamthorn Pruksananonda, reproductive biology.
Appointed from Chulalongkorn University, Bangkok
Place of study University of Pennsylvania, Philadelphia

Biotechnology Career Fellowships

Agricultural Sciences

Brazil

Dulce Eleonora de Oliveira, *Universidade Federal do Rio de Janeiro* Molecular analysis of elicitor-induced defense responses in *Oryzae sativa*, at *Rijksuniversiteit Gent*, Belgium

Edilson Paiva, *National Corn and Sorghum Research Center, Sete Lagoas* Special types of corn for human nutrition, at the *University of Arizona, Tucson* (Renewal)

China

Yang Jinshui, *Fudan University, Shanghai* Gene-related pollen abortion of gametophytic sterility type in rice, at *Stanford University, California*

Costa Rica

Luis Leandro Rodriguez, *Universidad Nacional, Heredia* Use of newly developed molecular biology techniques in the study of vesicular stomatitis virus epizootiology, at the *University of Wisconsin-Madison*

India

Shanker L Kothari, *University of Rajasthan, Jaipur* Genetic transformation and manipulation of cytoplasmic male sterility in rice and other cereal crops using protoplast systems, at the *University of Nottingham, United Kingdom*

Baishnab Charan Tripathy, *Jawaharlal Nehru University, New Delhi* Protein transport into chloroplast, at the *University of Wisconsin-Madison*

Usha Vijayraghavan, *Indian Institute of Science, Bangalore* Molecular genetic analysis of flora morphogenesis in *Arabidopsis thaliana*, at the *California Institute of Technology, Pasadena*

Mexico

Carlos Arámburo de la Hoz, *Universidad Nacional Autónoma de Mexico, D F* Structure, biological activity, and control of chicken growth hormone molecular variations, at *Rutgers University, New Brunswick, New Jersey*

Nigeria

Clement Kanyidinma Ojeh, *University of Ibadan* Development of tests/reagents for the detection and characterization of group C rotaviruses, at *Ohio Agricultural Research and Development Center, Ohio State University, Wooster*

Gilbert Uwahmaka Okereke, *Anambra State University of Technology, Enugu* Molecular linkage of soybean nodulation-controlling genes, at the *University of Tennessee, Knoxville*

John Osita Arinze Okoye, *University of Nigeria, Nsukka* Detection of infectious bursal disease viral isolates using polymerase chain reaction, at *Auburn University, Alabama*

Pakistan

Khalida Sultana Ahmed, *Quaid-i-Azam University, Islamabad* Development of a pentose-utilizing yeast strain for the efficient conversion of agricultural biomass to fuel-grade alcohol, at *Cornell University, Ithaca, New York*

Thailand

Burachai Sonthayanon, *Mahidol University, Bangkok* Development of a high-density RFLP map in rice, at *Cornell University, Ithaca, New York*

Health Sciences

Argentina

Luis S Mayorga, *Universidad Nacional de Cuyo, Mendoza* Reconstitution of phagolysosome formation in cell-broken preparations and the effect of human intracellular parasites on the process, at *Washington University, St Louis, Missouri*

Marcos Leonardo Satz, *University of Buenos Aires* Molecular characterization of HLA class II alleles in Latin American individuals, at the *National Institutes of Health, Bethesda, Maryland*

Brazil

Fernando de Castro Reinach, *University of São Paulo* Molecular genetic analysis of A-band assembly in striated muscle, at *Cornell University Medical College, New York, New York*

Yaria Maria Traub-Cseko, *Fundação Oswaldo Cruz, Rio de Janeiro* Characterization of cysteine proteinases in *Leishmania*, at *Yale University, New Haven, Connecticut*

Anibal Eugênio Vercesi, *Universidade Estadual de Campinas* Regulation of intracellular Ca²⁺ homeostasis in *Trypanosoma cruzi*, at the *University of Illinois, Urbana-Champaign*

India

Shahid Jameel, *International Centre for Genetic Engineering and Biotechnology, New Delhi* Isolation, cloning, and sequencing of the genome of the etiologic agent for enteric Non-A, Non-B Hepatitis, at the *University of Colorado Health Sciences Center, Denver*

Kamal K Kamboj, *Central Drug Research Institute, Lucknow* Use of recombinant DNA methodology and peptide-based immunoassays for the identification of variants of human malaria parasites and of epitopes recognized by the immune system of malaria-infected individuals, at *New York University Medical Center, New York City*

Nigeria

John Abiodun Elegbede, *Ahmadu Bello University, Zaria*
Molecular basis of feedback regulation of mevalonate synthesis by plant isoprenoid products, at the University of Wisconsin-Madison

Turkey

Beki Kan, *Marmara University, Istanbul* Regulation of hemoglobin synthesis in normal and abnormal hematologic conditions, at *Harvard University and Massachusetts Institute of Technology, Cambridge*

Population Sciences

Egypt

Mostafa Kamel El-Awady, *National Research Centre, Cairo*
Molecular defects in the human androgen receptor gene, and their linkage to genetic markers for early diagnosis and carrier detection of the androgen insensitivity syndrome, at the University of North Carolina at Chapel Hill

India

K Muniyappa, *Indian Institute of Science, Bangalore* Genetic approaches to the investigation of meiosis in mammals, at the *University of Washington, Seattle*

Social Science Research Fellowships

Agricultural Sciences

Alexander Amuah, *an agricultural economist studying macroeconomic policies and fertilizer use in Ghana, while located at the International Food Policy Research Institute (IFPRI) project in Accra*

Daniel Buckles, *a sociologist studying the socio-economic dimensions of the adoption of soil conservation practices by maize farmers in Central America and Mexico, while located at the International Maize and Wheat Improvement Center (CIMMYT), El Batán, Mexico*

John Corbett, *a geographer participating in a project entitled "Upgrading and Utilization of a Wheat Database for the Developing World," while located at the International Maize and Wheat Improvement Center (CIMMYT), El Batán, Mexico*

Adiel Mbabu, *a rural sociologist participating in the training program of the International Service for National Agricultural Research (ISNAR) at the Kenya Agricultural Research Institute, Nairobi*

Adhiambo Odaga, *a geographer serving as Regional Social Scientist for West and Central Africa for the International Potato Center (CIP), while located in Yaoundé, Cameroon*

Diane Russell, *an anthropologist studying fallow management strategies of small-scale farmers in the humid forest zone of Cameroon, while located at the International Institute of Tropical Agriculture (IITA) project in Yaoundé*

Population Sciences

Mark Hereward, *a demographer studying behavioral, demographic, organizational, and attitudinal responses to the effects of enhanced family planning services in selected rural areas of China, while located at the State Family Planning Commission in Beijing*

Arts and Humanities Grants

The arts and humanities division encourages creative artists and scholars in the humanities whose work can advance international and intercultural understanding in the United States. The division therefore supports activities extending international and intercultural scholarship, and increasing artistic experimentation across cultures.

Extending International and Intercultural Scholarship

American Association of Museums, Washington, D.C. \$50,300
Toward the costs of the "International Partnerships Among Museums" program.

American Historical Association, Washington, D.C. \$900
Toward the costs of an international meeting on women's history.

Toward the costs of publishing a new edition of its Guide to Historical Literature. \$50,000

Association of American Colleges, Inc., Washington, D.C. \$2,500
For use by the Women's College Coalition in producing and distributing the papers commissioned for its 1990 conference. (Joint grant with Equal Opportunity, for a total of \$5,000.)

California/International Arts Foundation, Los Angeles \$60,000
To enable Latin American participants to attend the 1990 Comité Internationale pour les Musées d'Art Moderne annual conference.

Cine Accion, Inc., San Francisco, California \$30,000
Toward expenses for "Encuentro Quinceañero," a conference of Mexican and Latina/Chicana women filmmakers at the Colegio de la Frontera del Norte.

Cultural Survival, Inc., Cambridge, Massachusetts \$85,000
Toward the costs of establishing the Center for Cultural Survival.

Forest History Society, Durham, North Carolina \$24,000
Toward the costs of a conference on Latin American forest and environmental history.

History of Science Society, Worcester, Massachusetts \$30,000
To enable Latin American scholars to attend its 1991 international conference.

Hunter College, City University of New York, New York \$50,000
Toward a pilot project for a university-based satellite television program service.

International Arts Relations, Inc. (INTAR), New York, New York \$30,000
Toward curatorial outreach and educational programs, including the commissioning of bilingual catalogues to accompany exhibitions of work by minority artists.

International Network of Resource Information Centers (INRIC), Plainfield, New Hampshire \$7,000
Toward the costs of third-world participation in the INRIC conference on "Economics as a Tool for a Sustainable Society."

Micere Mugo, Harare, Zimbabwe \$11,000
Toward the costs of a research and writing project on African literature, education, and culture. (Joint grant with Special Programming, for a total of \$21,000.)

National Archives Trust Fund Board, Washington, D.C. \$15,000
Toward the collection and publication of the papers of Margaret Sanger. (Joint grant with Population Sciences, for a total of \$30,000.)

New School for Social Research, New York, New York \$63,400
Toward the costs of a national conference and publication of commissioned papers associated with the exhibition "Home: A Place in the World."

New York University, New York \$38,750
For a series of conferences on urban development entitled "The Forum on the City." (Joint grant with Equal Opportunity, for a total of \$77,500.)

Arts and Humanities, continued

Obor, Inc , Clinton, Connecticut <i>Toward the costs of a conference at the Bellagio Study and Conference Center, on developing autonomous publishing in Africa</i>	\$20,000	University of Iowa, Iowa City <i>Toward the costs of a resident fellowships program in its Women's Studies Program</i>	\$134,500
Readers International, Inc , Columbia, Louisiana <i>Toward the costs of a library marketing campaign for its translations of contemporary world literature</i>	\$30,000	University of Maryland Foundation, College Park <i>Toward the costs of a resident fellowships program at its Department of Spanish and Portuguese and its Research Center for Arts and Humanities</i>	\$142,200
Resident Fellowships in the Humanities <i>[1990 - \$2,600,000, in addition to remaining funds from prior year appropriations] To support humanistic scholarship intended to illuminate and assess international and intercultural issues and to strengthen institutional programs where such scholarship is sustained</i>		University of Oklahoma, Norman <i>Toward the costs of a resident fellowships program in its History of Science Department</i>	\$155,000
Sites Selected in 1990		Washington University, St. Louis, Missouri <i>Toward the costs of a resident fellowships program at its Center for the Study of Islamic Societies and Civilizations</i>	\$155,000
City College of the City University of New York, New York <i>Toward the costs of a resident fellowships program at the Simon H Rifkind Center for the Humanities</i>	\$245,000	Related Research Activities	
Indiana University, Bloomington <i>Toward the costs of a resident fellowships program at the Research Institute for Inner Asian Studies</i>	\$244,000	Center for Community Studies, Inc , New York, New York <i>Toward the costs of planning the development of an organization devoted to research, documentation, and interpretation of the experience of Chinese in the Americas</i>	\$50,000
Northwestern University, Evanston, Illinois <i>Toward the costs of a resident fellowships program at its Institute for Advanced Study and Research in the African Humanities</i>	\$245,000	Cornell University, Ithaca, New York <i>For use by its program on Ethics and Public Life toward the costs of a study entitled "Ethical Guidelines for Global Bargains"</i>	\$26,000
State University of New York at Buffalo <i>Toward the costs of a resident fellowships program in its departments of American Studies and African American Studies</i>	\$245,000	Hunter College, City University of New York, New York <i>Toward the costs of participation by third world scholars and artists in the Fourth International Interdisciplinary Congress on Women, hosted by its Women's Studies Program, a site for resident fellowships</i>	\$45,200
University of California at Los Angeles <i>Toward the costs of a resident fellowships program at its Chicano Studies Research Center</i>	\$245,000	Newberry Library, Chicago, Illinois <i>For use by the D'Arcy McNickle Center for the History of the Native American toward the costs of scriptwriting and project development of a film series on Native American tales set in North America before 1492</i>	\$75,000
University of Chicago, Illinois <i>Toward the costs of a resident fellowships program in its Program on South Asian Civilizations</i>	\$245,000	University of California at Santa Cruz <i>For use by its Center for Cultural Studies for a conference on "Cultural Politics and Contemporary Social Movements"</i>	\$19,775
Sites Receiving Renewed Support			
University of Arizona, Tucson <i>Toward the costs of a resident fellowships program at its Southwest Institute for Research on Women</i>	\$155,000		
University of California at Berkeley <i>Toward the costs of a resident fellowships program at its Center for Chinese Studies</i>	\$40,600		
University of Hawaii at Manoa, Honolulu <i>Toward the costs of a resident fellowships program at its Center for Pacific Islands Studies</i>	\$134,000		

Arts and Humanities, continued

University of Houston, Texas <i>For use by its Arte Publico Press toward the costs of conferences on restoring the Hispanic literary heritage of the United States</i>	\$50,000	Children's Museum, Boston, Massachusetts <i>Toward the costs of its Multicultural Professional Development Project</i>	\$50,000
University of Maryland Foundation, College Park <i>For use by the Institute for Philosophy and Public Policy in conducting a research project entitled "Environmental Ethics Survey and Assessment"</i>	\$32,000	Crocker Art Museum Association, Sacramento, California <i>For implementation of programs on aspects of Mexican art and culture</i>	\$5,000
Foundation-administered projects <i>Program support expenses</i>	\$70,000	EXIT Art, Inc , New York, New York <i>Toward the costs of "Parallel History," a transcultural, multimedia project</i>	\$50,000
<i>Exploration by the Foundation of how to further the development of humanistic perspectives on environmental concerns</i>	\$50,000	Institute of International Education, New York, New York <i>Toward the costs of an international conference on exhibitions, in Venice, Italy</i>	\$65,000
Smithsonian Institution, Washington, D C [1990 - \$300,000] <i>To enable Latin American scholars and museum professionals to develop a version of the U S exhibition "Tropical Rainforests A Disappearing Treasure" for audiences in their countries</i>	\$300,000	Museum of Photographic Arts, San Diego, California <i>Toward the costs of a traveling exhibition entitled "Revelaciones The Photographs of Manuel Alvarez Bravo"</i>	\$25,000
Spoletto Festival U S A , Charleston, South Carolina <i>Toward its exhibition of newly commissioned visual arts installations created for venues throughout Charleston</i>	\$60,000	New School for Social Research, New York, New York <i>Toward the costs of a national conference and publication of commissioned papers associated with the exhibition "Home A Place in the World"</i>	\$41,600
Understanding Cultures Through Museums [1990 - \$700,000, in addition to remaining funds from prior year appropriations] <i>To enable museums to conduct research for, develop, and present accurate, imaginatively powerful exhibitions of non-Western and American minority cultures</i>		Polarities, Inc , Brookline, Massachusetts <i>Toward the costs of a major exhibition of contemporary Cuban art entitled "The Nearest Edge of the World"</i>	\$50,000
Afro-American Historical and Cultural Museum, Inc., Philadelphia, Pennsylvania <i>Toward the costs of the exhibition "Contemporary African Artists Changing Traditions"</i>	\$5,000	Social and Public Art Resource Center, Venice, California <i>Toward the costs of international activities of the "World Wall" exhibition</i>	\$25,000
Asian American Arts Centre, Inc , New York, New York <i>Toward the costs of research for an exhibition of artistic production by Asian-American artists in the U S from 1945 to 1965</i>	\$30,000	Studio Museum in Harlem, New York <i>Toward the costs of presenting an exhibition entitled "Five Artists from Contemporary Africa" at the 1990 Venice Biennale</i>	\$100,000
Bronx Museum of the Arts, New York <i>Toward research and development of an exhibition entitled "Latin American Conceptual Arts"</i>	\$35,000	<i>To cover unanticipated expenses associated with the "Decade Show"</i>	\$20,000
Brooklyn Museum, New York <i>Toward the costs of the "Caribbean Festival Arts" exhibition</i>	\$25,000	University of Texas at Austin <i>Toward the costs of an exhibition entitled "The School of the South The Torres-Garcia Workshop (1934-1962)"</i>	\$50,000
Center for African Art, New York, New York <i>Toward the costs of an exhibition entitled "Africa Explores Twentieth Century African Art"</i>	\$100,000	Western Behavioral Sciences Institute, La Jolla, California <i>Toward the costs of a teleconference on "Cultural Theory Applied to the Global Environment"</i>	\$100,000

Yale University, New Haven, Connecticut <i>To establish an interdisciplinary and comparative program for U S and third-world scholars in agrarian studies (Joint grant with Special Programming and Agricultural Sciences, for a total of \$251,200)</i>	\$156,200	Hostos Community College Advisory Council, Inc , Bronx, New York <i>Toward the costs of a series of cultural programs on Mexican art and music</i>	\$20,000
Increasing Artistic Experimentation Across Cultures			
Almeida Theatre Company, London, England <i>Toward the participation of international artists in the creation of the play "Desire"</i>	\$10,000	Instituto Cultural Mexicano, San Antonio, Texas <i>Toward exhibition expenses to mount "The History of Mexican Textiles"</i>	\$10,000
American Federation of Arts, Inc , New York, New York <i>Toward the costs of a traveling video exhibition entitled "Short Films from Latin America"</i>	\$50,000	International Center of Photography, New York, New York <i>Toward the mounting of its exhibition "Between Worlds Contemporary Mexican Photography"</i>	\$40,000
American Place Theater, New York, New York <i>Toward artists' fees and production expenses for a theater piece, "Ground People"</i>	\$25,000	Metropolitan Museum of Art, New York, New York <i>Toward the costs of a series of scholarly symposia in San Antonio, Los Angeles, and New York to complement the exhibition "Mexico Splendors of Thirty Centuries"</i>	\$95,000
American Repertory Theatre Company, Inc , Cambridge, Massachusetts <i>Toward the costs of two theatrical collaborations with international artists</i>	\$75,000	New York Shakespeare Festival, New York <i>Toward the costs of presenting the Laboratorio de Teatro Indigena's production of "Romeo y Julieta"</i>	\$25,000
Arts of Mexico [1990 - \$400,000] <i>To support educational and performing arts programs developed in host cities to complement the exhibition entitled "Mexico Splendors of Thirty Centuries"</i>		Texas Committee for the Humanities, Austin <i>Toward a cooperative outreach program with the San Antonio Public Library Foundation</i>	\$25,000
Americas Society, Inc , New York, New York <i>Toward the costs of its literature program focusing on Mexican avant-garde literature and women's identity in Mexican literature</i>	\$15,000	Universidad Nacional Autonoma de México, Permanent Extension School, San Antonio, Texas <i>Toward its lecture series contextualizing the art objects in the exhibition</i>	\$10,000
Amigos del Museo del Barrio, New York, New York <i>Toward its exhibition "Through the Path of Echoes Contemporary Art in Mexico"</i>	\$10,000	University of Texas at San Antonio <i>To enable the College of Fine Arts and Humanities to develop and present scholarly symposia on the arts of the Southwest and Mexico from ancient times to the present</i>	\$10,000
City College of the City University of New York <i>Toward the costs of a Latin American book fair</i>	\$15,000	Foundation-administered project <i>Development of community based programs related to the Arts of Mexico exhibition in New York, San Antonio, and Los Angeles</i>	\$39,000
Government of Mexico, Mexico City <i>Toward expenses relating to the musical presentations for a festival of Baroque, Renaissance and contemporary Mexican music at Merkin Concert Hall and the Great Hall of the Cooper Union</i>	\$10,000	The Association of American Cultures, Washington, D C <i>Toward the costs of planning a pilot program in leadership development for community-based arts organizations</i>	\$50,000
		Boston Dance Umbrella, Cambridge, Massachusetts <i>Toward the costs of residency activities for its Native American Festival</i>	\$25,000
		Brooklyn Academy of Music, New York <i>For the development and production of a music/ theater piece entitled "Endangered Species"</i>	\$100,000
		<i>Toward presentation costs of the Court Performers as part of the Festival of Indonesia</i>	\$50,000

