

THE ROCKEFELLER FOUNDATION
PRESIDENT'S FIVE-YEAR REVIEW
& ANNUAL REPORT 1968

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THE ROCKEFELLER FOUNDATION

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April 1968—April 1969

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¹ Retired June 30, 1968.

² Resigned January 17, 1969.

³ Beginning July 1, 1968.

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April 1968—April 1969

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¹ Beginning October 1968.

² Beginning December 1968.

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Robert L. Fischelis, M.A., *Fellowship Associate*

¹ Died October 1968.

⁴ Resigned August 1968.

² Beginning April 1968.

⁵ Beginning November 1968.

³ Retired as an officer June 1968.

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| PETER R. JENNINGS, PH.D. | |

¹ Through March 1968.

² Temporary appointment completed.

³ Through September 1968.

⁴ In Bogotá until July 1969.

⁵ Beginning October 1968.

⁶ Beginning August 1968.

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VILLA SERBELLONI

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¹ Through August 1968.

² Beginning July 1969.

³ Beginning June 1968.

⁴ Temporary appointment completed.

⁵ On study leave beginning August 1968.

⁶ Through September 1968.

⁷ Through March 1968.

⁸ Postretirement appointment from July 1968.

KENYA

Muguga

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VERNON H. LEE, PH.D.

¹ Temporary appointment completed.

⁷ Resigned April 1968.

² Beginning September 1968.

⁸ Beginning September 1968; died December 1968.

³ Resigned August 1968.

⁹ Beginning October 1968.

⁴ Beginning June 1968.

¹⁰ Through October 1968.

⁵ Beginning July 1968.

¹¹ Beginning August 1968.

⁶ Beginning April 1968.

PHILIPPINES

Quezon City

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TANZANIA

Dar es Salaam

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¹ Through August 1968.

² Beginning April 1968.

³ Through July 1968 (on study leave).

⁴ Temporary appointment completed.

⁵ On assignment in Ceylon.

⁶ Beginning September 1968.

⁷ Beginning August 1968.

THAILAND

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WILLIS L. McCUISTION, PH.D.⁸

¹ Temporary appointment completed.

² Resigned December 1968.

³ Beginning July 1968.

⁴ Beginning August 1968.

⁵ Beginning October 1968.

⁶ Beginning November 1968.

⁷ Beginning May 1968.

UGANDA

Kampala

AGRICULTURAL SCIENCES

JOHN L. NICKEL, PH.D.

KENNETH O. RACHIE, PH.D.²

CARLTON S. KOEHLER, PH.D.¹

HUMANITIES AND SOCIAL SCIENCES

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SONJA M. BUCKLEY, M.D.

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LORING WHITMAN, M.D.

Charlottesville, Virginia

HUMANITIES AND SOCIAL SCIENCES

DANTE L. GERMINO, PH.D.⁵

¹ Beginning July 1968.

² Beginning September 1968.

³ Through August 1968.

⁴ On study leave through July 1968.

⁵ On leave of absence beginning September 1968.

THE ROCKEFELLER FOUNDATION: PRINCIPLES AND PROGRAM

THE ROCKEFELLER FOUNDATION: PRINCIPLES AND PROGRAM

Among the thousands of foundations that have been established in the United States, there are only a few with unrestricted endowments, broad mandates, and international interests. Most foundations operate under some form of donor-imposed limitation—several major foundations are restricted to specific geographical areas; others must focus their interest on single fields, such as medical sciences, the social sciences, or education.

The general-purpose foundations are general only in the sense that their boards of trustees are free to use their best judgment to determine those broad areas most closely related to contemporary needs. Once these areas have been defined, the boards must inevitably require that the foundations operate within these limits.

The Rockefeller Foundation is one of the largest of the general-purpose foundations. Its financial resources, however, represent only a small element in the total of private and public funds available for investment in health, nutrition, science, education, and the arts. But, when measured by the yardsticks of qualitative achievement and effectiveness in bringing about significant progress through constructive change, the Foundation's record of accomplishment is evident. For more than 55 years it has attacked basic human problems through a carefully focused program characterized by continuity of effort, flexibility and readiness to innovate, and emphasis on quality in leadership and performance.