Arts and Humanities, continued

Carnegie Hall Society, Inc , New York, New York <i>Toward the recording and broadcast over public radio of a concert series entitled "Folkmasters Traditional Music in America"</i>	\$50,000	American Dance Festival, Durham, North Carolina <i>For continuation of its international programs for choreographers</i>	\$100,000
Center for Puppetry Arts, Inc , Atlanta, Georgia <i>Toward the costs of its "Puppetry of Indonesia" project</i>	\$15,000	East Tennessee Foundation, Knoxville <i>Toward international commissions and collaborations for the Knoxville World Festival</i>	\$65,000
Centro Cultural Ciudad de Buenos Aires, Argentina <i>For a collaborative residency and exchange program for computer music composers</i>	\$19,600	Friends of the Arts, Inc , San Francisco, California <i>Toward the expenses of planning and conducting Festival 2000's Forum on the American Aesthetic</i>	\$65,000
Community Television of Southern California, Los Angeles <i>To enable the National Latino Communications Center to do research and development for a national public television series entitled "The Story of the Chicano Civil Rights Movement"</i>	\$70,000	Jacob's Pillow Dance Festival, Inc , Lee, Massachusetts <i>Toward the costs of its international and intercultural programs</i>	\$90,000
Contemporary Arts Center, Cincinnati, Ohio <i>For program expansion, including exhibitions, artist residencies, and related educational activities</i>	\$50,000	Los Angeles Festival, California <i>For international artists' expenses and conference activities</i>	\$100,000
Dance Critics Association, Los Angeles, California <i>In support of its 1990 conference, "Looking Out Critical Imperatives in World Dance"</i>	\$10,000	Movement Theatre International, Philadelphia, Pennsylvania <i>Toward the international performance activities of its 1990 festival</i>	\$60,000
Dance Theatre Workshop, New York, New York [1990 \$275,000, in addition to remaining funds from prior year appropriations] <i>To continue support for its Suitcase Fund, a program of reciprocal touring by artists and performing arts companies from the United States and abroad</i>	\$275,000	National Black Arts Festival, Atlanta, Georgia <i>In support of its 1990 international activities</i>	\$75,000
ETV Endowment of South Carolina, Inc , Spartanburg <i>Toward administrative costs and travel assistance for United States delegates attending the 1990 INPUT conference</i>	\$15,000	New York Shakespeare Festival, New York <i>Toward the costs of its Festival Latino</i>	\$250,000
Festival Fund [1990 - \$1,000,000] <i>To encourage festival activities in the United States that broaden intercultural or international exchange</i>		Pregones Touring Puerto Rican Theater Collection, Inc , Bronx, New York <i>Toward the costs of the 1990 TENAZ Festival</i>	\$50,000
Alternate ROOTS, Inc , Atlanta, Georgia <i>Toward its 1990 performance festival of works by Southeastern artists</i>	\$28,000	Teatro Avante, Miami, Florida <i>For international participation in its Festival de Teatro Hispano</i>	\$50,000
		Theater for the New City Foundation, Inc , New York, New York <i>For its First Annual Eco Festival in New York</i>	\$10,000
		Film News Now Foundation, Inc , New York, New York <i>Toward the costs of transcribing and editing the proceedings of the "Show the Right Thing" conference</i>	\$15,000
		Foundation for Independent Video and Film, Inc , New York, New York <i>To complete work on its African Directory and to research and publish its Asia Directory</i>	\$45,000
		Fund for Reconciliation and Development, Philadelphia, Pennsylvania <i>Toward the touring costs of the Classical Dance Company of Cambodia on the East Coast</i>	\$30,000
		Grantmakers in the Arts, Chicago, Illinois <i>Toward its 1990 activities</i>	\$3,000

Independent Committee on Arts Policy,
New York, New York
Toward its 1990 activities.

\$25,000

Institute of International Education,
New York, New York
[1990 - \$350,000]

\$350,000

To enable the participation of American artists in international visual arts exhibitions and performing arts festivals through the Fund for U.S. Artists at International Festivals and Exhibitions, administered by Arts International.

Toward 1990 activities of its Arts International Program.

\$50,000

Intercultural Film/Video Fellowships
[1990 - \$875,000, in addition to remaining funds from prior year appropriations]
To provide creative time, travel, and research and production support for competitively selected film and video artists who are working in the documentary and media art forms to explore and interpret issues of cultural diversity, both internationally and within the United States.

Selected in 1990:

Ralph Arlyck, Poughkeepsie, New York \$35,000
Zeinabu Irene Davis, Yellow Springs, Ohio \$35,000
Joel DeMott and Jeff Kreines, Millbrook, Alabama \$35,000
Juan Downey, New York, New York \$35,000
Su Freidrich, Brooklyn, New York \$35,000
Vanalyne Green, Chicago, Illinois \$35,000
Louis Hock, San Diego, California \$35,000
Peter Hutten, Annandale-on-Hudson, New York \$35,000
Bill Jersey, Berkeley, California \$35,000
Joan Jonas, New York, New York \$35,000
Zydnia Nazario, Brooklyn, New York \$35,000
Warren Sonbert, San Francisco, California \$35,000
Janice Tanaka, Los Angeles, California \$35,000
Keiko Tsuno, New York, New York \$35,000
Bill Viola, Long Beach, California \$35,000
Marco Williams, Los Angeles, California \$35,000

Stage II Awards
To former fellowship recipients to aid in the completion and promotion of projects.

St. Clair Bourne, New York, New York \$7,500
Tony Buba, Braddock, Pennsylvania \$7,500
Charles Burnett, Los Angeles, California \$50,000
Christine Choy, New York, New York \$32,000
Julie Dash, Atlanta, Georgia \$45,000
Ana Maria Garcia, Caparra Heights, Puerto Rico \$15,000
Haile Gerima, Washington, D.C. \$50,000
Jill Godmilow, New York, New York \$25,000
DeeDee Halleck, La Jolla, California \$45,000
Gary Hill, Seattle, Washington \$31,000
Paul Kos, San Francisco, California \$7,500
John Marshall, Watertown, Massachusetts \$40,000
Victor Masayesva, Hoteville, Arizona \$7,500
Trinh Minh-ha, Berkeley, California \$30,000
Enrique Oliver, Boston, Massachusetts \$40,000
Lourdes Portillo, San Francisco, California \$22,000
Yvonne Rainer, New York, New York \$45,000
Marlon T. Riggs, Berkeley, California \$40,000
Leslie Thornton, Brooklyn, New York \$30,000
Billy Woodberry, Los Angeles, California \$35,000

Related Activities and Other Grants

Electronic Arts Intermix, New York, New York \$15,000
Foundation-administered project
Program support expenses. \$30,000

Japanese American Cultural and Community Center, Los Angeles, California \$7,500
Toward a multicultural performance series entitled "Celebrate California."

Mary Luft and Company, Inc., Miami, Florida \$5,000
Toward its music and dance festival, "New from the USA," in Brazil.

Mabou Mines Development Foundation, Inc., New York, New York \$50,000
Toward the 1990 production of "Lear" and a retrospective of four plays in the Mabou Mines repertoire.

Media Resource Associates, Washington, D.C. \$200,000
[1990 - \$200,000]
To provide research and early development support for a comprehensive documentary series about Native American histories and cultures for public television.

<p>Meet the Composer, Inc , New York, New York \$150,000 [1990 - \$150,000, in addition to remaining funds from prior year appropriations] To support a national commissioning program that places jazz composers in project-based residencies with symphony orchestras, chamber music ensembles, dance companies, theater groups, and opera/music theater companies</p>	<p>District Curators, Washington, D C \$25,000 Toward production and presentation of the "Multikulti World Suite," composed by Don Cherry and performed by master improvisational musicians from throughout the world</p>
<p>Multi-Arts Production Fund [1990 - \$750,000, in addition to remaining funds from prior year appropriations] To continue the Foundation's formalized process for evaluating and supporting proposals in the performing arts that reflect the boldest and most creative new work in intercultural and/or international representation</p>	<p>El Puerto Rican Playwrights/Actors Workshop, New York, New York \$20,000 Toward selected productions of the Nuyorican Theater Festival 1990-91</p>
<p>Asian Heritage Council, Cupertino, California \$15,000 Toward commissioning and production of "The Guru," an original collaborative full-length concert by choreographers Chitresh Das and Mythili Kumar</p>	<p>En Garde Arts, New York, New York \$10,000 Toward commissioning playwright Charles Mee, Jr to create a new site-specific, music-theater piece entitled "Strange Country"</p>
<p>Baltimore Opera, Maryland \$35,000 Toward publicly attended workshops of "Amistad," a new opera composed by Anthony Davis with an original libretto by Thulani Davis</p>	<p>Ethnic Folk Arts Center, New York, New York \$20,000 Toward co-production of two days of free, outdoor, multi-ethnic music and dance performances, in conjunction with the opening of the Success Garden Learning Center for Horticulture and the Urban Environment in Harlem</p>
<p>Brava! for Women in the Arts, San Francisco, California \$25,000 Toward production of the world premiere of "Heroes and Saints," written by Cherrie Moraga</p>	<p>House Foundation for the Arts, New York, New York \$40,000 Toward the New York City production of "Atlas," a full-length opera by Meredith Monk</p>
<p>Crossroads Theatre Company, New Brunswick, New Jersey \$35,000 Toward the final development phase of "The Mother Project," the first full-scale production of the Sangoma Project, a collaborative group of African-American women artists</p>	<p>Houston Grand Opera, Texas \$25,000 Toward production of a new dance opera, "The Mother of Three Sons," composed by jazz violinist/composer Leroy Jenkins, with a libretto by poet Ann T Greene, and choreography by Bill T Jones</p>
<p>Cultural Odyssey, San Francisco, California \$15,000 Toward creation and production of "Raining Down Stars More Stories of the Diaspora," a collaborative multi-disciplinary performance piece by playwright Ed Bullins, composer/performer Idris Ackamoor, jazz composer Don Moye, and performance artist Rhodessa Jones</p>	<p>International Arts Relations, Inc (INTAR), New York, New York \$11,000 Toward the collaborative translation by Eduardo Machado and Pedro Perez of "Pericones" (Anthems) by Argentinian Mauricio Kartun, and toward a production directed by Jorge Cachero</p>
<p>Dance Brigade, Oakland, California \$20,000 Toward production of "Goodbye Columbus," a repertory concert of 10 dance pieces created by five choreographers Suzanne Nakamura, Sarah Crowell, Gina Pacaldo, Maria Amalia Pendones, and Nina Fichter</p>	<p>Junebug Productions, Austin, Texas \$25,000 Toward creation and production of two works by John O'Neal</p>
	<p>Ko Thi Dance Company, Milwaukee, Wisconsin \$20,000 Toward the poetic opera "Song of Sundiata," a collaboration by choreographer Ferne Yangyette Caulker, orchestrator Dumah Saafir, and poet Reginald Finlayson</p>
	<p>Kulintang Arts, San Francisco, California \$20,000 Toward creation and workshop production of "La China Poblana," a collaborative, multimedia performance piece by visual/performance artist Guadalupe Garcia, poet/performance artist Genny Lim, and dancer/choreographer Alleluia Panis</p>

Arts and Humanities, continued

La Compania de Teatro de Albuquerque, New Mexico <i>Toward the development of "Matachines" by Rudolfo Anaya, and for related developmental projects</i>	\$10,000	San Jose Taiko, San Jose, California <i>Toward development and performance of a collaborative production by San Jose Taiko, choreographer Margaret Wingrove, musicians Russell Hisashi Baba and Jeanne Aiko Mercer, and taiko artist Kenny Endo</i>	\$20,000
Life On The Water, San Francisco, California <i>Toward commissioning and production of "La Ultima Carpa," a performance collaboration created by El Taller and Grupo Zero Cultural from Mexico</i>	\$20,000	Under One Roof, New York, New York <i>Toward production of "The Mermaid Wakes," a new music-theatre work by composer/director Elizabeth Swados and poet Lora Berg</i>	\$20,000
Mandeleo Institute, Oakland, California <i>Toward commissioning and production of a concert of original collaborative music and dance pieces by folk artists Malonga Casquelourd and Jose Lorenzo</i>	\$25,000	Vivian Beaumont Theater, New York, New York <i>Toward the world premiere of "Mule Bone" by Langston Hughes and Zora Neale Hurston, directed by Michael Schultz with original music by Taj Mahal</i>	\$40,000
Pan Asian Repertory Theatre, New York, New York <i>Toward development and production of "Cambodia Agonistes," a multimedia theater piece, written by Ernest Abuba, composed by Louis Stewart, and directed by Tisa Chang</i>	\$25,000	Walker Art Center, Minneapolis, Minnesota <i>Toward co-commissioning and presentation of Kei Takei to choreograph and perform "24 Hours of Light" with composers David Moss and Yukio Tsujit, and visual artist Ichi Ikeda</i>	\$20,000
Pentacle - Foundation for Independent Artists, Inc., New York, New York <i>Toward the work of Eiko and Koma to develop and produce "Land," a two-part dance work, in collaboration with composer Robert Mirabal (Taos Pueblo)</i>	\$40,000	The Women's Project and Productions, New York, New York <i>Toward co-commissioning, with the Southeast Playwrights Project, Southern playwrights Jo Carson, Pearl Cleage, and Valetta Anderson, and toward development workshops in Atlanta and New York</i>	\$22,500
Performance Space 122, New York, New York <i>Toward creation and development of a performance work, "No Trace of the Blonde," a collaboration by director Ellen Sebastian, playwright Holly Hughes, and visual designer Janie Geiser</i>	\$20,000	Music-Theatre Group, Inc., New York, New York <i>Toward videotaping of its production of "Juan Darien," a music/theater work by Julie Taymor and Elliot Goldenthal</i>	\$3,000
Ping Chong, New York, New York <i>Toward the American premiere of "Deshima," a poetic documentary, multi-disciplinary performance work</i>	\$35,000	National Jazz Service Organization, Washington, D C <i>Toward the costs of its educational and public information activities</i>	\$30,000
Redwood Cultural Work, Oakland, California <i>Toward creation and production of "Todo Mezclado," a concert-length, multimedia performance work inspired by Cuban poet Nicolas Guillen, performed by Conjunto Cespedes and by Altazor</i>	\$22,500	National Public Radio, Washington, D C [1990 - \$130,000] <i>To assist its plan for redeveloping its cultural programming offerings and for a new series, "Making the Music"</i>	\$130,000
The Road Company, Johnson City, Tennessee <i>Toward collaboration with leaders of the African- American community of Johnson City, Tennessee, to establish an ensemble of African American theater artists</i>	\$18,000	National Video Resources, New York, New York [1990 - \$1,000,000, in addition to remaining funds from prior year appropriations] <i>To increase public access through videocassette to outstanding cultural, educational, and documentary film and video materials</i>	
San Diego Repertory Theatre, California <i>Toward the world premiere of "The Life and Life of Bumpy Johnson," a jazz musical/bopera conceived by Amiri Baraka with a score by Max Roach, directed by George Ferenz</i>	\$30,000		

Arts and Humanities, continued

American Film Institute, Los Angeles, California <i>To publish a book that identifies opportunities for independent film and video distribution through the home video market.</i>	\$8,135	Los Angeles Contemporary Exhibitions, Inc., California <i>Toward a grants program for artists in southern California and Hawaii.</i>	\$19,000
Media for Development International, Columbia, Maryland <i>To develop a broadcast strategy model for socially relevant docudramas with a follow-up distribution.</i>	\$5,500	New England Foundation for the Arts, Cambridge, Massachusetts <i>Toward a grants program in collaboration with Inquilinos Boricuas En Accion, Refugee Arts Group, and other organizations throughout New England, for artists in the states of Maine, Massachusetts, Rhode Island, New Hampshire, Connecticut, and Vermont.</i>	\$17,000
Modern Language Association of America, New York, New York <i>To assess video use by foreign-language and English faculty in U.S. colleges and universities.</i>	\$32,020	New Langton Arts, San Francisco, California <i>Toward a grants program in collaboration with the Multi-Cultural Arts Consortium and Artist Trust for artists in northern California, Alaska, Oregon, and Washington.</i>	\$20,000
Resolution Inc., San Francisco, California <i>In support of its project to create new audiences and markets for an ongoing stream of African films on videocassette.</i>	\$62,000	Painted Bride Art Center, Philadelphia, Pennsylvania <i>Toward a grants program for artists in the states of Pennsylvania, New Jersey, Virginia, West Virginia, Maryland, Delaware, and the District of Columbia.</i>	\$20,000
Foundation for Independent Video and Film, Inc., New York, New York <i>To design, print, and disseminate the "Independent Producer's Guide to Film and Video Distributors" and to provide individualized consultation services to producers about their distribution options.</i>	\$25,000	Puerto Rico Community Foundation, Inc., Hato Rey <i>Toward a grants program for artists in Puerto Rico.</i>	\$10,000
Foundation-administered project <i>Program support expenses.</i>	\$437,380	Pyramid Arts Center, Rochester, New York <i>Toward a grants program for artists in New York state.</i>	\$20,000
Network of Cultural Centers of Color, New York, New York <i>For direct costs of its 1991 production and touring.</i>	\$50,000	Randolph Street Gallery, Inc., Chicago, Illinois <i>Toward a grants program in collaboration with the National African-American Museum and Cultural Center, for artists in the states of Illinois, Indiana, Ohio, Michigan, and Missouri.</i>	\$20,000
New Forms: Regional Initiative <i>[1990 - \$250,000, in addition to remaining funds from prior year appropriations] To assist emerging American performing artists to develop new work and reach new audiences through arts organizations in their own parts of the country.</i>		Southeast Community Cultural Center, Inc., Atlanta, Georgia <i>Toward a grants program for artists in the states of Georgia, Kentucky, Tennessee, North Carolina, and South Carolina.</i>	\$15,000
Each grantee below also receives a matching sum from the National Endowment for the Arts.		State Dance Association of Florida, Inc., Miami Beach, Florida <i>Toward a grants program in collaboration with the Miami Dade Community College for artists in the state of Florida.</i>	\$5,000
Contemporary Arts Center, New Orleans, Louisiana <i>Toward a grants program for artists in the states of Louisiana, Mississippi, Alabama, and Arkansas.</i>	\$19,000	Foundation-administered project <i>Program support expenses.</i>	\$30,000
DiverseWorks, Houston, Texas <i>Toward a grants program in collaboration with Mexic-Arte for artists in the states of Texas, Arizona, New Mexico, and Oklahoma.</i>	\$20,000		
Helena Film Society, Inc., Montana <i>Toward a grants program in collaboration with the Colorado Dance Festival for artists in the states of Colorado, Idaho, Montana, Nevada, Wyoming, and Utah.</i>	\$16,000		
Intermedia Arts of Minnesota, Inc., Minneapolis <i>Toward a grants program for artists in the states of Minnesota, Iowa, Wisconsin, Nebraska, Kansas, and North and South Dakota.</i>	\$17,000		

Arts and Humanities, continued

New Radio and Performing Arts, Inc , Brooklyn, New York <i>Toward the continuation of a radio series featuring work by artists of color and international artists</i>	\$35,000	World Music Productions, Brooklyn, New York <i>Toward the costs of its nationally distributed, public radio series on contemporary African music, "AFROPOP Worldwide"</i>	\$50,000
New York University, New York <i>Toward the costs of an international conference on interculturalism in performance</i>	\$51,500	Yale University, New Haven, Connecticut <i>To engage a staff member to administer the community outreach program for the Broadway production of "The Piano Lesson," by August Wilson</i>	\$7,500
Santa Fe Chamber Music Festival, New Mexico <i>In support of its "Music of the Americas" program</i>	\$50,000	Other	
Spanish Theatre Repertory Company, Ltd , New York, New York <i>Toward the third year of Repertorio Español's Latin American Directors Project</i>	\$50,000	Dance Theatre of Harlem, New York <i>[1990 - \$200,000]</i> <i>To help it regain a solid financial footing in preparation for launching a long-term stabilization effort</i>	\$200,000
Stanford University, Palo Alto, California <i>For a collaborative residency and exchange program at its Center for Computer Research in Music and Acoustics</i>	\$26,500	The following grants were approved under former guidelines	
Sundance Institute Latin American Filmmakers Exchange Program, Utah <i>Toward the production of a feature documentary film on the global environment, to be undertaken in conjunction with the Filmmakers' Union of the USSR</i>	\$25,000	Meet the Composer, Inc , New York, New York <i>[1990 - \$250,000, in addition to remaining funds from prior year appropriations]</i> <i>To help Meet the Composer carry out the final round of its national program for composer residencies with symphony orchestras</i>	\$250,000
<i>Toward the costs of its 1990 activities</i>	\$60,000	OPERA America, Washington, D C <i>In support of its program, "Opera for the Eighties and Beyond"</i>	\$100,000
Telluride Institute, Inc , Colorado <i>Toward its 1990 Composer-to-Composer Festival</i>	\$20,000		
Twin Cities Public Television, Inc (KTCA/TV), Minneapolis-St Paul, Minnesota <i>[1990 - \$200,000, in addition to remaining funds from prior year appropriations]</i> <i>To support continued production of its national public television series "Alive from Off Center," a summer showcase of new and innovative work in dance, theater, music, and performance and video art</i>	\$200,000		
University of California, San Diego <i>For a collaborative residency and exchange program for computer music composers at its Center for Music Experiment</i>	\$48,500		
Visual Arts Research and Resource Center Relating to the Caribbean, Inc , New York, New York <i>Toward publication and distribution costs of Cultural Diversity The Myth and the Reality, the collected papers from its 1989 international conference</i>	\$25,000		

Equal Opportunity Grants

The equal opportunity division seeks to assure full participation of minorities in American life. In attacking persistent poverty in urban America, it supports activities in four categories: programs of planning and action in a few selected cities, national initiatives for community economic development, research and policy analysis, and research and action to strengthen basic skills and family support. To protect basic rights, the division supports litigation and advocacy, voter registration and education, and related research and policy analysis.

Equal Opportunity for the Urban Poor

Brandeis University, Boston, Massachusetts <i>Toward the costs of (1) compiling an archive on the Foundation's program for combatting persistent poverty in six cities through community planning and action projects, (2) providing the projects with techniques for self-assessment, and (3) developing activities to synthesize the six-city initiative.</i>	\$100,000	<i>To plan and implement the service-delivery systems for the demonstration and develop a research component for the evaluation of child outcomes.</i>	\$580,200
Martha Burt, New York, New York <i>Toward the costs of research on factors affecting the homeless.</i>	\$6,760	<i>Toward the costs of management and evaluation of the demonstration.</i>	\$900,000
Center for Community Change, Washington, D.C. <i>Toward the costs of expanding its public policy work on resource issues for community-based development.</i>	\$100,000	Foundation-administered project <i>Honoraria and travel expenses for the demonstration's advisory panel members.</i>	\$12,600
Center on Budget and Policy Priorities, Washington, D.C. <i>[1990 - \$150,000, in addition to remaining funds from prior year appropriations] To support the Center's policy analysis on federal, state and local government budgets and safety-net programs for low-income families and individuals.</i>	\$150,000	Children Now, Oakland, California <i>Toward its general operating expenses.</i>	\$75,000
Center for Strategic and International Studies, Washington, D.C. <i>Toward the costs of a study entitled "National Service for Out-of-School Youth."</i>	\$97,300	Children's Defense Fund, Washington, D.C. <i>[1990 - \$1,000,000] To assist its efforts to improve public policies affecting children.</i>	\$1,000,000
Child Care Plus <i>[1990 - \$3,600,000, in addition to remaining funds from prior year appropriations] To support a multiyear demonstration and evaluation of two alternative child care support systems for low-income families.</i>		Community Planning and Action <i>[1990 - \$2,375,000, in addition to remaining funds from prior year appropriations] To continue support for the operation in selected cities of planning and action projects dedicated to reducing persistent poverty.</i>	
Corporation for the Advancement of Policy Evaluation, Princeton, New Jersey <i>Toward the costs of initial implementation activities of the demonstration.</i>	\$44,775	Case Western Reserve University, Cleveland, Ohio <i>In support of projects aimed at reducing persistent poverty in the Cleveland area.</i>	\$300,000
<i>Toward planning costs and early operation of the demonstration.</i>	\$70,000	Greater Washington Research Center, Washington, D.C. <i>In support of projects aimed at reducing persistent poverty in the Greater Washington area.</i>	\$400,000
		Partnership for Hope, San Antonio, Texas <i>In support of the development and operation of projects dedicated to reducing persistent poverty in the San Antonio area.</i>	\$395,258
		Piton Foundation, Denver, Colorado <i>In support of projects aimed at reducing persistent poverty in the Denver area.</i>	\$350,000
		San Antonio Cares, Texas <i>In support of projects aimed at reducing persistent poverty in the San Antonio area.</i>	\$7,500

Equal Opportunity, continued

Urban Strategies Council, Oakland, California <i>In support of projects aimed at reducing persistent poverty in the Oakland area</i>	\$396,425	Social Science Research Council, New York, New York <i>To continue support for the SSRC's fellowship and training program aimed at developing a cohort of younger scholars concerned with the study of persistent poverty and the underclass</i>	\$801,480
Foundation-administered projects <i>Technical assistance for projects aimed at reducing persistent poverty in six cities</i>	\$100,000	Woodrow Wilson National Fellowship Foundation, Princeton, New Jersey <i>To enlarge the supply of minority scholars trained for the field of public policy management</i>	\$300,000
<i>Toward the costs of site-based research</i>	\$285,000		
Development Training Institute, Baltimore, Maryland <i>To complete an analysis of a database of the workforce and career pattern of people in the community development field</i>	\$12,000	Illuminating Intergenerational Perspectives [1988 - \$440,000] <i>To further understanding of how intergenerational approaches in human services can foster better developmental outcomes for low-income parents and their children</i>	
Educational Broadcasting Corporation, New York, New York <i>To help meet production and promotion costs for its two-hour public television documentary, "Childhood in America"</i>	\$300,000	American Enterprise Institute for Public Policy Research, Washington, D C <i>Partial support for a series of six policy seminars on the needs of low-income parents and their children, specifically addressing issues of intergenerational programs within the governmental policy framework for the 1990s</i>	\$28,000
Emory University, Atlanta, Georgia [1990 - \$55,000] <i>To provide bridging support for a Public Health Summer Fellowship Program for Minority Students (Joint appropriation with Health Sciences, for a total of \$110,000)</i>	\$55,000	Local Initiatives Support Corporation (LISC), New York, New York <i>[1990 - \$275,000, in addition to remaining funds from prior year appropriations] To pay a portion of LISC's core management expenses</i>	\$275,000
Enterprise Foundation, Columbia, Maryland [1990 - \$150,000, in addition to remaining funds from prior year appropriations] <i>To continue support for its effort to develop nonprofit systems for improving housing and increasing human and community services in low-income neighborhoods</i>	\$150,000	<i>[1990 - \$183,650, in addition to remaining funds from prior year appropriations] To increase its support of locally based, community development corporations</i>	\$183,650
Foundation-administered projects <i>Design of a multi-site demonstration program to identify significant amounts of increased investment funds for community development</i>	\$38,525	Manpower Demonstration Research Corporation, New York, New York <i>Toward the costs of follow-up research of the JOBSTART Demonstration Project</i>	\$100,000
<i>Exploratory efforts by the Foundation to identify and consolidate information on promising local strategies and policies addressing persistent poverty</i>	\$100,000	Minority Female Single Parent Program (MFSP), [1990 - \$700,000, in addition to remaining funds from prior year appropriations] <i>To complete evaluation research of the Minority Female Single Parent Program and dissemination of the research findings</i>	
<i>Toward the costs of a conference entitled "Our Youth and Their Future"</i>	\$23,470	Center for Employment Training, San Jose, California <i>To provide support for a dissemination project in response to interest generated by the MFSP evaluation</i>	\$100,000
<i>Toward the costs of a research project to predict the African-American population to the year 2010</i>	\$33,500	Foundation-administered project <i>To support the evaluation, monitoring, and dissemination of the MFSP by Mathematica Policy Research, Inc , and other contractors</i>	\$750,000
Harvard University, Cambridge, Massachusetts <i>Toward the costs of a study entitled "Entrepreneur and Community Organization The Development and Execution of Organizational Strategy in Community Development Corporations"</i>	\$75,000		
Human Capital [1989 - \$1,525,000] <i>To develop a cohort of young, primarily minority scholars concerned with the study of public policy as it affects persistent poverty and the underclass</i>			

Equal Opportunity, continued

Morehouse College, Atlanta, Georgia <i>Toward the costs of a series of meetings of researchers/policy activists concerned with the most pressing issues confronting African-American males</i>	\$100,000	<i>Toward the costs of collaborating with the Center for Strategic and International Studies on a study entitled "National Service for Out-of-School Youth"</i>	\$86,500
National Community Development Initiative [1990 - \$500,000] <i>To catalyze, through a funder's consortium called the National Community Development Initiative, strategic growth in the resources available for local community development corporation activities in selected cities</i>		Research Foundation of the City University of New York (CUNY), New York <i>Toward the costs of a study entitled "Latinos, Applied Social Research, and Public Policy"</i>	\$77,500
National Congress for Community Economic Development, Washington, D C <i>Toward the costs of a service-oriented economic development initiative</i>	\$35,000	<i>Toward the costs of a study entitled "Migration and Poverty The Puerto Rican Experience"</i>	\$52,000
National Council of La Raza, Washington, D C [1990 - \$260,000, in addition to remaining funds from prior year appropriations] <i>To continue support for its policy analysis and dissemination activities on issues of persistent poverty among Latinos</i>	\$260,000	Social Science Research Council, New York, New York [1990 - \$658,200, in addition to remaining funds from prior year appropriations] <i>To continue support for the SSRC's multiyear program to mobilize the academic community for interdisciplinary research on the underclass</i>	\$658,200
National Puerto Rican Coalition, Inc , Washington, D C <i>Toward the costs of developing a long-term advocacy strategy to address the persistence of poverty in the U S Puerto Rican community</i>	\$20,400	University of California-Los Angeles <i>Toward the costs of formulating a program for technical assistance to community development corporations in Los Angeles</i>	\$25,000
New York Community Trust, New York <i>Toward the costs of a Substance Abuse Study Group Project</i>	\$25,000	University of Chicago, Illinois <i>Toward the costs of a study entitled "Piercing the Puzzle Discontinuities in the School-Work Transition of Puerto Rican and Other Minority Youth"</i>	\$47,100
New York University, New York <i>For a series of conferences on urban development entitled "The Forum on the City" (Joint grant with Arts and Humanities, for a total of \$77,500)</i>	\$38,750	University of Michigan, Ann Arbor <i>For use by its Law School toward the costs of a program in legal assistance for urban communities</i>	\$50,000
Population Reference Bureau, Washington, D C <i>Toward the costs of a study on the concept of a rural underclass</i>	\$40,000	Urban Institute, Washington, D C [1990 - \$500,000, in addition to remaining funds from prior year appropriations] <i>To continue support for its policy research on the urban underclass and dissemination of the findings to policymakers, community leaders, and the media</i>	\$500,000
Program to Explore Long-Term Implications of Changing Gender Roles [1988 - \$800,000, in addition to remaining funds from prior year appropriations] <i>To further understanding of the relationship between changing gender roles and new patterns of family life and work in postindustrial societies</i>		Women's Legal Defense Fund, Washington, D C [1990 - \$200,000, in addition to remaining funds from prior year appropriations] <i>To continue assistance efforts to ensure economic security for women and children through child support</i>	\$200,000
Foundation-administered project <i>Toward the costs of completing the review of the competitive grants program, "The Implications of Changing Gender Roles in Post-Industrial Societies," and developing materials for dissemination, including consultant costs</i>	\$50,000	Protecting Basic Rights	
Public/Private Ventures, Inc , Philadelphia, Pennsylvania [1990 - \$300,000] <i>To initiate a five-year evaluation of urban youth corps programs</i>	\$300,000	American Civil Liberties Union Foundation, New York, New York [1990 - \$1,000,000] <i>To provide stable support for the ACLU Foundation's class-action litigation activities in the field of voting rights</i>	\$1,000,000

Association of American Colleges, Inc , Washington, D C <i>For use by the Women's College Coalition in producing and distributing the papers commissioned for its 1990 conference (Joint grant with Arts and Humanities, for a total of \$5,000)</i>	\$2,500	Native American Rights Fund, Boulder, Colorado <i>[1990 - \$300,000, in addition to remaining funds from prior year appropriations] To enable the Fund to continue its advocacy, litigation, and technical assistance activities to protect the civil and human rights of American Indians</i>	\$300,000
Association of Black Foundation Executives, Washington, D C <i>Toward its general operating expenses</i>	\$25,000	People for the American Way, Washington, D C <i>Toward the costs of a project to increase citizen participation in self-government and strengthen democratic institutions</i>	\$50,000
Center for Community Change, Washington, D C <i>Toward the costs of its publication program</i>	\$1,000	<i>Toward the costs of a preliminary review of existing public opinion data and social marketing research on civil rights</i>	\$9,430
Civil Rights Conferencing <i>Toward the costs of a conference to review "Opportunity Perestroika The Future of Civil Rights and Anti-Poverty Advocacy"</i>	\$17,250	Phelps-Stokes Fund, New York, New York <i>In support of the New York State Judicial Commission on Minorities</i>	\$15,000
<i>To stimulate activities which affect attitudes and perceptions that lead toward a new American consensus on race relations</i>	\$82,750	Poverty Advocates Research Council, New York, New York <i>[1990 - \$250,000] To support a newly formed federation of civil rights and poverty advocacy organizations, designed to facilitate more effective collaboration among the member groups and a closer linkage of policy analysis with action on inner-city minority poverty</i>	
Fair Employment Council of Greater Washington, Washington, D C <i>Toward start-up costs</i>	\$40,000	NAACP Legal Defense and Educational Fund, New York, New York <i>In support of the Poverty Advocates Research Council</i>	\$125,000
Hispanics in Philanthropy, San Francisco, California <i>Toward its general operating expenses</i>	\$20,000	Program to Explore Long-Term Implications of Changing Gender Roles <i>[1988 - \$300,000, in addition to remaining funds from prior year appropriations] To further understanding of the relationship between changing gender roles and new patterns of family life and work in postindustrial societies</i>	
Institute for Puerto Rican Policy, New York, New York <i>Toward the costs of supporting Latino initiatives in the 1991 redistricting process</i>	\$25,000	Foundation-administered project <i>For the costs of completing the review of the program and developing materials for dissemination, including consultant costs</i>	\$50,000
Mexican American Legal Defense and Educational Fund, Los Angeles, California <i>Toward the costs of providing community education, technical assistance, and litigation support to the Hispanic community, as well as ensuring the Hispanic community's involvement in the 1991 redistricting process</i>	\$100,000	Robert Moeller, University of California, Irvine <i>For the costs of a study entitled "Women and the State in the Economic Miracle Social Policy in Postwar West Germany"</i>	\$30,000
National Coalition on Black Voter Participation, Washington, D C <i>Toward the costs of its 1990 Census Awareness Project</i>	\$50,000	Southern Regional Council, Atlanta, Georgia <i>Toward the costs of projects designed to enhance minority voting participation</i>	\$50,000
National Council of La Raza, Washington, D.C. <i>[1990 - \$375,000, in addition to remaining funds from prior year appropriations and an earlier 1990 grant for \$75,000] To continue support for its Policy Analysis Center</i>	\$375,000	<i>Toward the costs of preparing a report on the challenges and needs of redistricting in the 1990s</i>	\$15,000
		<i>Toward the costs of providing technical assistance on redistricting to minority communities in the Midwest and Northeast</i>	\$54,700

Urban Institute, Washington, D C [1990 - \$296,600] To support a test for employment discrimination on the basis of race in the metropolitan areas of Chicago and Washington, D C	\$296,600	Toward the costs of a research project relating to civil rights policy	\$55,000
		Toward the costs of a conference entitled "Testing Discrimination in America Results and Policy Implications"	\$98,350

School Reform Grants

The Foundation supports a limited number of programs to improve public education in poor communities for at-risk children and to help these young people succeed in school.