From the time of its establishment in 1913, The Rockefeller Foundation has been a thoroughly professional organization. It maintains a highly qualified staff of scientists, social scientists, and humanists, capable of dealing at home and abroad with precisely defined human concerns. Senior officers working with younger staff members perpetuate the professional character of the group, which is recruited principally from the academic community. The very nature of the Foundation's programs requires a high level of professional quality and sustained effort toward defined goals. In order to achieve progress on an international scale in the

fields of public health, education, food production, population stabilization, and the arts, work must be supported over long periods of time, and continuous adjustments to changing circumstances must be made. Such programs require the long-term services of qualified professional staff dedicated to the Foundation's goals.

The carefully designed programs carried out by the major general-purpose foundations have been rich in their variety and diverse in their approach. In some instances, they consist of working with institutions of higher education to help them carry on more effectively the activities of major social significance that they themselves have chosen. Support has also been provided to scholarly and scientific organizations that are conducting important research in the biological, physical, and medical sciences, the humanities, and the social sciences. In each case, the objectives of the institution clearly fall within the program interests of the foundation. Foundations may also on occasion participate directly in well-defined programs for the control of disease, the alleviation of hunger, or the improvement of education. Foundation staff then may work side by side with foreign colleagues on projects that have been given high priority by the host countries.

One major misconception still persists with respect to the general-purpose foundations. Many people think of them as repositories of funds which are available for almost any purpose upon persuasive demand, rather than as philanthropies with carefully designed and continuing programs. Each year foundations are deluged with more requests for funds than the year before, and there appears to be a growing tendency for groups to initiate projects on the assumption that foundation assistance automatically will be forthcoming. In fact, the number of proposed but unfunded memorials, endowments, councils, study centers, and other programs is increasing in almost explosive fashion, and their combined budgets could readily absorb the capital resources of all foundations. Many of these requests are obviously well-conceived and important, and

merit consideration for support from various sources, including foundations. But it is obvious that The Rockefeller Foundation, if it is to continue to be true to its original mandate of combining continuity with a readiness to change when circumstances require it, will necessarily have to decline to provide funds for purposes which, although worthy, are extraneous to its basic policy and program.

During the past five years there have been notable and even dramatic results arising from Foundation efforts, both at home and overseas. Most spectacular have been those growing out of the Foundation's worldwide Conquest of Hunger Program, which has contributed millions of tons of food grains to the world food budget and has added hundreds of millions of dollars to the gross national product of the countries involved. The program is now widely recognized and is popularly spoken of as the "green revolution," built upon "miracle rice," and "miracle wheat."

THE CONQUEST OF HUNGER

The genesis of the agriculture program of The Rockefeller Foundation took place in Mexico in a joint effort with the Government of that country to close its gap in food grain production. It expanded to Central and South America and then to Asia and Africa. The original "country program" concept has evolved into one in which the basic instrument is the international research center focused on increasing world food production, principally through adaptive research applied to the less-developed countries.

There are at present four research centers, located in the Philippines, Mexico, Colombia, and Nigeria. Initially funded by the Ford and Rockefeller Foundations, these centers are receiving partial support from the W. K. Kellogg Foundation, the United States Agency for International Development, the Food and Agriculture Organization of the United Nations, and the Government of Canada. It is expected that other organizations, too, will join in the effort and that local governments, which have already been generous in providing land and certain other facilities, will increase their contributions to the local costs of the research centers.

Thus the pattern of research and development in food production, evolved and initially supported by The Rockefeller Foundation, is being converted with multiple support into a network of adaptive research centers. It is expected that the international research institutes will be copied elsewhere and funded by others, and that, as their numbers and

impact increase, so will their core and other forms of support. Foundation investments in the four original institutions will thus be gradually stabilized, enabling the Foundation to place principal emphasis on the use of key personnel in leadership positions to assure the continuing success of research and development programs overseas.

As it continues to make all possible effort toward population stabilization during the next few years, the world must also be able to feed itself. The tropics will of necessity have to furnish an increasing proportion of the world's food, and the major thrust of the Foundation's program in agriculture is therefore expected to be directed toward bringing these areas closer to full production through multiple cropping systems. These systems are designed to maximize the productivity of land units through successive crop rotations during the entire year, taking advantage of the 365-day growing season. It has already been shown in the Philippines and elsewhere that per-acre yields under improved systems of management may be four to six times greater than yields under present systems.