Alliance for Education in Global and International Studies (AEGIS), New York, New York Toward its project, "Quality and Balance in Education About the World"	\$25,000	Foundation-administered project Evaluation activities related to the CHART network	\$62,000
Artist Space, New York, New York Toward the production of a program catalogue and sponsorship of a panel discussion for the exhibition, "Teaching TV"	\$5,000	Hispanic Culture Foundation, Albuquerque, New Mexico Toward the costs of the planning phase and initial activities of its program, "New Mexico Currents"	\$25,000
Collaboratives for Humanities and Arts Teaching (CHART) [1990 - \$2,000,000, in addition to remaining funds from prior year appropriations] To continue building and to centralize a national network of collaborative projects that feature international and multicultural education as priorities for school improvement and demonstrate the centrality of the teacher as the agent of educational reform		For the development of a statewide multicultural education program in New Mexico	\$150,000
American Forum, Inc., New York, New York Toward continuation of a teacher-training program in international education in the New York City public schools	\$50,000	International Education Consortium, St. Louis, Missouri Toward the continuation of a teacher-training program to strengthen international education in the St. Louis secondary schools	\$150,000
Bryn Mawr College, Pennsylvania For the administration, evaluation, and development of programming activities of the CHART network	\$588,800	Los Angeles Educational Partnership, California Toward institutionalization of its HUMANITAS Academy, which fosters professional renewal of teachers through interdisciplinary activity in the arts and humanities	\$225,000
Toward the costs of two conferences on curricular change in the public schools	\$50,000	Network for Secondary Schools, New York, New York To organize and coordinate the announcement of the New Mexico CHART initiatives	\$10,000
Community Foundation of Greater Washington, Washington, D C For continuation of the development of the Superintendent's Academy for Humanities and Arts teaching	\$100,000	PATHS/PRISM The Philadelphia Partnership for Education, Pennsylvania Toward the administrative and evaluation costs of the CHART network	\$8,000
Connecticut Humanities Council, Middletown Toward the establishment of the Connecticut Humanities Alliance and expanded activities in urban school systems	\$60,000	For continuation of its project to revise the world history curriculum in the School District of Philadelphia	\$175,000
		Pittsburgh Public School District, Pennsylvania For continuation of the Arts PROPEL Dissemination Project	\$150,000
		San Francisco Education Fund, California For continuation of the Humanities, Education, Research, and Learning Development (HERALD) project in the San Francisco School District	\$150,000

School Reform, continued

South Carolina Committee for the Humanities, Columbia <i>For its rural education project in the arts and humanities</i>	\$175,000	Foundation-administered projects <i>Toward the costs of producing and distributing "how-to" videos</i>	\$550,000
University of Arkansas at Little Rock <i>For use by its Arkansas International Center in continuing an interdisciplinary teacher-training program in global education</i>	\$150,000	Howard University, Washington, D C <i>For implementation of the Comer process in the elementary schools of the District of Columbia</i>	\$71,800
Committee for Economic Development, New York, New York <i>For support of its new Program in Education and Child Development</i>	\$50,000	New Haven Public Schools, Connecticut <i>In support of the Consortium for Urban Education, New Haven</i>	\$50,000
Council on Foundations, Washington, D C <i>In support of its Precollegiate Education Group</i>	\$3,500	Southern Connecticut State University, New Haven, Connecticut <i>In support of the Consortium for Urban Education, New Haven</i>	\$100,000
Earth Day 1990, Stanford, California <i>Toward production and distribution of the Earth Day 1990 Lesson Plan and Home Survey.</i>	\$50,000	Southern University at New Orleans, Louisiana <i>To develop a plan for disseminating and implementing the Comer process in the New Orleans public schools</i>	\$34,000
Education Commission of the States, Denver, Colorado <i>For preparation, convening, and follow-up costs for a meeting of key leaders of education re-structuring movements</i>	\$57,000	Yale University, New Haven, Connecticut <i>For use by the Yale University Child Study Center to expand utilization of the School Development Program principles</i>	\$410,000
Educational Consortium of Central Los Angeles, California <i>Toward the costs of planning and organizing an innovative program of in-school and out-of-school instruction and support for disadvantaged students in the Los Angeles public schools</i>	\$25,000	Foundation-administered projects <i>Development of a formal proposal for production of a television documentary on James P. Comer and the Comer School Development Program</i>	\$12,000
Educational Testing Service, Princeton, New Jersey <i>[1990 - \$230,000, in addition to remaining funds from prior year appropriations] To conclude support for the research phase of the collaboration between Harvard's Project Zero and Educational Testing Service (ETS) on the development of new approaches to instruction and testing in the arts and humanities</i>	\$230,000	<i>Development and implementation of "The Juice Factory," a program to prepare at-risk urban youth for the emerging multicultural world of the 1990s and beyond</i>	\$53,700
Facilitating the "Comerization" of Public Schools [1990 - \$1,500,000] <i>To expand the number of public schools utilizing the school improvement approach developed by James Comer and to incorporate his methodology into the curriculum of teacher-training institutions</i>		<i>For consultant fees in connection with the Foundation's efforts to bring the philosophy and work of James Comer to the attention of education policymakers and opinion leaders</i>	\$100,000
Central State University, Wilberforce, Ohio <i>For the Graduate School of Education to develop courses derivative of Dr. James P. Comer's work for inclusion in curriculum of their MA program for urban elementary and secondary school teachers</i>	\$75,000	<i>For the costs of videotaping and distributing the proceedings of the fourth Foundation-sponsored Institute of the Community Planning and Action Projects</i>	\$40,000
Federal City Council, Washington, D C <i>For use by the District of Columbia Committee on Public Education in implementing the Comer process in elementary schools</i>	\$63,000	Foundation of the Dramatists Guild, Inc., New York, New York <i>To establish its first National Teacher Training Institute</i>	\$25,000
		Harvard University, Cambridge, Massachusetts <i>[1990 - \$305,000, in addition to remaining funds from prior year appropriations] To conclude support for the research phase of the collaboration between Harvard's Project Zero and the Educational Testing Service (ETS) on the development of new approaches to instruction and testing in the arts and humanities</i>	\$305,000
		<i>In support of a feasibility study for a National Center for Appropriate Assessment, to be conducted by the Harvard University Graduate School of Education</i>	\$66,250

Institute for Educational Leadership, Inc., Washington, D.C. <i>For use by a consortium comprising the Institute, the McKenzie Group, and the Joint Center for Political and Economic Studies in planning a project to prepare the next generation of school superintendents.</i>	\$46,150	Southern Education Foundation, Inc., Atlanta, Georgia <i>Toward the support of the study and design of a summer academy for educators from urban schools serving at-risk students.</i>	\$65,000
National Council of La Raza, Washington, D.C. <i>To plan a national-level policy analysis project focusing on education reform.</i>	\$25,000	Texas Interfaith Education Fund, Austin <i>To enable it and the Texas Industrial Areas Foundation to implement a school reform mobilization effort for predominantly Hispanic schools in Texas.</i>	\$75,000
New Haven Public Schools, Connecticut <i>To establish a summer training institute for School Planning and Management teams as a model for national replication.</i>	\$40,000	Training Education Leaders to Improve At-Risk Schools <i>To continue support for pilot summer academies that train principals and other building-level education leaders to meet the challenge of managing schools that serve at-risk children. (Grants will be made in subsequent years.)</i>	
Original Ballets Foundation, Inc., New York, New York <i>Toward implementation of the New Ballet School/ Professional Performing Arts School partnership and a related research project.</i>	\$25,000	University of California—Los Angeles <i>For use by the Wight Art Gallery for the production and dissemination of curriculum units related to the exhibition "Chicano Art: Resistance and Affirmation."</i>	\$25,000
Public Education Association, New York, New York <i>In support of its school design program, "New Schools for New York."</i>	\$10,000	University of New Mexico, Albuquerque <i>For a conference at which its Bureau of Educational Planning and Development briefed leaders from national laboratories funded by the U.S. Department of Energy on new research and techniques in mathematics and science pedagogy.</i>	\$1,140
San Diego City Schools, California <i>Toward the development of a demonstration leadership academy for the school district.</i>	\$25,000		

International Security Grants

The Foundation supports work to limit the proliferation of nuclear and other weapons of mass destruction, to encourage developing-world participation in international security deliberations, and to broaden the international security agenda to include the environment and other global issues.

Center for Foreign Policy Development, Providence, Rhode Island <i>Toward the costs of a conference, "Cuba Between the Superpowers."</i>	\$30,000	Massachusetts Institute of Technology, Cambridge <i>Toward the costs of a research and dialogue project on minimizing the risk of the use of nuclear weapons in the Middle East.</i>	\$29,400
Centers for Disease Control, Atlanta, Georgia <i>Toward support of a collaborative research project between the United States and the Soviet Union to sequence strains of the variola virus. (Joint grant with Health Sciences, for a total of \$60,000.)</i>	\$30,000	Mediators Foundation, Inc., Santa Monica, California <i>Toward the costs of the PARTNERS Project.</i>	\$100,000
Institut Français des Relations Internationales, Paris, France <i>Toward the costs of a multinational research and networking program on weapons proliferation.</i>	\$100,000		

Monterey Institute of International Studies, California <i>Toward the costs of initiating a computer database on the ballistic missile trade.</i>	\$30,000	University of Southampton, England [1990–\$300,000] <i>To support the work of the Programme for Promoting Nuclear Non-Proliferation (PPNN) in strengthening the nuclear non-proliferation regime, with particular emphasis on third-world participation.</i>	\$300,000
New York University, New York [1990–\$450,150] <i>To enable its Center for War, Peace, and the News Media to complete the planning of a new global security organization, Armswatch, while maintaining regular Center activities.</i>	\$450,150	University of Wisconsin–Madison [1990–\$130,000] <i>To support the work of the Wisconsin Project on Nuclear Arms Control on limiting the export of the technology required to develop nuclear weapons and ballistic missiles.</i>	\$130,000
<i>Toward the design and planning of a new global security organization.</i>	\$100,000	Wilton Park, West Sussex, England <i>Toward the costs of a conference, “New Threats to Global Security Proliferation of Nuclear, Chemical, and Biological Weapons,” to be held at its Wiston House Conference Centre.</i>	\$17,315
Parliamentarians for Global Action, New York, New York <i>Toward the costs of the project, “Moving the Test Ban to Center Stage.”</i>	\$30,000		
Princeton University, New Jersey <i>For a summer school on science and world affairs. (Joint grant with Global Environment, for a total of \$50,000.)</i>	\$25,000		

Other Interests and Initiatives Grants

The Foundation supports a very small number of exceptionally meritorious projects that do not fall within established program guidelines, using its special interests and explorations fund, and provides support for the Rockefeller Archives Center. The Foundation also operates the Bellagio Study and Conference Center, on northern Italy’s Lake Como, for international meetings and residencies for scholars and artists.

Special Interests and Explorations

The Africa Fund, New York, New York <i>Toward general support of the production of the public television program “South Africa Now.”</i>	\$100,000	African-American Institute, New York, New York <i>Toward expenses associated with establishing an international working committee for the creation of a South African Development Bank.</i>	\$35,000
Africa News Service, Inc., Durham, North Carolina [1990 - \$500,000] <i>To contribute toward its continuation and expansion.</i>	\$500,000	American Academy of Arts and Sciences, Cambridge, Massachusetts <i>Toward the costs of developing a three-year project on the redeployment of government-funded research and development resources from the military sector to strengthen the civilian technology base.</i>	\$25,000
Africa Resources Trust, Epsom, Surrey, United Kingdom <i>Toward the costs of its Southern African NGO Resource Centre.</i>	\$50,000	American Civil Liberties Union Foundation, New York, New York [1990 - \$300,000] <i>To assist its Reproductive Freedom Project to prepare and conduct litigation.</i>	\$300,000

Other Interest and Initiatives, continued

American Indian College Fund, New York, New York <i>Toward its 1990-91 administrative costs</i>	\$100,000	Fund for Free Expression, Washington, D C <i>Toward the costs of a research project leading to the publication of a book tentatively entitled "Israel/Palestine - Beyond the Second Republic Conflict Management in a Bi-national Society"</i>	\$23,000
The Cleveland Foundation, Cleveland, Ohio <i>For use by the National Community AIDS Partnership toward support of expansion of the Partnership into more communities in 1991 by way of education or service programs</i>	\$100,000	Dr C Jakes Gerwel, University of the Western Cape, Bellville, Cape Province, South Africa <i>In recognition of his efforts on behalf of just and democratic change in South Africa</i>	\$50,000
Cold Comfort Farm Trust, Harare, Zimbabwe <i>Toward support of a research unit providing economic and political analyses of events in South Africa for policymakers in the six frontline states Angola, Botswana, Mozambique, Tanzania, Zambia, and Zimbabwe</i>	\$40,000	The Grameen Trust, Dhaka, Bangladesh <i>[1990 - \$500,000]</i> <i>To support its efforts to promote the replication in third-world countries of the Grameen Bank's micro-credit and social development program</i>	\$500,000
Conflict Management Project, Cambridge, Massachusetts <i>Toward the costs of conducting a prenegotiation workshop with members of the African National Congress, held in Lusaka, Zambia, March 1990</i>	\$24,000	Helsinki Citizens Assembly, Prague, Czechoslovakia <i>Toward the costs of its founding congress, held in Prague in October 1990, and a portion of its research</i>	\$100,000
Council on Foundations, Washington, D C <i>Toward its general operating expenses during 1990</i>	\$24,700	Independent Sector, Washington, D C <i>Toward general support</i>	\$7,400
Editorial Projects in Education, Inc , Washington, D C <i>[1990 - \$250,000, in addition to remaining funds from prior year appropriations]</i> <i>To help assure continuation of <u>Teacher Magazine</u></i>	\$250,000	<i>In support of John Gardner's studies in leadership</i>	\$25,000
Educational Broadcasting Corporation (WNET/Thirteen), New York, New York <i>Toward the costs of televising the art exhibit, "Facing History The Black Image in American Art, 1710-1940"</i>	\$13,300	Institute of International Relations, Maputo, Mozambique <i>Toward support of an international conference entitled "Rethinking Strategies for Mozambique and Southern Africa," held in May 1990 at the Institute</i>	\$30,000
<i>Toward the production of an hour-long conversation with Nelson Mandela for public television</i>	\$10,000	National Academy of Public Administration, Washington, D C <i>Toward the costs of a secretariat to coordinate activities for implementing the recommendations of the National Commission on the Public Service (the Volcker Commission)</i>	\$15,000
Esquel Group Foundation, Bethesda, Maryland <i>To fund a study of the feasibility of creating an independent, national foundation in Ecuador</i>	\$280,000	National Charities Information Bureau, New York, New York <i>Toward its 1990-91 operating budget</i>	\$5,000
Foundation-administered projects <i>Joint Rockefeller Foundation/MacArthur Foundation Task Force on the Future of the U S Defense Budget</i>	\$50,000	National Council of Educational Opportunity Associations, Washington, D C <i>Toward the costs of a Student Leadership Conference, held in Washington, D C , June 16-21, 1990, marking the 25th anniversary of the inception of two federally sponsored educational opportunity programs, Talent Search and Upward Bound</i>	\$25,000
<i>Rockefeller Foundation Matching Gift Program</i>	\$75,000		
Friends of the Institute for a Democratic Alternative for South Africa, New York, New York <i>[1990 \$150,000]</i> <i>To support the work of the Institute for a Democratic Alternative for South Africa to encourage the evolution of a democratic, nonracial society in South Africa</i>	\$150,000		

Other Interest and Initiatives, continued

National Opinion Research Center, Chicago, Illinois <i>For the continuation of the collection of reliable data on sexual behavior</i>	\$75,000	Twentieth Century Fund, New York, New York <i>Toward development of a multi foundation-sponsored initiative to test new programs for combatting drug abuse</i>	\$100,000
National Public Radio, Washington, D C [1990 - \$200,000, in addition to remaining funds from prior year appropriations] <i>To continue support for its news and information programming</i>	\$200,000	University of Chicago, Illinois <i>For use by the University of Chicago Press toward the publishing costs of <u>Managers of Science Foundations and the Natural Sciences 1900-1950</u></i>	\$5,500
New Departures, Inc , Cambridge, Massachusetts <i>Toward support for <u>Reconstruction</u>, a quarterly magazine</i>	\$50,000	University of Colorado at Denver <i>For use in planning, in partnership with consortiums in the Soviet Union and China, the establishment of an International School of Public Affairs within its Graduate School of Public Affairs</i>	\$100,000
New York Community Trust, New York, New York <i>Toward the support of Funders Concerned About AIDS education and outreach activities</i>	\$10,000	University of the Witwatersrand, Johannesburg, South Africa <i>Toward a feasibility study for a proposed graduate program in public policy and development administration at the university</i>	\$50,000
New York Regional Association of Grantmakers, New York, New York <i>Toward general support</i>	\$7,125	WNYC Foundation, New York, New York <i>For use by the WNYC Communications Group toward support of a research and development plan for Teen City</i>	\$100,000
Overseas Development Council, Washington, D C [1990 - \$1,500,000] <i>To assist the Council, in the post-Cold War era of the 1990s, to refocus its program of providing policy-makers and the public with timely analysis of U S interests and responsibilities in developing countries</i>	\$1,500,000	Women and Foundations/Corporate Philanthropy, New York, New York <i>Toward its 1990-91 general operating expenses</i>	\$25,000
Overseas Development Network, Cambridge, Massachusetts <i>To make linkages between overseas and domestic development issues, diversify the Network to ensure more participation from students of different social, economic, and cultural backgrounds, and bring more international perspectives and ideas into exchange with U S students</i>	\$48,000	The World Congress on Philanthropy Educational Foundation, Alexandria, Virginia <i>Toward costs of assisting developing-country representatives in attending the next World Congress on Philanthropy being held in June 1991</i>	\$15,000
Partnership for Democracy, Washington, D C <i>Toward support of The Charles Bannerman Memorial Fellowship Program</i>	\$15,000	Rockefeller Foundation Archives	
People for the American Way, Washington, D C <i>Toward a four phase anti censorship program</i>	\$75,000	Rockefeller University, New York, New York [1990 \$466,660] <i>For the operation of the Foundation's archives at the Rockefeller Archive Center</i>	\$466,660
Phelps Stokes Fund, New York, New York <i>Toward its project, the Committee for South African Development</i>	\$100,000		

Financial Report 106

1989-90 Financial Statements 110

Foundation Organization 117

Board of Trustees 117

Officers and Staff 117

Warren Weaver Fellows 119

Report of the Secretary 119

Information for Applicants 120

Index 122

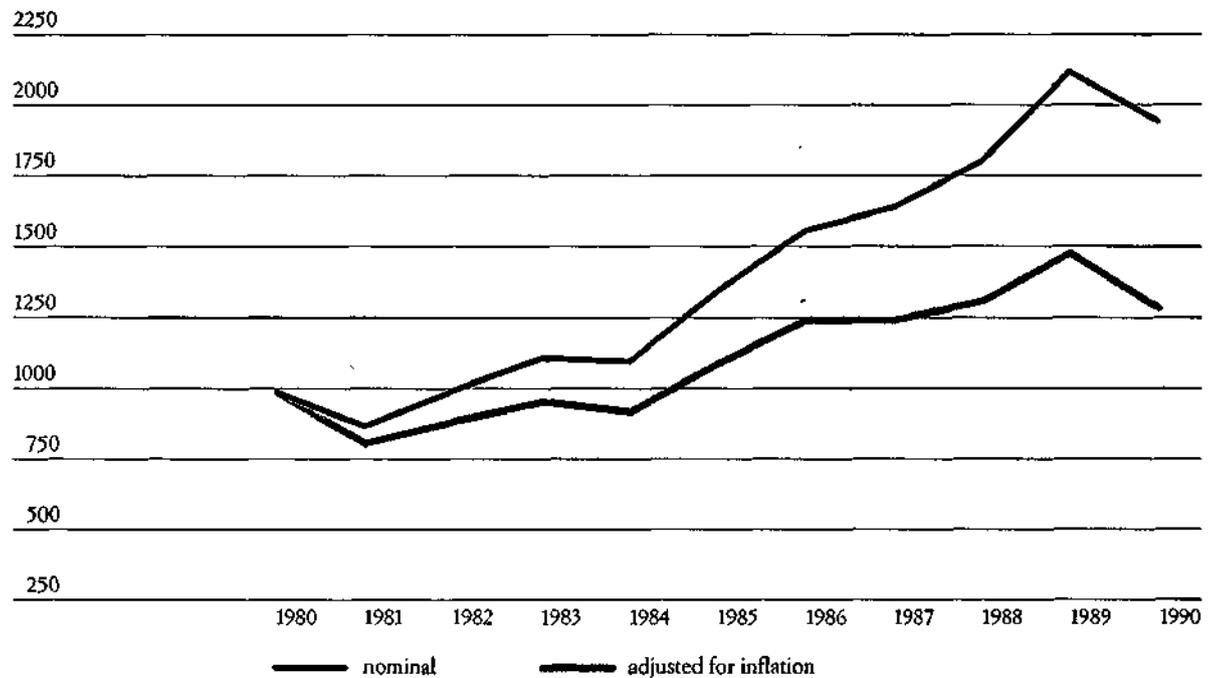
Financial Report

The 1980's was a rewarding period for investors having a long-term perspective and a moderate tolerance for bearing risk. High rates of return enabled the Foundation to spend \$649 million over the ten-year period ended December 31, 1990, and still increase assets by \$956 million over the period to end the decade at \$1,945 million. The following exhibits describe the Foundation's investment program in greater detail.