Major responsibility for the success of these co-operative programs has in each case been due principally to local governments, institutions, and individuals. They have made the decisions with respect to priorities, have provided the leadership and other forms of support vital to the progress of the program, and have obtained the involvement of teachers, investigators, extension agents, and agricultural producers so that all may strive in harmony to achieve critically important national goals. Ultimately, it is expected that, in the best interests of all concerned, more and more of the total effort will be assumed by national or regional institutions and organizations.

UNIVERSITY DEVELOPMENT

The University Development Program of the Foundation is an especially exciting and productive venture. It has now become clearly evident that university and national leaders in most of the less-developed countries enthusiastically recognize that improvement in the quality of university personnel and programs will produce significant benefits both for the nation and for the entire region. With Foundation assistance, a number of methods have been devised to improve the quality of university staff and curricula, to bring about better fiscal policies and control, and to obtain new sources of support. The effectiveness of these efforts is now such that

there is growing involvement and effort by local leaders, and the Foundation welcomes the opportunity to work with them in these demonstrably important endeavors.

The Foundation's approach to university development is a flexible one, and on occasion the program has been combined with other Foundation activities, such as family planning, agricultural development, and rural public health. During the past five years, the University Development Program has been most active at the University of Valle in Colombia, several universities in Thailand, the University of the Philippines, the University of Ibadan in Nigeria, and the University of East Africa.

Consideration is also being given to the establishment of University Development Program centers at other overseas institutions that have expressed interest in this form of collaboration.

POPULATION

The Foundation's Population Program has grown in dimension and diversity. Its components include support of research, training, and action programs both at home and abroad. Of special interest is the fact that by 1968, seven United States medical schools had, with Foundation assistance, initiated or expanded teaching, research, and family counseling programs in this area. Research is principally in the fields of human biology, reproductive physiology, immunology, and molecular biology, and its basic purpose is to discover efficient, safe, and low-cost methods for the control of fertility.

Major organizations such as the Population Council and the National and International Planned Parenthood Federations have been supported in a variety of ways. These and other existing organizations, as well as others that may come into being, represent exceedingly important instrumentalities for the extension of family planning information and contraceptive methods to increasing numbers of those who would welcome the knowledge and the opportunity to limit family size.

The Foundation has worked with the above organizations and with others here and abroad, wherever there is interest in creating through their own efforts and institutions a greater awareness of population problems and in promoting family planning activities. Much of this support has been through grants to local groups and funds for the training of individuals to work in one or another sector of the total program.

In its Population Program the Foundation is cur-

rently placing increasing emphasis on the interaction of the social, medical, and biological sciences. There is evidence that a concerted approach of this type offers growing opportunity for progress in the areas of both research and communication.

EQUAL OPPORTUNITY

The Equal Opportunity Program, begun in 1963, has grown substantially and is becoming increasingly diversified. Initial efforts were concentrated in the field of education, working with predominantly Negro as well as predominantly white institutions in an effort to provide more educational opportunities to qualified students, and to help others to qualify for continuing education. Several thousands of disadvantaged Americans have now been reached by this complex of efforts, which has involved professional, graduate, baccalaureate, remedial, and secondary education. The Foundation has also worked with established agencies dedicated to serving the needs and improving the conditions of the disadvantaged, for example the National and local Urban Leagues, the NAACP, the national Urban Coalition, and others. Support has also been provided through certain agencies to enable a number of veterans returning from Vietnam to acquire further education and receive assistance in placement, in order that they may fully realize their potential, for their own development and that of their community and nation.

Another exciting aspect of the Program is the support being provided to medical institutions working in the ghettos and other areas on the problem of delivering health care to large numbers of disadvantaged citizens. This would appear to be a highly important and productive area of concern and action, both now and in the future.

As the Equal Opportunity Program has evolved, more and more attention has been placed upon ghetto areas. Upon recommendation of the special Trustee-Officer Committee which functioned during 1968, the Foundation decided to emphasize broadly based efforts to improve education in the ghetto, to identify leadership within the ghetto, and to provide support for clearly constructive programs. Officers have traveled extensively within many ghetto areas of this country and talked with leaders of the black, Mexican-American, Puerto Rican, and American Indian communities. They also continue to examine areas in the rural and semi-rural South, in the conviction that in those areas needs exist which merit assistance.

A special activity is a ghetto study led by Dr. Kenneth Clark. It will focus primarily on areas in Newark and White Plains, one an example of a solidified ghetto area, the other a black neighborhood in the stage of formation. This study, supported by the Foundation, is expected to be available in approximately one year.

The total problem of minorities is vast, perplexing, and difficult. It is also challenging. While the Foundation can play only a small role in the total effort in terms of resources, it is clear that this role can be designed so as to be meaningful and constructive; over a period of time, such an effort could contribute significantly to patterns for improvement.

CULTURAL DEVELOPMENT

The Cultural Development Program is the Foundation's newest venture. Since 1964, it has been carefully developed through the technique of making grants-in-aid to individuals and institutions, often followed by larger appropriations as the recipient demonstrates high quality and imagination. College, university, and community groups are the principal, but not the only, recipients of Foundation support. Major emphasis is upon music, theatre, and dance, including both training and participant activities, along with audience development. The arts program has experimented with support to television, new forms of theatre, new music and dance

forms. Results to date suggest that this program is taking form, that it is effective, and is now beginning to have demonstrable impact.

To conclude, a comparison of the Foundation's efforts in the five-year periods before and after 1963 clearly demonstrates the evolution of Foundation programs and the reorientation of skills and experience as social patterns have changed. The Foundation has also attempted to look to the future so as to be helpful in correcting certain current trends before they lead to irreversible disaster. Of particular importance is the area of the quality of the environment, where the Foundation can invest in research and action programs directed to the solution of problems presented by the continuing degradation of our environment both physically and socially. The Foundation has been concerned also with the problems of the university and other components of the American educational system, and has been searching for opportunities to contribute to solving this increasingly complex problem. Finally, consideration is being given to the whole question of the delivery of medical services in this country and abroad, since this would seem to be the major problem of the future in the area of medical practice and public health.