Asset Growth

The market value of the Foundation's assets totaled \$1,945 million at December 31, 1990, a decrease of 7.9 percent from the 1990 year end total of \$2,111 million. The graph below shows growth in asset values over the past 10 years. The top line shows total assets in nominal dollars; the bottom line shows assets in real dollars, adjusted by the personal consumption deflator. Nominal assets grew at a 7.2 percent annualized rate over the period. The real value of assets grew at a 2.7 percent annualized rate.

(Dollars in millions)



Asset Mix

Diversification among asset classes is an important element of the Foundation's investment program. The program is diversified among six asset classes in the proportions indicated in the following table. Within each asset class, further diversification is achieved by assignment of portfolios to several investment managers and or strategies. The investment program is structured with a long-term perspective on risk and return and, therefore, in order to maintain the Foundation's grant making capacity, the equity allocation is normally maintained above 50 percent.

Note: The investment categorizations below reflect the asset mix based upon the functional intent underlying the Foundation's investment strategy and thus, differ from those presented in the accompanying financial statements.

Asset Mix (continued)

	December 31, 1990		December 31, 1989	
	\$ Millions	Percent	\$ Millions	Percent
U.S. Equities	\$ 990	50.9%	\$1,101	52.1%
Foreign Equities	276	14.2	320	15.2
Bonds	270	13.9	245	11.6
Cash	159	8.2	219	10.4
Real Estate	165	8.5	141	6.7
Venture Capital	85	4.3	85	4.0
	\$1,945	100%	\$2,111	100%

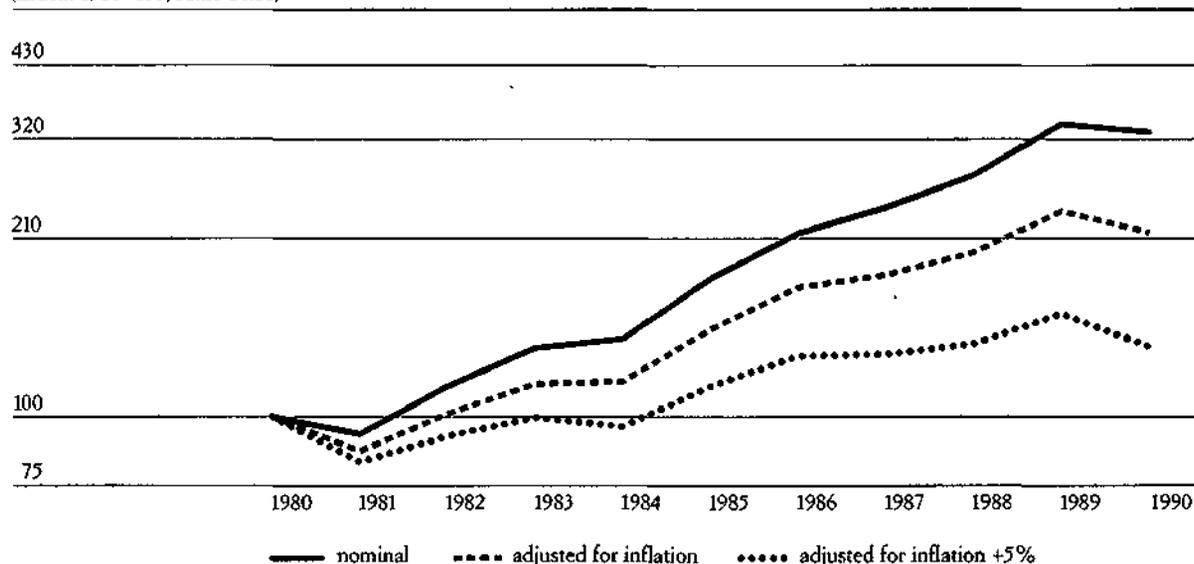
Investment Returns

The Foundation's investment program is designed to maintain the real value of assets and still support spending in excess of the 5 percent minimum distribution requirement imposed by the IRS. While returns needed to meet this objective will not be earned every year, the Foundation expects that an asset mix similar to that shown in the previous table will support our spending policy over time.

In addition to holding a diversified portfolio, the Foundation uses a number of techniques to increase investment returns. These include tactical asset allocation (under or overweighting asset classes based on near-term valuation judgements), the use of misvalued futures, and the retention of external managers who attempt to outperform broad equity or bond indices.

The total return on assets for 1990 was - 3.3 percent. Cumulative returns for the past ten years are shown by the top line in the graph below. The average annual compound rate of return for the ten year period was 12.5 percent. Adjusted for inflation, the compound annual real rate of return was 7.9 percent.

(Index: 1980=100, Ratio Scale)

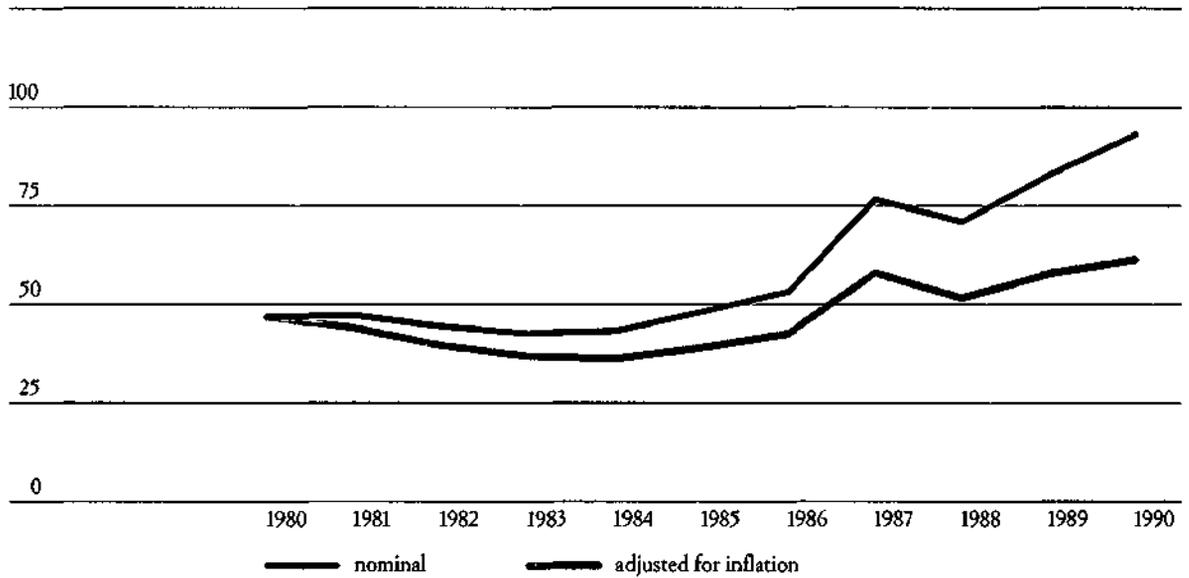


Investment Managers

The Foundation had four equity managers at the end of 1990: Wells Fargo Investment Advisors, Rosenberg Institutional Equity Management, Geewax Terker, and Concord Capital. Bonds are managed by three firms: Wells Fargo, Rosenberg Capital, and Security Capital. Foreign equities are managed by Wells Fargo, State Street Bank, and Emerging Markets Management. In order to limit security selection risk, the Foundation has allocated a disproportionate share of its equity and fixed income accounts to "passive" strategies, through the utilization of arbitrage techniques. The Foundation has investments in ten real estate partnerships and 20 venture capital partnerships. Cash reserves are managed internally. Northern Trust is custodian for domestic assets.

Spending

Spending (grants plus general administration expenses) totaled \$93.1 million in 1990, a 12.4 percent increase over 1989's \$82.8 million. As the graph below shows, real and nominal spending have increased sharply since 1985. The growth in spending is directly related to the substantial increase in asset values registered over the period.



Expenditures by Categories	Expenditures by categories for the three years 1988-1990 are shown in the table below.					
	1990		1989		1988	
	\$ Millions	Percent	\$ Millions	Percent	\$ Millions	Percent
Grants and Operations:						
Agricultural Sciences	\$13.6	14.2%	\$14.3	17.0%	\$ 9.8	13.3%
Arts & Humanities	14.2	14.8	13.6	16.1	12.4	16.8
Equal Opportunity	13.9	14.5	13.5	16.0	12.5	17.0
Health Sciences	14.3	14.9	10.5	12.4	10.6	14.4
Population Sciences	10.9	11.4	8.6	10.2	7.1	9.6
Global Environment	2.7	2.8	0.4	0.5	-	-
Special Programming	4.7	4.9	4.0	4.7	4.3	5.8
School Reform	2.7	2.8	1.6	1.9	-	-
International Security	0.9	0.9	0.5	0.6	-	-
Special Interests & Explorations	3.1	3.2	4.5	5.3	4.2	5.7
Education for Development	-	-	-	-	0.1	0.1
International Relations	0.1	0.1	0.3	0.4	1.0	1.4
Bellagio Center & Archives	2.8	2.9	2.9	3.4	2.6	3.5
Warren Weaver Fellows	0.8	0.8	0.3	0.4	-	-
Subtotal	84.7	88.2	75.0	88.9	64.6	87.6
General Administration	8.3	8.6	7.8	9.2	6.4	8.7
Major Renovation and Equipment	-	-	0.1	0.1	0.3	0.4
Federal excise tax paid for previous year	3.1	3.2	1.5	1.8	2.4	3.3
Total	\$96.1	100.0%	\$84.4	100.0%	\$73.7	100.0%

1990-89 Financial Statements

**Report of
Independent Auditors**

The Board of Trustees
The Rockefeller Foundation

We have audited the accompanying statements of assets, obligations and principal fund of The Rockefeller Foundation as of December 31, 1990 and 1989, and the related statements of operations and changes in principal fund and of changes in financial position for the years then ended. These financial statements are the responsibility of The Rockefeller Foundation's management. Our responsibility is to express an opinion on these financial statements based on our audits.

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

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of The Rockefeller Foundation at December 31, 1990 and 1989, and the results of its operations, changes in its principal fund and changes in its financial position for the years then ended in conformity with generally accepted accounting principles.

Ernst & Young

New York, New York
February 22, 1991

Statements of Assets, Obligations and Principal Fund

December 31, 1990 and 1989

	1990	1989
Assets		
Investments (Note 1)	\$1,929,940,824	\$2,117,301,168
Cash	28,111,668	1,494,041
Accounts receivable (primarily security sales)	2,804,875	4,745,885
Dividends and interest receivable	1,929,301	21,449,381
Refundable federal excise tax (Note 2)	244,033	83,337
Property—at depreciated cost (Note 3)	1,903,858	2,239,345
Other assets (Note 4)	7,036,000	4,934,000
Total assets	\$1,971,970,559	\$2,152,247,157
Obligations and Principal Fund		
Accounts payable and accrued liabilities (primarily security purchases)	\$ 17,769,755	\$ 25,451,634
Deferred federal excise tax (Note 2)	894,594	3,164,315
Appropriations by the Trustees, approved for specific grantees/purposes but not yet paid (Note 5)	61,840,657	56,666,001
Total obligations	80,505,006	85,281,950
Commitments (Notes 1, 4 and 6)		
Principal fund:		
Appropriations by the Trustees (Note 5):		
For allocation to future grantees	45,358,631	35,410,114
Budget for operations and new grants of the following year	120,150,000	109,416,350
	165,508,631	144,826,464
Unappropriated	1,725,956,922	1,922,138,743
Total principal fund	1,891,465,553	2,066,965,207
Total obligations and principal fund	\$1,971,970,559	\$2,152,247,157

See accompanying notes.

Statements of Operations and Changes in Principal Fund

Years ended December 31, 1990 and 1989

	1990	1989
Dividends	\$ 22,865,355	\$ 32,746,665
Interest	73,887,335	61,457,168
Other	330,843	340,600
Realized gain (loss) on sale of marketable securities	(58,543,310)	216,368,692
Total realized investment income	38,540,223	310,913,125
Less: investment expenses	5,203,371	5,969,642
Net realized investment income	33,336,852	304,943,483
Less:		
Approved grants and program costs	89,945,706	86,894,762
General administrative expenses	6,562,834	5,958,875
Provision for federal excise tax (Note 2)	930,250	2,952,008
	(64,101,938)	209,137,838
Increase (decrease) in unrealized appreciation of marketable securities net of provision (credit) for deferred federal excise tax—1990: (\$2,269,721); 1989: \$1,910,000 (Notes 1 and 2)	(111,397,716)	93,571,925
Principal fund at beginning of year	2,066,965,207	1,764,255,444
Principal fund at end of year	\$1,891,465,553	\$2,066,965,207

See accompanying notes.

Statements of Changes in Financial Position

Years ended December 31, 1990 and 1989

	1990	1989
Sources of Cash		
Net realized investment income	\$33,336,852	\$304,943,483
Federal excise tax refund	60,257	4,341,109
Net change in accounts receivable, dividends and interest receivable, and accounts payable and accrued liabilities	13,779,211	57,483,318
Total sources of cash	47,176,320	366,767,910
Applications of Cash		
Expenditures for grants and operations:		
Agricultural Sciences	13,647,977	14,302,566
Arts & Humanities	14,238,822	13,555,026
Equal Opportunity	13,875,774	13,522,660
Health Sciences	14,317,491	10,545,377
Population Sciences	10,890,643	8,564,683
Global Environment	2,695,037	402,993
Special Programming	4,671,866	3,984,597
School Reform	2,711,133	1,617,569
International Security	883,296	484,850
Special Interests & Explorations	3,143,983	4,501,857
Education for Development	—	11,711
International Relations	79,800	328,092
Bellagio Center & Archives	2,805,278	2,865,183
Warren Weaver Fellows	762,470	282,139
	84,723,570	74,969,303
General administrative expenditures	8,328,934	7,784,160
Special maintenance—Bellagio Center	47,893	102,065
Subtotal	93,100,397	82,855,528
Federal excise tax paid (Note 2):		
For previous year	—	196,510
For estimated taxes for current year	1,147,500	3,179,700
	1,147,500	3,376,210
Net securities and repurchase agreement transactions, exclusive of realized gains (losses)	(73,689,204)	279,225,197
Total applications of cash	20,558,693	365,456,935
Increase in cash	26,617,627	1,310,975
Cash balance at beginning of year	1,494,041	183,066
Cash balance at end of year	\$ 28,111,668	\$ 1,494,041

See accompanying notes.

Notes to Financial Statements

December 31, 1990 and 1989

1. Investments

Marketable securities are reported on the basis of quoted market value, and investment income and expenses are reported on the accrual basis. Realized gains and losses are calculated based on the specific identification method for both financial statement and tax return purposes. Limited partnership interests in real estate are reported at appraised value, when available; and when not available, at cost, adjusted for the Foundation's share of the limited partnership income or loss. Venture capital limited partnership interests are reported at fair value.

	December 31, 1990		December 31, 1989	
	Cost	Market Value	Cost	Market Value
Marketable securities:				
Repurchase agreements	\$ 11,560,000	\$ 11,560,000	\$ 16,000,000	\$ 16,000,000
U.S. Government obligations	280,366,254	285,390,337	256,174,911	260,446,550
Money market funds	492,717,617	492,717,617	261,473,392	261,473,392
Foreign currency—short-term	1,520,660	1,516,951	209,274	214,839
Certificates of deposit	44,452,836	53,670,158	53,009,201	54,980,107
Corporate obligations	103,646,272	105,552,293	108,362,542	110,560,621
Other investments	1,296,910	450,000	1,296,910	450,000
Preferred stock	325,635	379,803	463,814	514,705
Common stock	682,357,646	679,858,015	1,019,399,359	1,137,054,559
Subtotal	1,618,243,830	1,631,095,174	1,716,389,403	1,841,694,773
Limited partnerships and similar interests:				
Real estate	137,226,549	165,162,333	127,096,549	140,340,821
Venture capital	65,445,882	63,908,874	51,119,514	61,165,272
Other	70,000,000	69,774,443	70,000,000	74,100,302
Subtotal	272,672,431	298,845,650	248,216,063	275,606,395
Total	\$1,890,916,261	\$1,929,940,824	\$1,964,605,466	\$2,117,301,168

At December 31, 1990, the Foundation had entered into futures contracts totaling approximately \$540,864,703, which represents the gross contract amounts and the full extent of the Foundation's involvement. However, those amounts may differ from the Foundation's future cash requirements as the Foundation may close out positions prior to settlement and thus be subject only to the change in the value of the futures contracts. The margin cash requirements for the futures contracts were approximately \$27,982,910 at December 31, 1990. The Foundation is subject to the market risk associated with changes in the value of the underlying financial instruments. Changes in the market values of the underlying instruments are recognized as unrealized gains or losses.

Under the terms of various venture capital and real estate limited partnership agreements, the Foundation has commitments to contribute approximately \$40,000,000 in additional capital, as of December 31, 1990.

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 is subject to a federal excise tax of 2% on investment income less investment expenses, and on net realized taxable gains on security transactions. In accordance with Section 4940 (e) of the Internal Revenue Code, during the years ended December 31, 1990 and 1989, the Foundation has met the specified distribution requirements and is subject to a federal excise tax of 1% in place of the 2% tax.

Deferred federal excise tax arises from timing differences between financial and tax reporting relating to investment income and the difference between the cost basis and market value of marketable securities.

3. Property

Expenditures for capital items are included in the property account and depreciated on a straight-line basis over the lives of the respective assets or amortized over the term of the lease. The net change in the property account in 1990 was caused by additions of \$304,759 and a decrease of \$640,246 attributable to depreciation and amortization. Depreciation and amortization totalled \$686,107 in 1989.