J. GEORGE HARRAR
President

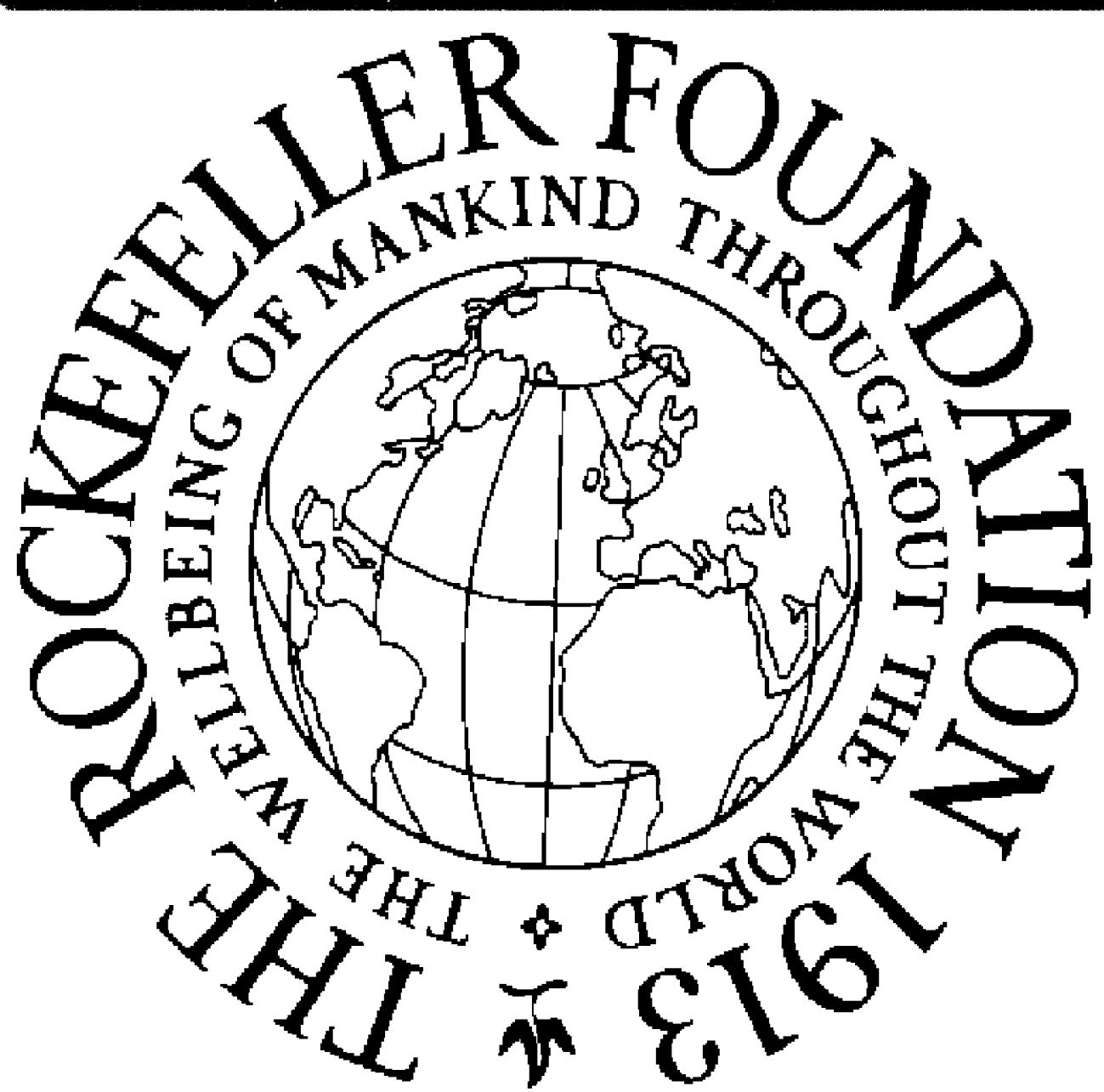
THE CONQUEST OF HUNGER

"By 1963 it had been clearly demonstrated in Mexico that, with organized assistance, a food-deficit nation could rapidly modernize its agriculture. . . . [Yet] The Rockefeller Foundation was still the only major organization with career staff engaged, on an international scale, directly in applied research on the basic food crops. . . .

"Today unprecedented production increases are being achieved in some areas of food-deficit nations. New terms have been coined—'miracle rice,' 'the green revolution'—in attempts to characterize these exciting new developments. . . . It is in fact difficult to list all the regions now benefiting, for example, from use of the wheats from Mexico, so rapidly and so widely are they being adopted.

"There have now been enough successes to demonstrate clearly that most nations can, if they will, dramatically and rapidly increase agricultural output. Throughout the world, traditional or subsistence agriculture can and must be replaced by a highly productive, market-oriented system."

*EXAMPLES OF INVESTMENTS OF FOUNDATION ST
TIME AND FUNDS 1963-4*



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In 1963, when the trustees of The Rockefeller Foundation established five major program goals, among them was the mandate "to work toward the provision of an adequate food supply for all." The Foundation had just completed 20 years of work in the improvement of world agriculture, with results that held great promise.

The cooperative program in Mexico had been a spectacular success. Over the 20-year period, average wheat yields had increased from about 11 to over 40 bushels per acre, and corn yields had more than doubled: the nation had become more than self-sufficient in both crops. Potato yields had tripled, and substantial progress had been realized with other commodities.

The agricultural program had been extended to Colombia, Chile, and India. Simultaneously, assistance was being given for the establishment of graduate schools of agriculture in Mexico, Peru, India, and the Philippines, to help meet the need for greater numbers of well-qualified agricultural specialists to man programs of accelerated development. The International Rice Research Institute had been launched the previous year by the Ford and Rockefeller Foundations, in cooperation with the Government of the Philippines. The Rockefeller Foundation's wheat and corn specialists were assisting nations in the Americas, in Asia, in the Middle East, and in Africa by training young scientists and by cooperating in local testing of wheat varieties developed in Mexico and corn varieties produced in Mexico and Colombia.

Extensive collections of the world's germplasm of the basic food crops—wheat, corn, rice, sorghum, millets, and potatoes—had been assembled, described, and stored in central vaults. An active program of evaluation of these diverse materials, some of them quite primitive, was under way, to determine their utility for the many ecological situations throughout the world.

And a beginning had been made in research on increasing livestock production, first in Mexico and then in Colombia.