4. Pension Plan, Trusteed Savings Plan and postretirement benefits

The Foundation maintains a defined benefit pension plan for regular salaried employees who are at least 21 years old and have completed one year of service or have attained the age of 40. The Plan provides retirement benefits based on years of service and final-average pay, with benefits after retirement subject to increase under a cost-of-living augmentation formula. Plan assets are invested in a diversified portfolio of common stocks and fixed-income securities.

Selected information on the Plan's funded status and the amounts recognized in the Foundation's statement of financial position at December 31 follows:

	1990	1989
Plan assets at fair value	\$51,044,000	\$52,893,000
Less: Projected benefit obligation	(34,301,000)	(32,039,000)
Funded status—surplus	\$16,743,000	\$20,854,000
Prepaid pension cost included in other assets	\$ 7,036,000	\$ 4,934,000

Program and administrative costs incurred in 1990 and 1989 were reduced by a net pension credit of \$2,102,000 and \$1,851,000, respectively.

The projected benefit obligation for the Plan was determined using the assumed discount rate of 8.5% and an annual salary increase rate of 6%. The assumed long-term rate of return on plan assets was 9%.

The Foundation also maintains a Trusteed Savings Plan for regular salaried employees under which Foundation contributions are made to equal employee contributions of up to 5% of pay. The combined contributions are credited to the employees' accounts. These accounts are invested and at termination of employment, the employee receives the account balance. The Foundation's contributions to this Plan were \$250,872 for 1990 and \$232,114 for 1989.

The Foundation provides certain health care and life insurance benefits for retired employees. Employees are eligible for these benefits when they meet the criteria

for retirement under the Foundation's pension plan. The cost of such benefits (approximately \$890,000 and \$780,000 in 1990 and 1989, respectively) is currently recognized as expense as related insurance premiums are incurred. In December 1990, Statement of Financial Accounting Standards No. 106—"Employers' Accounting for Postretirement Benefits Other Than Pensions" ("SFAS 106") was issued. The provisions of SFAS 106, which require that the expected cost of providing postretirement benefits be accrued during the years that the employee renders the necessary service, become effective during the year ending December 31, 1995. The Foundation has not yet determined the effects that the implementation of the SFAS 106 provisions will have on its financial position or results of operations.

5. Appropriations and expenditures

Appropriations by the Trustees are considered to be obligations when grants are approved for specific grantees; appropriations not released for specific grantees and the appropriation for the budget for the next year are considered as appropriated principal fund. Administrative costs are charged to operations when incurred.

Appropriations and expenditures for the year are summarized as follows:

	Appropriated for specific grantees/ purposes	Appropriated for allocation and next year's budget	Total Appropriated
Balance, January 1, 1990	\$56,666,001	\$144,826,464	\$201,492,465
Approved grants, and program and administrative costs	98,572,574	(98,572,574)	-
Lapses and refunds	(320,794)	(895,259)	(1,216,053)
Expenditures for grants and operations	(93,127,124)	-	(93,127,124)
Subtotal	61,790,657	45,358,631	107,149,288
1991 Budget	50,000	120,150,000	120,200,000
Balance, December 31, 1990	\$61,840,657	\$165,508,631	\$227,349,288

6. Long-term leases

At December 31, 1990, base rental commitments under non-cancellable leases for headquarters office space aggregate approximately \$2,375,000 and are payable at approximately \$720,000 annually until 1994. Under the leases, the Foundation is required to pay additional amounts for maintenance, electricity and taxes. The Foundation has subleased portions of its space under two separate sublease agreements. Net rental income under the first sublease will be approximately \$394,000 and under the second approximately \$165,000 during the remaining period of the leases. Rental expense included in the statement of operations was approximately \$1,188,000 in 1990 and \$1,118,000 in 1989.

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Warren Weaver Fellows

The Warren Weaver Fellows Program gives exceptionally talented individuals firsthand experience in the field of philanthropy and also gives the Foundation the benefit of fresh perspectives on its work. Fellows are appointed annually for one-year residencies at the Foundation. They are expected to complete priority projects within the Foundation's program areas, and are encouraged to participate in staff meetings and other official Foundation events.

Cynthia A. Chavez
"School Reform for At-Risk Youth in the United States"

Ian Johnstone
"International Security"

Yelena Khanga
"Black Americans in the Soviet Union"

Sarah C. von der Lippe
"Persistent Poverty and Government Policy in the United States"

Judy Mitoma
"Internationalizing the Arts"

Anthony Romero
"Persistent Poverty and Litigation in the United States"

Claire Spencer
"Enrichment of the Foundation's activities at its Bellagio Study and Conference Center"

Report of the Secretary

The annual meeting of the Board of Trustees for 1990 was held on March 26–27, and regular meetings of the Board were held on June 12, September 10–11, and December 11. There were no meetings of the executive committee during 1990.

Eleanor Holmes Norton resigned from the Board, effective December 11. She was elected a trustee in 1981 and served on the Executive and Nominating Committees and as chair of the latter.

Jack R. Meyer, who joined the Foundation as treasurer and chief investment officer in 1983, resigned, effective August 31. His successor, *David A. White*, was appointed treasurer and chief investment officer, effective January 14, 1991.

Rajaram Ramanathan, who was appointed comptroller in 1982 after having served in the Foundation's field office in India from 1961 to 1971 and in the New York office from 1971, will retire from the Foundation following a year's study leave that began June 1. His successor, *Charles J. Lang*, was appointed comptroller, effective July 23.

The work of the Rockefeller Foundation is in three principal areas: international science-based development, the arts and humanities, and equal opportunity. Within science-based development, the emphases are on the global environment and on the agricultural, health, and population sciences. We also have smaller grant programs in international security and in school reform to improve public education for at-risk young people.

To accomplish lasting results with limited resources, the Foundation concentrates its grants and fellowships on purposes approved by the Board of Trustees and expressed in program guidelines. These guidelines have been summarized to introduce each program section in the grants and fellowships listings of this annual report. Copies of the guidelines in full are available from the Foundation.

The Foundation employs a staff of experienced professionals, augmented by consultants and advisory panels, to plan, develop, and conduct its programs. Members of the staff, in order to meet their responsibilities, are expected to travel

widely and study extensively, keeping abreast of relevant scholarly and other literature, visiting Foundation-supported projects, talking with others in the field, and observing programs and projects of potential interest.

Many grants therefore stem from proposals stimulated by staff interactions with individuals and institutions that have the qualifications needed to accomplish the objectives of the Foundation's programs. Other grants and fellowships are made through publicized competitions designed to advance program goals. We also receive approximately 8,000 unsolicited proposals each year, and while most are declined because they are for purposes outside the Foundation's program guidelines, we review the remainder and fund those that we can within budgetary limits on a competitive basis.

Grants

The factors considered in evaluating grant proposals include the proposed project's potential for accomplishing its objectives and contributing significantly to the "well-being of mankind"; the relevance of the project to the Foundation's programs; the applicant's qualifications and record of achievement; and the extent of the applicant's efforts to secure additional and subsequent funding from other sources.

Fellowships

The Foundation offers fellowships for training and to assist in the production of a piece of work. Advanced training fellowships, biotechnology career fellowships, and social science research fellowships are given to help prepare outstanding younger scholars and scientists, primarily from the developing world, to make significant contributions to research and training to public service. In addition, a number of special fellowships are announced and awarded annually through specific Foundation programs.

Limitations

The Foundation, as a matter of policy, does not give or lend money for personal aid to individuals; contribute to the establishment of local hospitals, churches, schools, libraries, or welfare agencies, or to their building and operating funds; finance altruistic movements involving private profit; or support attempts to influence legislation.

In addition, we do not normally provide general institutional support or endowment. Occasional exceptions are made for organizations or institutions in which the Foundation has played an important creative role, and organizations that serve and support organized philanthropy in the United States. Although general or core support is seldom given, we try to ensure that the full direct costs of a project are taken into account in the calculation of grant budgets.

External Affirmative Action Policy

The Rockefeller Foundation believes that important issues of underrepresentation of minorities and women remain unresolved in our society, and we seek to play a helpful and constructive part in their resolution. To that end, the Foundation systematically invests in the professional development of minorities and women and their promotion into leadership roles. The Foundation expects grantee organizations in the United States to do the same.

Consequently, affirmative-action questions will be raised with U.S. applicants and grantees when there appear to be opportunities for constructive collaboration with the Foundation in the interests of improving opportunities for underrepresented groups. In such instances, as a first step, we may ask these institutions to inform us of their efforts, supported when appropriate, with data on the gender and minority composition of the leadership of the institution.

Requests and Applications

In general, no special form is required to apply for a grant or fellowship, but the proposal or application should include:

- a description of the proposed project or fellowship activity, with clearly stated plans and objectives;

- a comprehensive plan for the total funding of the project during and, where applicable, after the proposed grant period; and
- a listing of the applicant's qualifications and accomplishments and, if applicable, a description of the institutional setting.

Proposals and applications should be sent to the secretary of the Foundation or to the director of the relevant division or program. Requests for the application form required to apply for a conference or residency at the Bellagio Study and Conference Center should be sent to the attention of the Bellagio Conference Office. For more information about the Foundation, send your inquiries to the Communications Office.

Our general mailing address is:

The Rockefeller Foundation
1133 Avenue of the Americas
New York, N.Y. 10036, USA

Index

A

Abdel-Sayed, Zeinab, 75
Academia Mexicana de Investigacion en Demografia Medica, 68
Academia Sinica, 55
Acheson, Roy, 61
Addis Ababa University, 67, 75
Africa agriculture, 18 21, agroforestry, 18, female education, 6-7, 27
Africa Fund, 102
Africa Leadership Foundation, 75
Africa News Service, 48, 102
Africa Press Trust, 69
Africa Resources Trust, 102
African Academy of Sciences, 75
African-American Institute, 102
African Centre for Technology Studies, 72
African Dissertation Internship Awards, 72
African Economic Research Consortium Program, 78
African Forum for Children's Literacy in Science and Technology, 78
African Medical and Research Foundation, 58
Afro-American Historical and Cultural Museum, 87
Aga Khan Foundation, 58
Agency for International Development, 18
Agricultural Sciences division, 50-57, fellowships, 57, 80-81, 83, 84
Agriculture, African, 18-21
Agroforestry, 18
Ahmed, Khalida Sultana, 83
AIDS and Reproductive Health grants, 63-64, 70
AIDS test kit, 25
Akin-Olugbade, Adesegun, 75
Alda, Alan, 117
Aldemita, Rhodora Romero, 81
Alemaya University of Agriculture, 75
Alexandria University, 67
Alliance for Education in Global and International Studies (AEGIS), 99
All-India Institute of Medical Sciences, 66
Almeida Theatre Company, 88
Alonge, Adewale Johnson, 75
Alternate ROOTS, 89
American Academy of Arts and Sciences, 72, 102
American Assembly, 34
American Association of Museums, 85
American Civil Liberties Union, 42, 48, 97, 102
American College of Physicians, 58
American Dance Festival, 30, 89
American Enterprise Institute for Public Policy Research, 42, 96
American Federation of Arts, 88
American Festival Project, 30
American Film Institute, 93
American Forum, 99
American Foundation for AIDS Research, 63, 70
American Historical Association, 85
American Indian College Fund, 103
American Place Theater, 88
American Repertory Theatre Company, 88
American Society for Circumpolar Health, 61
American Society of Tropical Medicine and Hygiene, 58
Americas Society, 88
Amigos del Museo del Barrio, 88
Amuah, Alexander, 84
Anambra State University of Technology, 69

Anuratha, C. S., 80
Appalshop, 30
Applying Biotechnology to Developing-Country Food Crops grants, 50 55
Argentina, 30
Arlyck, Ralph, 90
Art controversial, 34, freedom of expression in, 9 10
Arthurs, Alberta, 118
Artist Space, 99
Arts and Humanities division grants, 85-94, new initiatives, 28 35
Arts of Mexico program, 88
Arts PROPEL, 45
Asia, Southeast, agroforestry in, 16, 18
Asia Society, 72
Asian American Arts Centre, 87
Asian Heritage Council, 91
Asian Institute of Technology, 56
Asociacion Dominicana Pro-Bienestar de la Familia, 67
Association Museums of Kenya, 55
Association of American Colleges, 85, 98
Association of American Cultures, 88
Association of Black Foundation Executives, 98
Association of Rice Research Workers, 53
AT&T Foundation, 34
Australian National University, 21, 64, 70
Averill, Meredith S., 118
Axinn, W. G., 69
Ayana, Daniel, 75

B

Baca, Judith F., 35
Baltimore Opera, 34, 91
Banaras Hindu University, 67
Bangladesh Rice Research Institute, 53
Barton, John H., 52
Basic and Applied Rice Biotechnology, 50
Bass, Carol, 118
Bass, Marian E., 117
Baunt, Evasius K., 82
Bay, Admir Pancas Mahomed, 81
Bayero University, 75
Beijing University, 53, 54
Bellagio Series on the Environment, 72
Bellagio Study and Conference Center, 48, 118
Benefo, Kofi Darkwa, 82
Berisso, Tadesse, 75
Berkley, Seth F., 119
Beyond Child Survival Program, 78
Binger, Al, 119
Biomass Users Network, 72
Biotechnology, 21 22
Biotechnology Career Fellowships, 57, 65, 83-84
Blackie, Malcolm J., 118
Blackstone, Gwendolyn T., 118
Board of Trustees, Foundation, 117
Bonga, Julia, 81
Bookmyer, Joseph R., 118
Borlaug, Norman E., 118
Bose Institute, 53, 54
Boston Dance Umbrella, 88
Botero, Arismendy Luis Fernando, 82
Bourne, St. Claire, 90
Bowen, Carol Endo, 118
Brademas, John, 10, 117
Brandeis University, 95
Brava! for Women in the Arts, 91
Brazil, 18, 25
Brewis, Alexandra A., 82
Brigham and Women's Hospital, 66

Bronx Museum of the Arts, 87
Brooklyn Academy of Music, 88
Brooklyn Museum, 87
Brown, Harold, 117
Brown University, 62
Bruemmer, Melissa L., 117
Bryn Mawr College, 79, 99
Buba, Tony, 90
Buchwalter, Ellen S., 118
Buckles, Daniel, 84
Burkhart, Lynne C., 118
Burnett, Charles, 31, 90
Burt, Martha, 95

C

Cairo Demographic Centre, 69
Calderon Urrea, Alejandro, 80
California/International Arts Foundation, 85
Cambridge Laboratory, 51
Cameroun, 24
Cardenas, Hugo Guillermo Sankan, 81
Carnegie Hall Society, 89
Case Western Reserve University, 62, 65, 71, 95
Catholic University of Chile, 66, 67
Celli, Roberto, 118
Center for African Art, 87
Center for Community Change, 95, 98
Center for Community Studies, 86
Center for Employment Training, 38 39, 96
Center for Foreign Policy Development, 101
Center for Genetic Engineering and Biotechnology Investigations (CEINGEBI), 62
Center for Nitrogen Fixation, 21
Center for Population Options, 68
Center for Puppetry Arts, 89
Center for Research and Advanced Studies, 51, 53
Center for Strategic and International Studies, 95
Center on Budget and Policy Priorities, 95
Centers for Disease Control, 61, 101
Central State University, 43, 100
Centro Cultural Ciudad de Buenos Aires, 89
Centro de Pesquisa e Assistencia em Reproducao Humana (CPARH), 67, 70
Centro Medico A S I A., 64, 70
Chakra, Zakia R. G., 81
Champoux, Michael, 81
Chanin, Clifford, 118
CHART, 45, 99
Chavez, Cynthia A., 119
Chen Mingshun, 53
Cheserem, Salina Jepakoch, 75
Chiba University, 66
Chicano filmmaking projects, 32
Child Care Plus, 95
Children, vaccination campaign, 22
Children Now, 95
Children's Defense Fund, 95
Children's Museum (Boston), 87
China, 24, 25, 30, crop germplasm conservation program, 21-22, environmental policy, 14
China Initiative, 72
China National Center for Biotechnology Development, 53
China National Rice Research Institute, 53, 54
Chinese Academy of Agricultural Sciences, 53, 54
Chinese Academy of Sciences, 21, 51, 53, 67

Chitedze Agricultural Research Station, 76
 Chiteka, Zwenhamo Albert, 81
 Chiyembekeza, Allan James, 76
 Choi Seong Ho, 80
 Chowdhury, Vijay Kumar, 80
 Choy, Christine, 90
 Christian Medical College and Hospital (India), 62
 Chulalongkorn University, 58
 Chunwongse, Julapark, 81
 Cine Accion, 85
 Cisneros, Henry, 117
 City College of the City University of New York, 28, 86, 88
 City University of New York, *Research Foundation*, 79, 97
 Civil rights, 42
 Civil Rights Conferencing, 98
 Cleveland Foundation, 103
 Climate Institute, 72
 Cold Comfort Farm Trust, 103
 Cold Spring Harbor Laboratory, 61
 Colegio de la Frontera, 32
 Collaboratives for Humanities and Arts Teaching (CHART), 45, 99
 Columbia University, 64, 66, 70
 Comer, James, 38, 43, 45
 Commission on Health Research for Development, 22-24
 Committee for Economic Development, 100
 Committee of Soviet Scientists, 72
 Commonwealth Regional Health Community Secretariat for East, Central, and Southeast Africa, 69
 Commonwealth Scientific and Industrial Research Organization, 50
 Community-based Control of Dengue grants, 64
 Community Development Corporations (CDCs), 7-8, 37
 Community development movement, 7-8
 Community Foundation of Greater Washington, 99
 Community Planning and Action Program (CPAP), 41, 95-96
 Community Television of Southern California, 89
 Compania de Teatro de Albuquerque, 92
 Conflict Management Project, 103
 Connecticut Humanities Council, 99
 Conservation International, 72
 Conservation Law Foundation, 72
 Consultative Group on Biological Diversity, 72
 Contemporary Arts Center (Cincinnati), 89
 Contemporary Arts Center (New Orleans), 93
 Contraception, 24-25
 Contraceptive Introduction Projects, 66
 Corbett, John, 84
 Cornell University, 52, 66, 67, 69, 72, 78, 86
 Corporation for the Advancement of Policy Evaluation, 95
 Cottingham, Phoebe H., 118
 Council for the Development of Economic and Social Research in Africa (CODESRIA), 78
 Council on Foundations, 100, 103
 Court, David, 117
 Crutchfield, Richard, 56
 Crocker Art Museum Association, 87
 Crop Genetic Maps, 51
 Crops *genetic engineering of*, 21, *germplasm conservation program*, 21-22
 Crossroads Theatre Company, 91
 Cultural Odyssey, 91
 Cultural Survival, 85
 Culture, minority, exhibitions of, 32

D

Dahal, Ganesh, 81
 Dance Brigade, 91
 Dance Critics Association, 89
 Dance Theatre of Harlem, 94
 Dance Theatre Workshop, 89
 Dash, Julie, 90
 Davis, Anthony, 34
 Davis, Thulani, 34
 Davis, Zeinabu Irene, 90
 De la Hoz, Carlos Aramburo, 83
 Dembele, Niama Nango, 81
 DeMott, Joel, 90
 Deng Wanyin, 80
 De Silva, Weraduwege Indralal, 82
 Developing countries *culture of*, 28, *science-based development in*, 12-17
 Developing Technology for Fertility Regulation grants, 66-68
 Development, economic, and the environment, 7, 12-17
 Development Training Institute, 96
 Discrimination, *housing*, 41
 District Curators, 91
 District of Columbia, *Committee on Public Education*, 43
 DiverseWorks, 93
 Dominican Republic, 25
 Donors Task Force on African Education, 6, 27
 Downey, Juan, 90
 Drug trafficking, 41-42
 Dulany, Peggy, 117

E

Earth Day 1990, 73, 100
 East Tennessee Foundation, 89
 Ebor, Reynaldo V., 81
 Edinburgh School of Agriculture, 56
 Editorial Projects in Education, Inc., 103
 Eduardo Mondlane University, 55
 Education *female participation, in Africa*, 6-7, 27, *reform of*, 43-45
 Educational Broadcasting Corporation (WNET), 96, 103
 Educational Consortium of Central Los Angeles, 100
 Educational Testing Service, 45, 100
 Education Commission of the States, 43, 100
 Egypt, 24, 25
 El Awady, Mostafa Kamel, 84
 Electronic Arts Intermix, 90
 Elegbede, John Abiodun, 84
 El Puerto Rican Playwrights/Actors Workshop, 91
 Emory University, 58, 68, 96
 Energy *efficiency*, 15, 17-18, *future policy*, 4-6, *U.S. policy*, 17-18
 Energy Foundation, 4-6, 17-18
 En Garde Arts, 91
 Enhancing National Capacity for Population-Based Health Care grants, 58-61
 Enterprise Foundation, 8, 37, 96
 Environment, *economic development and the*, 7, 12-17
 Environmental and Energy Study Institute, 73
 Environmental Defense Fund, 51, 73
 Epidemiology, 24
 Equal Opportunity division *grants*, 95-99, *new initiatives*, 37-42

Equal Opportunity for the Urban Poor program, 95-97
 Erwidodo, Mr., 51
 Escola Paulista de Medicina, 59
 Esole, John Peter, 76
 Esquel Group Foundation, 47-48, 103
 Ethnic Folk Arts Center, 91
 ETV Endowment of South Carolina, 58, 89
 Evans, John R., 22, 117
 EXIT Art, 87
 Extending International and Intercultural Scholarship program, 85-88

F

Facilitating the "Comerization" of Public Schools program, 100
 Fair Employment Council of Greater Washington, 41, 98
 Family and Community-Based Initiatives, 63-65, 70-71
 Family Care International, 68
 Fan Zai Feng, 80
 Fapohunda, Bolaji, 82
 Fatokun, Christian Ademola, 51, 81
 Federal City Council (D.C.), 100
 Federal Home Loan Mortgage Corporation, 8, 37
 Female Participation in African Education program, 6-7, 27, 78
 Ferris, Sally A., 118
 Festival Fund program, 89
 Festivals, art, 28-31
 Feyisetan, B. J., 69
 Fierro, Maria Irma Villalpando, 82
 Film, *documentary*, 31-32
 Film News Now Foundation, 89
 Financial report and statements, Foundation, 106-116
 FuzGerald, Frances, 117
 Florkowski, Wojciech J., 52
 Food and Agriculture Organization of the United Nations, 55, 73
 Ford Foundation, 7, 14, 37, 47
 Forest History Society, 85
 Forest management, 16, 18
 Forum on African-American Males, 42
 Foundation for Independent Video and Film, 89, 93
 Foundation for International Scientific Cooperation, 58
 Foundation for Research in Applied Biology (FIBA), 53
 Foundation of the Dramatists Guild, 100
 Foundations, private *partnerships of*, 9, *philanthropic goals of*, 4
 Freedom of expression, artistic, 9-10
 Friedrich, Su, 90
 Fricke, T. E., 69
 Friends of the Arts, 89
 Friends of the Institute for a Democratic Alternative for South Africa, 103
 Fudan University, 53
 Fundacion Mexicana Para La Salud, 24
 Fund for Free Expression, 103
 Fund for Reconciliation and Development, 89

G

Gadjah Mada University, 52, 58, 59
 Gambang'adi, Reuben Joshua, 55
 Garcia, Ana Maria, 90
 Garcia, Daniel P., 117
 Garfield, Susan E., 118
 Gatongi, Peter Manna, 76
 Gemeda, Guluma, 76
 Genetic engineering, 21

Genetic Map of Rice, 51
 Gerima, Haile, 90
 Gerwel, C. Jakes, 103
 Ghana, 30
 Gibson, James O., 118
 Global Environment Program Grants, 72, 74
 Godmilow, Jill, 90
 Goldmark, Peter C., Jr., 117, *President's Review*, 3, 10
 Goldsberry, Ronald E., 117
 Gordon, Milton, 21
 Gowda, Bhavanishankara, 51
 Grameen Trust, 47, 103
 Grant activities *evaluation system for*, 9,
innovation in, 4, *new initiatives*, 11, 48
 Grantmakers in the Arts, 89
 Greater Washington Research Center, 41, 95
 Green, Vanalyne, 90
 Green Video Collection, 31
 Guangdong Chinese Modern Dance Company, 30
 Gulf War, 46
 Guo Shenyang, 81
 Gu Yanmin, 81
 Gwadz, Robert W., 62
 Gwin, Catherine, 117

H

Hainan Province, People's Government, 73
 Hallack, DeeDee, 90
 Halstead, Scott B., 119
 Hamid, Gamal, 76
 Harry Frank Guggenheim Foundation, 41
 Harvard University, 45, 58, 61, 62, 64, 68, 70, 96, 100
 Hastings College of the Law, 74
 Health and Human Services, U.S. Department of, 41
 Health projects, 22, 25, *international task force*, 22, 24,
research programs, 22-24
 Health Sciences division, 58, 65, *fellowships*, 65, 81,
 83, 84
 Health Sciences for the Tropics, 61
 Health Transition Program, 64, 70
 Helena Film Society, 93
 Helsinki Citizens Assembly, 103
 Henry M. Jackson Foundation for the Advancement
 of Military Medicine, 58
 Herdi, Robert W., 118
 Hereward, Mark, 84
 Hewlett, William and Flora, Foundation, 37
 He Zhigang, 82
 Hill, Gary, 90
 Hispanic Culture Foundation, 99
 Hispanics in Philanthropy, 98
 History of Science Society, 85
 Hock, Louis, 90
 Hokkaido University, 50
 Holzer, Jenny, 31
 Hopper, William David, 117
 Horn, Karen N., 117
 Hospital General de Mexico, 59
 Hostos Community College Advisory Council, 88
 House Foundation for the Arts, 91
 Housing discrimination, 41
 Houston Grand Opera, 91
 Howard University, 43, 100
 Huazhong Agricultural University, 53
 Hughes, Jane, 117
 Human Capital grants, 96
 Humanities Fellowships, 28
 Hunter College, 85, 86
 Hu Tianhua, 80
 Hutten, Peter, 90

I

IAF Biovac Inc., 63
 Ilchman, Alice Stone, 117
 Illuminating Intergenerational Perspectives
 program, 96
 Improving Population Policies and Programs grants,
 68, 70
 Increasing Artistic Experimentation Across Cultures
 program, 88, 94
 Increasing Knowledge for the Management of Natural
 Resources grants, 56, 57
 Independent Committee on Arts Policy, 90
 Independent Sector, 103
 India, 24, 25
 Indian Council of Agricultural Research, 51
 Indian Society of Seed Technology, 52
 Indian Society of Soil Science, 56
 Indiana University, 28, 86
 Indra Gandhi Institute of Development Research, 73
 Indonesia, Government of, 51
 INFORM, 73
 Institut du Sahel, 63, 71
 Institut National de la Recherche Agronomique, 50
 Institut National de Recherches Agronomiques
 du Niger, 76
 Institut Pasteur, 62
 Institut Supérieur Scientifique, 76
 Institute for a Democratic Alternative for
 South Africa, 48
 Institute for Educational Leadership, 44, 101
 Institute for Puerto Rican Policy, 98
 Institute for Research on Public Policy, 73
 Institute of Amazon Studies, 73
 Institute of Genetics (China), 54
 Institute of International Education, 87, 90
 Institute of International Relations, 103
 Institut Français des Relations Internationales, 101
 Instituto Cultural Mexicano, 88
 Instituto Nacional de la Nutrición Salvador Zubirán,
 66, 71
 Integrated Development Systems (Nepal), 69
 Intercultural Film/Video Fellowships, 31, 90
 Intercultural research, 28
 Intermedia Arts of Minnesota, 93
 International African Institute, 79
 International Arts Relations (INTAR), 85, 91
 International Board for Soil Research and
 Management, 56
 International Center for Tropical Agriculture
 (CIAT), 50, 52
 International Center of Photography, 88
 International Centre for Genetic Engineering, 52
 International Centre for Integrated Mountain
 Development, 56
 International Choreographers Workshop, 30
 International Clinical Epidemiology Network
 (INCLIN), 24, 58
 International Council of Nurses, 65, 71
 International Development Conference, 79
 International Education Consortium, 99
 International Epidemiological Association, 59
 International Foundation for the Survival and
 Development of Humanity, 72
 International Fund for Agricultural Research, 56
 International Institute for Energy Conservation, 73
 International Institute for Environment and
 Development (IIED), 72, 79

International Institute of Population Sciences, 69
 International Institute of Tropical Agriculture (IITA),
 52, 55, 76
 International Laboratory for Research on Animal
 Diseases (ILRAD), 55, 57
 International Maize and Wheat Improvement Center
 (CIMMYT), 55
 International Network of Resource Information
 Centers, 85
 International Nongovernmental Support Fund, 74
 International Potato Center (CIP), 52, 56
 International Program to Support Science Based
 Development, 12, 27, *Advanced Training
 Fellowships*, 12, 14, 80, 82 *Agricultural Sciences
 Grants*, 50, 57, *Biotechnology Career Fellowships*,
 83, 84, *Global Environment Program Grants*,
 72, 74, *Health Sciences Grants*, 58, 65, *Population
 Sciences Grants*, 66, 71, *Special Programming
 Grants*, 75, 79
 International Rice Research Institute (IRRI), 51, 52, 53
 International Security Program, 46, 47, 101, 102
 International Society for Infectious Diseases, 63
 International Union for the Scientific Study of
 Population, 68
 International Union of Forestry Research
 Organizations, 57
 International Women's Health Coalition, 65, 68, 71

J

Jacob's Pillow Dance Festival, 89
 Jameel, Shahid, 83
 Japanese American Cultural and
 Community Center, 90
 Jenrette, Richard H., 117
 Jersey, Bill, 90
 Jia Jizeng, 51
 Jimenez, Carol, 117
 Job Opportunities and Basic Skills (JOBS)
 program, 38
 Job training, 38, 41
 John Innes Foundation, 21, 50, 52
 John Merck Fund, 18
 Johns Hopkins University, 59, 61, 63, 64, 66, 69, 70
 Johnson, Elizabeth, 117
 Johnson, Tom, 117
 Johnstone, Ian, 119
 Joint Center for Political and Economic Studies
 (JCPES), 41, 44
 Jomo Kenyatta University College of Agriculture
 and Technology, 76
 Jonas, Joan, 90
 Junebug Productions, 91

K

Kabeere, Flavia, 81
 Kamboj, Kamal K., 83
 Kan, Beki, 84
 Kangche, Louis, 55
 Kansas State University, 50
 Karel, Frank, 118
 Kasetsart University, 53
 Kebede, Derege, 76
 Kebede, Yohannes, 76
 Kehinde, Lucy Abosede, 76
 Kenya, 24, 25
 Kenya Agricultural Research Institute, 55, 76
 Khanga, Yelena, 119
 Khehra, Gurpreet S., 80
 Khon Kaen University, 59
 Kima, Peter, 76

Knight Foundation, 37
 Konneh, Augustine, 76
 Kos, Paul, 90
 Kothari, Shanker L., 83
 Ko-Thi Dance Company, 91
 Kreines, Jeff, 90
 Kulintang Arts, 91
 Kumar, Lalitha Sundi, 51
 Kuwait invasion, 46
 Kyoto Prefectural University, 50

L

LaGuardia, Katherine D., 119
 Lang, Charles J., 118, 119
 Latin America, *agroforestry in*, 18
 Latin American Social Science Research Council, 68
 Latino Consortium, 32
 Lawyers Committee for Civil Rights Under Law, 42
 Leadership Development Program, 73
 Lester, Theodore, 118
 Levine, R., 69
 Levitt, Arthur, Jr., 117
 Liang Zhi-Guo, 82
 Life On The Water, 92
 Li Liangcai, 54, 80
 Lilly Endowment, 37
 Liu Dong, 80
 Li Xiang-hui, 54
 Li Xiu Qing, 54, 80
 Local Initiatives Managed Assets Corporation (LIMAC), 37
 Local Initiatives Support Corporation (LISC), 8, 37, 96
 Los Angeles Contemporary Exhibitions, 93
 Los Angeles Educational Partnership, 99
 Los Angeles Festival, 33, 89
 Louisiana State University, 50
 Lynam, John K., 118

M

Mabou Mines Development Foundation, 90
 MacArthur, John D. and Catherine T., Foundation, 4, 17, 37
 Mafela, Lily, 77
 Magali, Barbieri, 82
 Mahidol University, 52, 54, 59, 69
 Majidi, Evelyn K., 119
 Major, Dara, 117
 Makerere University, 59, 69, 77, 78, 79
 Malawi, 18, *Government of*, 55, 56
 Mandeleo Institute, 92
 Manoff, Robert, 47
 Manpower Demonstration Research Corporation, 96
 Marine Biological Laboratory, 66
 Ma Rong, 82
 Marshall, John, 90
 Mary Luft and Company, 90
 Masayeva, Victor, 90
 Masilela, Sipho, 77
 Massachusetts Institute of Technology, 73, 101
 Mathematica Policy Research, 38
 Mawal, Yogesh Ramswarup, 80
 Maynard, Robert C., 117
 Mayorga, Luis S., 83

Mazingira Institute, 78
 Mbabu, Abdiel, 84
 McGill University, 63
 McKenzie Group, 44
 McMaster University, 59, 61
 Measuring Agricultural Constraints in Eastern and Southern Africa grants, 57
 Media for Development International, 93
 Media Resources Associates, 32, 90
 Mediators Foundation, 101
 Medical Research Council, 62
 Meet the Composer, 91, 94
 Melville Corporation, 43, 44
 Menancio Hautea, Desree, 51, 81
 Metropolitan Museum of Art, 88
 Mexican American Legal Defense and Educational Fund, 42, 98
 Mexican Health Foundation, 65
 Mexico, 24, 25, *Government of*, 88
 Meyer, Jack R., 118, 119
 Micere Mugo, 85
 Michigan State University, 44, 50, 57
 Milhollin, Gary, 46
 Minh ha, Trinh, 31, 90
 Minority Female Single Parent program (MFSP), 38, 96
 Mitoma, Judy, 119
 Modern Language Association of America, 93
 Moeller, Robert, 98
 Monsanto Company, 21
 Montana State University, 52, 57
 Monterey Institute of International Studies, 102
 Moock, Joyce L., 117
 Morehouse College, 42, 97
 Movement Theatre International, 89
 Mucavele, Firmino, 55
 Mullen, Lynda, 118
 Multi-Arts Production Fund, 28, 34, 91
 Muniyappa, K., 84
 Museum of Photographic Arts, 87
 Mushatt, Ann, 117
 Music Theatre Group, 92
 Mwandemere, Henry Kanjobe, 57

N

NAACP Legal Defense and Educational Fund, 42, 98
 Narayanan, Kottaram K., 80
 National Academy of Engineering Fund, 73
 National Academy of Public Administration, 103
 National Academy of Sciences, 61, 68
 National Archives Trust Fund Board, 68, 85
 National Black Arts Festival, 89
 National Charities Information Bureau, 103
 National Chemical Laboratory, 51, 54
 National Coalition on Black Voter Participation, 98
 National Community Development Initiative, 37, 97
 National Congress for Community Economic Development, 97
 National Council of Educational Opportunity, 103
 National Council of La Raza, 97, 98, 101
 National Endowment for the Arts, 9, 10, 34
 National Institute of Agricultural Research (Mozambique), 55
 National Institute of Immunology, 66
 National Institutes of Health, 62
 National Jazz Service Organization, 92
 National Museums of Kenya, 55, 66, 67
 National Opinion Research Center, 104
 National Polytechnic Institute, 51, 53
 National Public Radio, 92, 104
 National Puerto Rican Coalition, 97
 National Science Foundation, 18

National University of Benin, 68
 National Urban League, 44
 National Video Resources (NVR), 31, 92
 Native American Rights Fund, 98
 Native Americans, *film series on*, 32
 Natural Resources Defense Council, 73
 Nayak, Pritilata, 54
 Nazario, Zydna, 90
 Network for Secondary Schools, 99
 Network of Cultural Centers of Color, 93
 Newbery Library, 86
 New Departures, 104
 New England Foundation for the Arts, 93
 New England Medical Center Hospitals, 62
 New Forms Regional Initiative program, 28, 93
 New Haven Public Schools, 100, 101
 New Langton Arts, 93
 New Radio and Performing Arts, 94
 New School for Social Research, 85, 87
 New York Community Trust, 97, 104
 New York Regional Association of Grantmakers, 104
 New York Shakespeare Festival, 88, 89
 New York University, 47, 62, 85, 94, 97, 102
 Ngoh, Lucy N., 77
 Nichols, Susan, 118
 Nigeria, 25
 Nigerian Fertility Society, 67
 Nigerian Institute of Social and Economic Research (NISER), 65, 71, 77
 Ninsin, Kwame A., 79
 Nitrogen Fixation in Non-Legumes, 52
 Njala University College, 77
 NORPLANT, 24
 North Carolina State University, 18, 52, 67
 Northwestern University, 28, 86
 Norton, Eleanor Holmes, 117, 119
 Nuclear Non-Proliferation Treaty, 46-47
 Nuclear weapons, 46-47
 Nyamulinda, Vincent, 77

O

Obafemi Awolowo University, 69
 Obor, Inc., 86
 Odaga, Adhiambo, 84
 Ogum, G. E. O., 69
 Ohio State University, 56, 59
 Ojeh, Clement Kanyidinma, 83
 Oke, Bankole Olusiji, 82
 Okke, A. O., 69
 Oketeke, Gilbert Uwahmaka, 83
 Okore, A., 69
 Okoye, John Osita Arinze, 83
 Oliveira, Dulce Eleanora, 83
 Oliver, Enrique, 90
 Omamo, Steven Were, 80
 Omideyi, Adekunbi K., 82
 OPERA America, 94
 Original Ballets Foundation, 101
 Osmania University, 54
 Other Interests and Initiatives Grants, 102-104
 O'Toole, John C., 118
 Overseas Development Council, 47, 104
 Overseas Development Institute, 55, 57
 Overseas Development Network, 104
 Oxford University, 62