By 1963 it had been clearly demonstrated in Mexico that, with organized assistance, a food-deficit nation could rapidly modernize its agriculture. Still, in most developing nations, efforts to increase production of major agricultural commodities were relatively ineffective. Assistance agencies often emphasized and supported such approaches as the establishment of city-based industries or the development of agricultural educational and research

institutions with no direct link to production-oriented programs. In agriculture, primary attention was often given to extension, credit, marketing, and related activities, on the assumption that the needed technology for agricultural production was already available and could easily be applied wherever needed. The Rockefeller Foundation was still the only major organization with career staff engaged, on an international scale, directly in applied research on the basic food crops.

Five years ago, general apathy still prevailed regarding the potential of conventional agriculture. Many people felt it was hopeless to expect that agricultural output could be increased fast enough and in sufficient quantity to buy time for desperately needed population stabilization.

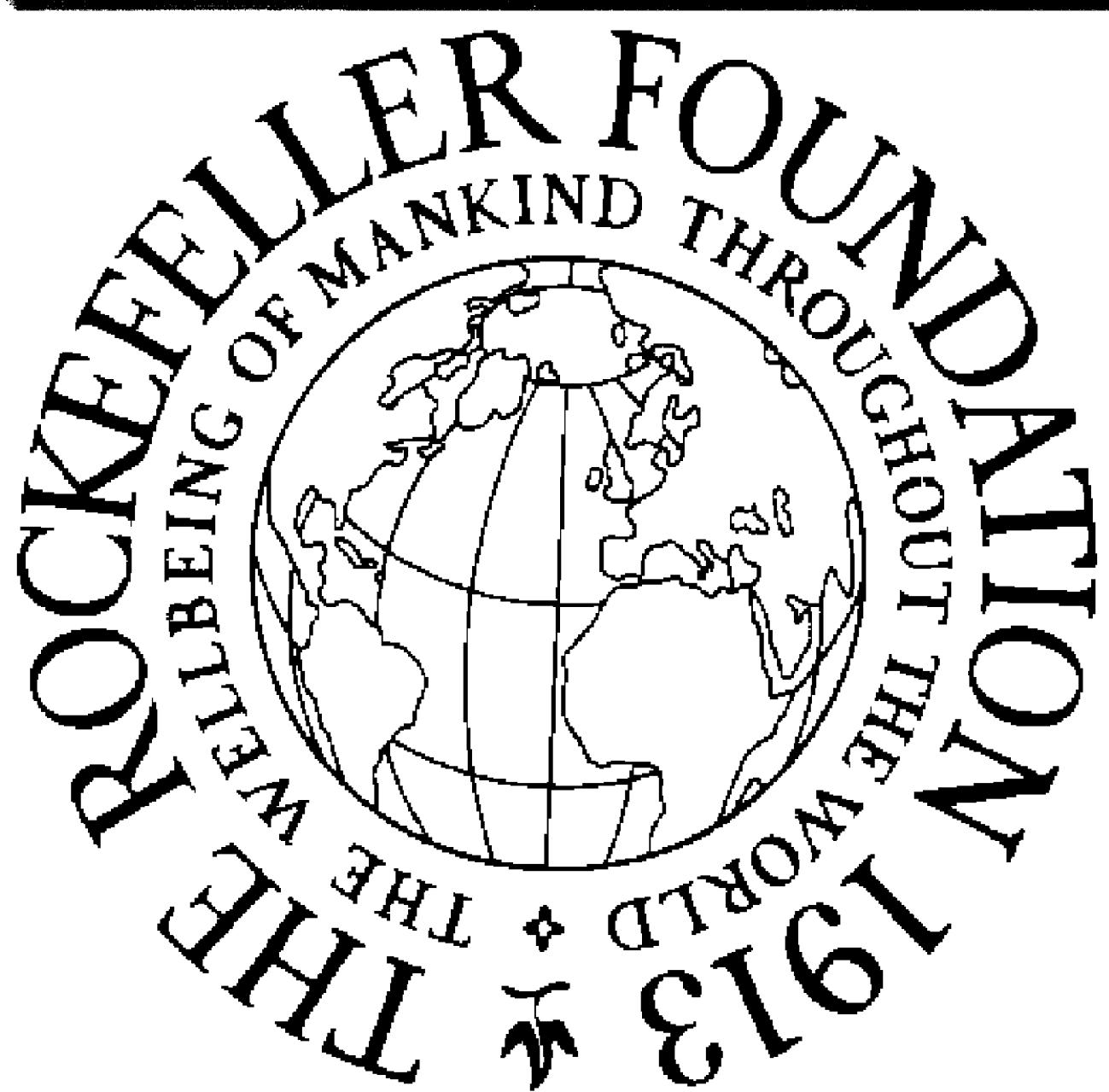
1964-1968: FIVE YEARS OF CHANGE

Today unprecedented production increases are being achieved in some areas of food-deficit nations. New terms have been coined—"miracle rice," "the green revolution"—in attempts to characterize these exciting new developments. Much of the present-day progress in these food production campaigns can be traced back to research undertaken, problems solved, principles established, and men trained through the earlier cooperative programs of the Foundation. The hoped-for catalytic and multiplier effects of early Foundation contributions are now occurring in many nations in many ways. It is in fact difficult to list all the regions now benefiting, for example, from use of the wheats from Mexico.

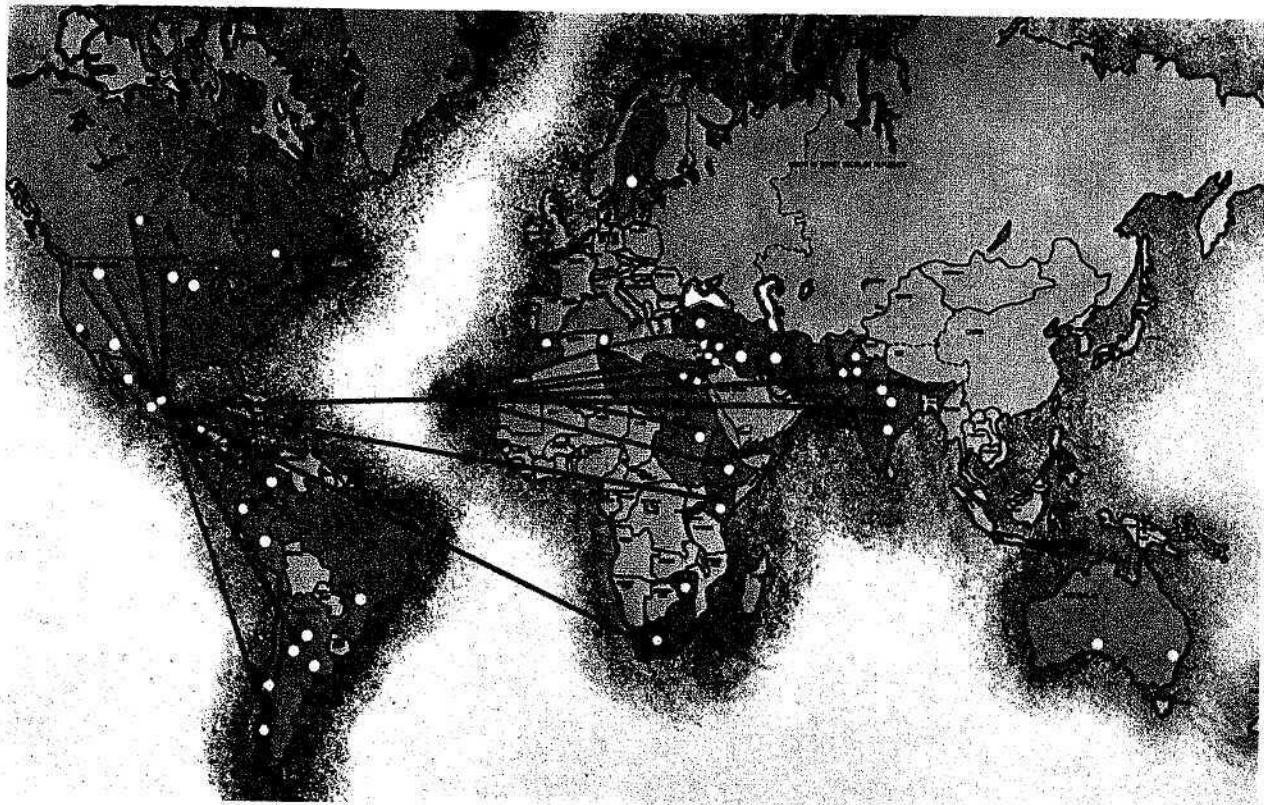
Spread of the Revolution: Corn and Wheat