P

Painted Bride Art Center, 93
 Paiva, Edison, 83
 Pan American Health Organization, 64
 Pan Asian Repertory Theatre, 92
 Panbangred, Watanalai, 81
 Parliamentarians for Global Action, 102
 Parris, Danielle, 118
 Partnership for Democracy, 104
 Partnership for Hope, 95
 PATHS/PRISM, 99
 Pennsylvania State University, 50
 Pentacle - Foundation for Independent Artists, 92
 People for the American Way, 98, 104
 People's University of China, 73
 Performance Space 122, 92
 Performing arts, 28 31, *interdisciplinary*, 32 34
 Pesticides, 18
 Peterson, Hannibal Marvin, 34
 Pew Charitable Trusts, 4, 17, 37
 Phelps Stokes Fund, 98, 104
 Philanthropy, *charitable vs. innovative strategies*, 4
 Pianta, Ivonne Rosa Szasz, 81
 Ping Chong, 92
 Piton Foundation, 95
 Pittsburgh Public School District, 99
 Planned Parenthood Federation, 24
 Plant Biotechnology Policy in Developing Countries, 52
 Polartites, Inc., 87
 Ponce, Ruben Hugo, 81
 Pontifici Universidad Javeriana, 59
 Population Council, 65, 66, 71
 Population Crisis Committee, 68
 Population Reference Bureau, 97
 Population Resource Center, 69
 Population science, 24-25
 Population Sciences division, 66-71, *fellowships*, 71, 81-82, 84
 Portillo, Lourdes, 90
 Potente, Terri, 117
 Poverty, *roots of*, 38 41
 Poverty Advocates Research Council, 98
 Poverty and Race Research Action Council, 42
 Power, Douglas R., 118
 Prawl, Orneata L., 119
 Pregnancy, *teenage*, 39
 Pregones Touring Puerto Rican Theater Collection, 89
 Preventing Developing-Country Diseases Through Vaccinology and Pharmacology program, 61-63
 Prewitt, Kenneth, 117
 Price, Hugh B., 117
 Princeton University, 69, 73, 102
 Program for Appropriate Technology in Health (PATH), 65, 71
 Program to Explore Long Term Implications of Changing Gender Roles, 97, 98
 Programme for Promoting Nuclear Non-Proliferation (PPNN), 46-47
 Protecting Basic Rights program, 97 99
 Prudential, The, 8, 37
 Pruksananonda, Kamthorn, 82
 Public Education Association, 101
 Public/Private Ventures, 97
 Puerto Rican Legal Defense and Education Fund, 42
 Puerto Rico Community Foundation, 93
 Purdue University, 52
 Puri, K. S., 57
 Pyramid Arts Center, 93

Q

Qin Rui Zhen, 54
 Qiu Yilan, 82

R

Rabiu, Safianu, 77
 Rainer, Yvonne, 90
 Rajic, Vera, 118
 Ramanathan, Rajaram, 118, 119
 Randolph Street Gallery, 93
 Readers International, 86
 Redona, Edilberto D., 81
 Redwood Cultural Work, 92
 Reflections on Development Program, 79
 Reinach, Fernando de Castro, 83
 Reproductive Freedom Project, 48
 Research and Policy Boards grants, 65, 71
 Research and Training in the Population Sciences in Sub-Saharan Africa grants, 67, 69
 Research Laboratory for Agricultural Biotechnology and Biochemistry, 54
 Research on Evaluation of Family Planning Programs in Developing Countries grants, 69
 Research on the Relationship between the Status of Women in Developing Countries and Fertility, 69
 Research on Topics Related to the Clinical Applications of Gossypol grants, 66 67
 Research Support for Population Scientists in Reproductive Biology and Policy Studies Returning to Developing Countries grants, 67, 69
 Resident Fellowships in the Humanities, 86
 Resolution, Inc., 93
 Resources Development Foundation, 73
 Resources for the Future, 57
 Ruazuddin, Sheikh, 21
 Rice Biotechnology at International Centers grants, 52
 Ricketts, Erol R., 118
 Riggs, Marlon T., 90
 Road Company, 92
 Rockefeller Foundation *Archives*, 104, *assets*, 10 *grant activities*, 3 4, 120 121, *organization and staff*, 117-119 *secretary's report*, 119 121
 Rockefeller University, 104
 Rocky Mountain Institute, 73
 Rodriguez, Aida, 118
 Rodriguez, Luis Leandro, 83
 Romero, Anthony, 119
 Romm, Joseph, 117
 Rout, Jyoti Ranjan, 80
 Rozelle, Scott, 52
 Russell, Diane, 84
 Rwanda, *Ministry of Agriculture, Livestock, and Forestry*, 77

S

Sadananda, Ajanahall R., 80
 Sahu, Sarat Chandra, 80
 Samiyappan, Ramasamy, 80
 San Antonio Cares, 95
 San Diego City Schools, 101
 San Diego Repertory Theatre, 92
 San Francisco Education Fund, 99
 San Jose Taiko, 34, 92
 Santa Fe Chamber Music Festival, 94
 SateLife, 61, 73
 Sato, Suzanne M., 118
 Satz, Marcos Leonardo, 83
 Sazawal, Sunil, 81
 School Development Program (SDP), 43
 School reform, 38
 School Reform Grants, 43 45, 99-101

Scientific Committee on Problems of the Environment (SCOPE), 74
 Sebastian, Leocadio S., 81
 Segal, Sheldon, 24, 119
 Shanghai Institute of Plant Physiology, 53
 Shanghai Medical University, 59
 Sharma, Hira Lal, 82
 Shompole, Patrick Sankale, 77
 Shreenivas, Sudha, 82
 Shrestha, I., 69
 Singh, Kaushalendra Kumar, 82
 Singh, Shio Kumar, 82
 Sitch, Lesley A., 118
 Smithsonian Institution, 18, 87
 Social and Public Art Resource Center, 87
 Social Science Fellowships in Agriculture, 57
 Social Science Research Council, 41, 74, 96, 97
 Social Science Research Fellowships, 84
 Soils Research in Africa grants, 56
 Sonbert, Warren, 90
 Sonthayanon, Burachai, 83
 South Carolina Committee for the Humanities, 100
 South China Agricultural University, 54
 South China Institute of Botany, 53
 Southeast Community Cultural Center, 93
 Southern Connecticut State University, 43, 100
 Southern Education Foundation, 44, 101
 Southern Regional Council, 98
 Southern University, 43, 100
 South-to-South Cooperation in the Population Sciences program, 25, 67-68, 69-70, 71
 Soweto, 30
 Spadone, Susan A., 118
 Spanish Theatre Repertory Company, 94
 Special Interests and Explorations (SIE) grants, 47 48, 102-104
 Special Programming Grants, 75-79
 Spencer, Claire, 119
 SPIC Science Foundation, 54
 Spoleto Festival U S A., 87
 Springer, Cora L., 118
 Stanford University, 50, 52, 62, 94
 State Dance Association of Florida, 93
 State University of Ghent, 50
 State University of Leiden, 51
 State University of New York at Buffalo, 28, 86
 Strengthening Food Production Systems in Africa grants, 55-56
 Studies on the Impact of Agricultural Technical Change grants, 52
 Studio Museum in Harlem, 87
 Sudan, *Ministry of Health*, 77
 Suez Canal University, 59
 Sukume, Chrispen, 81
 Sundance Institute Latin American Filmmakers Exchange Program, 94
 Surdna Foundation, 37
 Sutton, Francis X., 118
 Swiss Federal Institute of Technology, 51

T

Talwar, G. P., 24
 Tanaka, Janice, 90
 Tanzania, 18
 Task Force for Child Survival, 22, 61, 63
 Tata Energy Research Institute, 72, 74
 Teatro Avante, 89
 Tel Aviv University, 67
 Telluride Institute, 94

Texas A & M University, 51
 Texas Committee for the Humanities, 88
 Texas Interfaith Education Fund, 45, 101
 Texas Tech University, 51
 Thailand, 24, 25
 Theater for the New City Foundation, 89
 Thiam, Amadou Khoudiedji, 77
 Thornton, Leslie, 90
 Toenniessen, Gary H., 118
 Training Education Leaders to Improve At-Risk Schools program, 101
 Trammell, Webb, 118
 Transfer of Rice Biotechnology grants, 53
 Traub Cseko, Yaria Maria, 83
 Tripathy, Baishab Charan, 83
 Trust for Public Land, 74
 Tsuno, Keiko, 90
 Tufts University, 74
 Tunick, Kevin J., 118
 Turner, Barbara, 119
 Twentieth Century Fund, 104
 Twin Cities Public Television, 94

U

Ucelli, Marla, 117
 Uganda, 18, *Ministry of Agriculture*, 77
 Under One Roof, 92
 Underclass, *research on*, 41-42
 Understanding Cultures Through Museums Program, 87
 United Nations Centre on Transnational Corporations, 74
 United Nations Children's Fund (UNICEF), 22, 61
 United Nations Conference on Environment and Development, 14, 17, 74
 United Nations Development Programme, 14, 22
 United Nations Industrial Development Organization (UNIDO), 52, 54, 55
 United States, *energy policy*, 17-18
 U.S. Conference of Mayors, 41
 U.S. Energy Program, 74
 U.S. Information Agency (USIA), 30
 Universidad Catolica de Cuyo, 68
 Universidad Catolica de Valparaiso, 68
 Universidad de la Frontera, 59
 Universidad Nacional Autonoma de Mexico, 52, 68, *Permanent Extension School*, 88
 Universidade Federal Do Rio de Janeiro, 60
 Universidade Federale do Ceara, 62
 Universita di Roma, 62
 Universite du Benin, 61
 University College, 64, 70
 University of Alabama, 65, 71
 University of Arizona, 86
 University of Arkansas at Little Rock, 100
 University of Botswana, 77
 University of Buenos Aires, 67
 University of Calcutta, 54
 University of California, 61, *Hastings College of the Law*, 74, *Regents*, 79
 University of California - Berkeley, 86
 University of California - Davis, 56, 57
 University of California - Los Angeles, 28, 86, 97, 101
 University of California - San Diego, 63, 94
 University of California - San Francisco, 62, 64, 70
 University of California - Santa Cruz, 86
 University of Cambridge, 62
 University of Chicago, 28, 86, 97, 104
 University of Chile, 60, 67
 University of Colorado at Denver, 104
 University of Costa Rica, 54
 University of Dar es Salaam, 63, 64, 70, 78
 University of Dhaka, 54

University of Durham, 51
 University of Edinburgh, 62
 University of Georgia, 51, 52, 55
 University of Hawaii at Manoa, 86
 University of Health Sciences (India), 60
 University of Houston, 87
 University of Hyderabad, 54
 University of Ibadan, 51, 61
 University of Illinois, 57
 University of Iowa, 86
 University of Khartoum, 77
 University of Lagos, 70, 79
 University of Liberia, 77
 University of Madras, 54
 University of Malawi, 56
 University of Maryland Foundation, 86, 87
 University of Michigan, 63, 69, 97
 University of Minnesota, 51, 57
 University of Missouri Columbia, 51
 University of Mysore, 51
 University of Nairobi, 60, 71, 77
 University of Newcastle, 60
 University of New Mexico, 44, 101
 University of North Carolina at Chapel Hill, 60, 70
 University of Nottingham, 21
 University of Oklahoma, 86
 University of Paris, 51
 University of Pennsylvania, 60, 65, 68, 69, 71
 University of Salzburg, 68
 University of Sao Paulo, 74
 University of Siena, 68
 University of Southampton, 102
 University of Stockholm, 62
 University of Texas at Austin, 87
 University of Texas at San Antonio, 88
 University of Texas Medical Branch at Galveston, 63
 University of the Philippines, 51, 54, 60
 University of the Punjab, 21, 54
 University of the Witwatersrand, 104
 University of Toronto, 60
 University of Virginia, 62
 University of Washington, 51
 University of Wisconsin - Madison, 51, 56, 102
 University of Yaounde, 60, 77
 University of Zimbabwe, 56, 60, 70, 78
 Urban Institute, 41, 97, 99
 Urban renewal, 7-8
 Urban Strategies Council, 96
 U.S. Committee for Scientific Cooperation with Vietnam, 58
 Uzbek Academy of Sciences, 67

V

Vaccination, *childhood*, 22
 Vaccine Production Technology Transfer grants, 63
 Valera-Cabigon, Josefina, 82
 Venezuela, 30
 Verakalasa, Patchara, 81
 Vercesi, Anibal Eugenio, 83
 Videocassette technology, 31
 Vijayraghavan, Usha, 83
 Viola, Bill, 90
 Virginia Commonwealth University, 44
 Visual Arts Research and Resource Center Relating to the Caribbean, 94
 Vivian Beaumont Theater, 92
 Voice for Africa in the U.S., 79
 Von der Lippe, Sarah C., 119

W

W Alton Jones Foundation, 18
 Wabwire-Mangen, Fred, 77
 Walker Art Center, 31, 92
 Walker & Eliza Hall Institute of Medical Research, 63
 Wang Ai-Wei, 82
 Wang Hong, 80
 Wang Mingbo, 80
 Wang Yan, 82
 Warren Weaver Fellows, 119
 Washington Lawyers Committee for Civil Rights Under Law, 41
 Washington State University, 51
 Washington University, 51, 55, 86
 Welfare-to-work programs, 38
 West China University of Medical Sciences, 60
 Western Behavioral Sciences Institute, 87
 White, David A., 118, 119
 Williams, Marco, 90
 Wilton Park, 102
 Winrock International Institute for Agricultural Development, 56
 Wisconsin Project on Nuclear Arms Control, 46-47
 WNYC Foundation, 104
 Wolf, Constance, 118
 Women and Foundations/Corporate Philanthropy, 104
 Women for Women's Health Program, 65, 71
 Women USA Fund, 74
 Women's Legal Defense Fund, 97
 Women's Project and Productions, 92
 Wong, R., 69
 Woodberry, Billy, 90
 Woodrow Wilson National Fellowship Foundation, 96
 Woolf, Harry, 117
 World Bank, 6, 22, 27, 70, 74, 79
 World Congress on Philanthropy Educational Foundation, 104
 World Health Organization (WHO), 22, 61, 63, 68
 World Meteorological Organization, 74
 World Music Productions, 94
 World Resources Institute, 74
 World Wildlife Fund, 18
 Wye College, 57

X

Xiao Jinao, 80

Y

Yale University, 28, 57, 61, 79, 88, 94, 100
 Yang Jimshui, 83
 Yassi, Martin Ngon a, 80
 Ybarra-Frausto, Tomas, 118
 Ye Qiaolun, 80
 Ye Wenzhen, 82
 Young, Nevin Dale, 51
 Yousif, Hassan Musa, 82
 Yunus, Muhammad, 47

Z

Zaire, 30
 Zambia, 25
 Zaongo, Christophe G. L., 78
 Zhejiang Agricultural University, 54
 Zheng Kangle, 54
 Zhong Heng, 80
 Zhongshan University, 55
 Zhu Lihuang, 55
 Zimbabwe, 25
 Zinnah, Moses Moroe, 78
 Zou Jitao, 80

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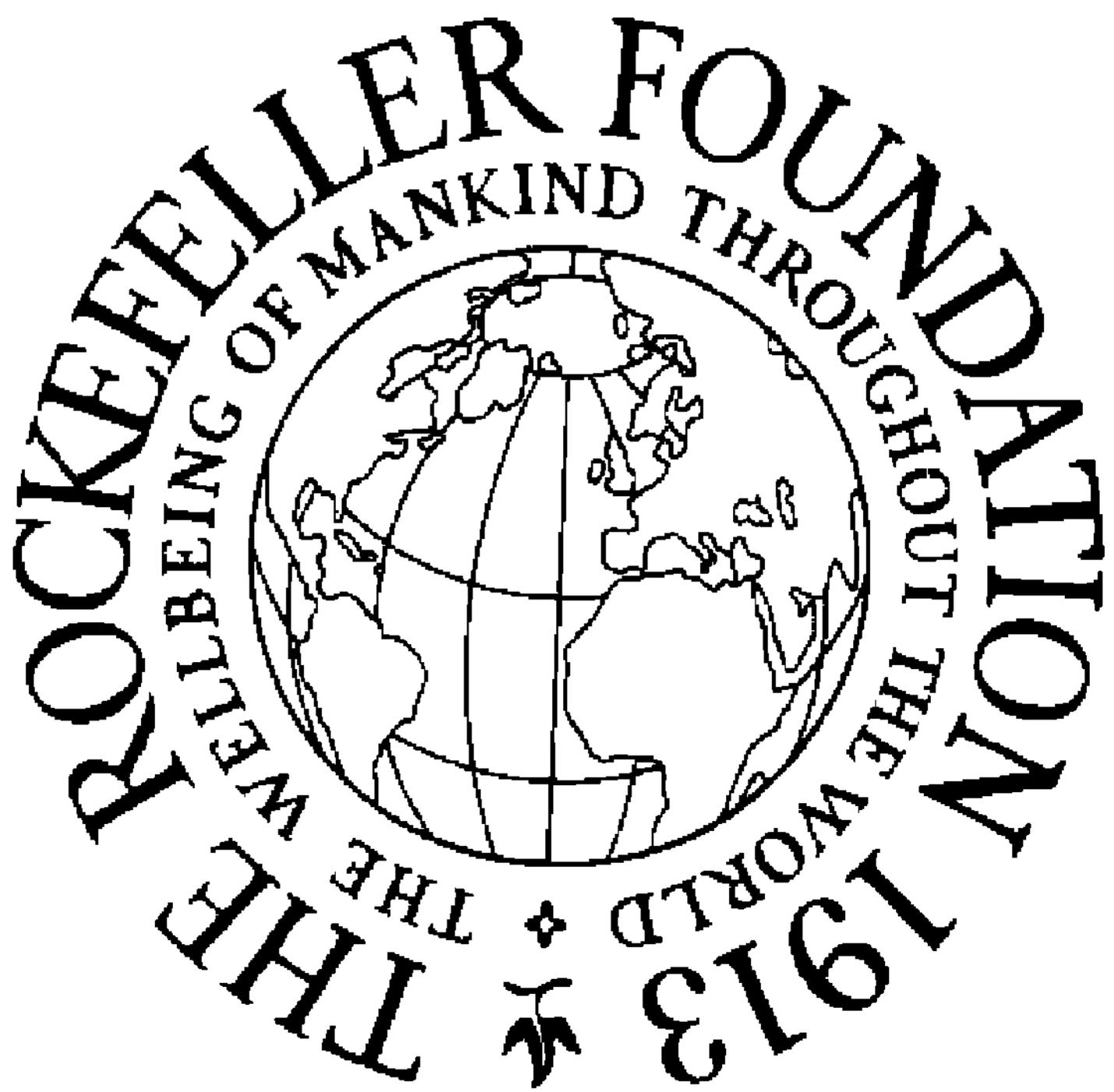
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