The first truly international cooperative efforts to improve production of the basic food crops were made during the early years of the Foundation's cooperative agricultural program in Mexico. Corn and wheat varieties were placed in tests in many nations. Mexico became a training center, first for Latin Americans and more recently for young scientists from Asia, Africa, and the Middle East. When the cooperative program in Mexico evolved into the National Institute of Agricultural Research, led entirely by Mexican scientists, Foundation specialists were able to intensify their work with other countries, and international corn and wheat programs were established, with headquarters in Mexico.

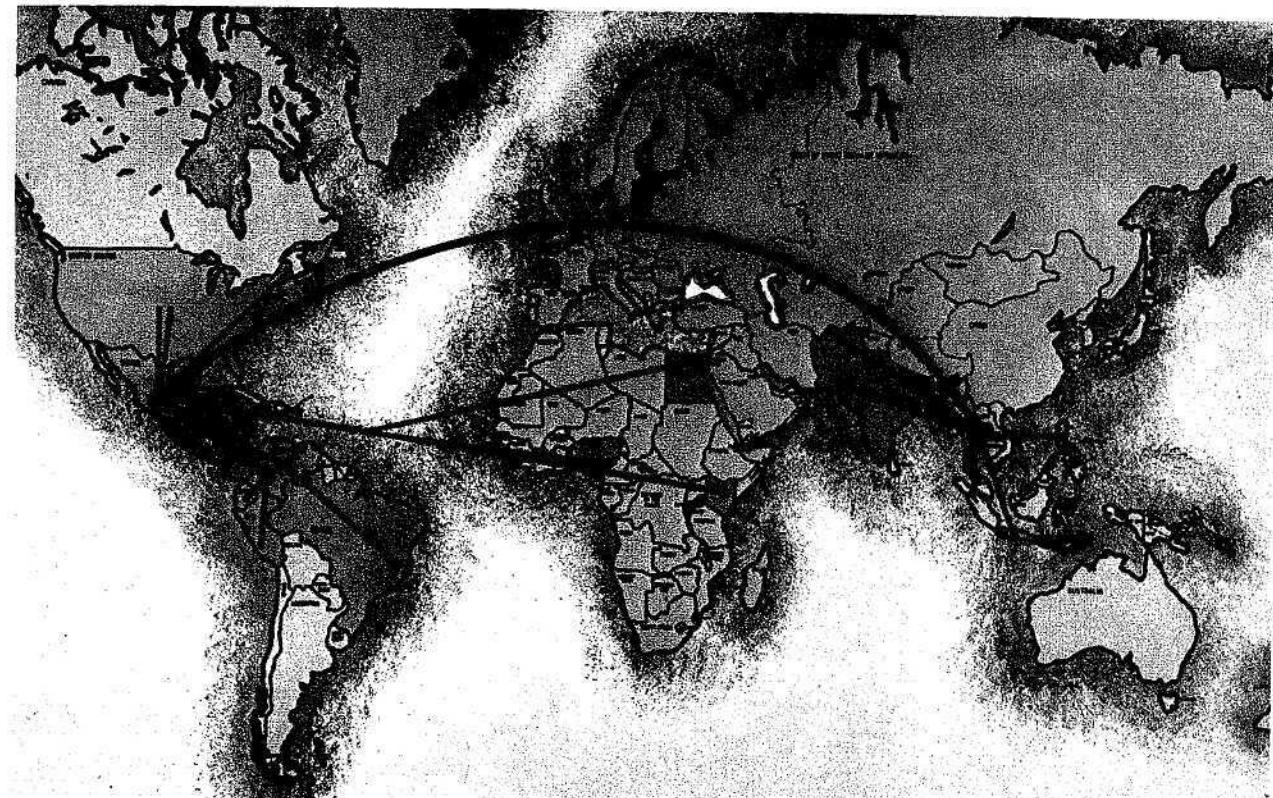
This led to the establishment in 1966 of the International Maize and Wheat Improvement Center (CIMMYT), launched in cooperation with the Ford Foundation, as an autonomous research



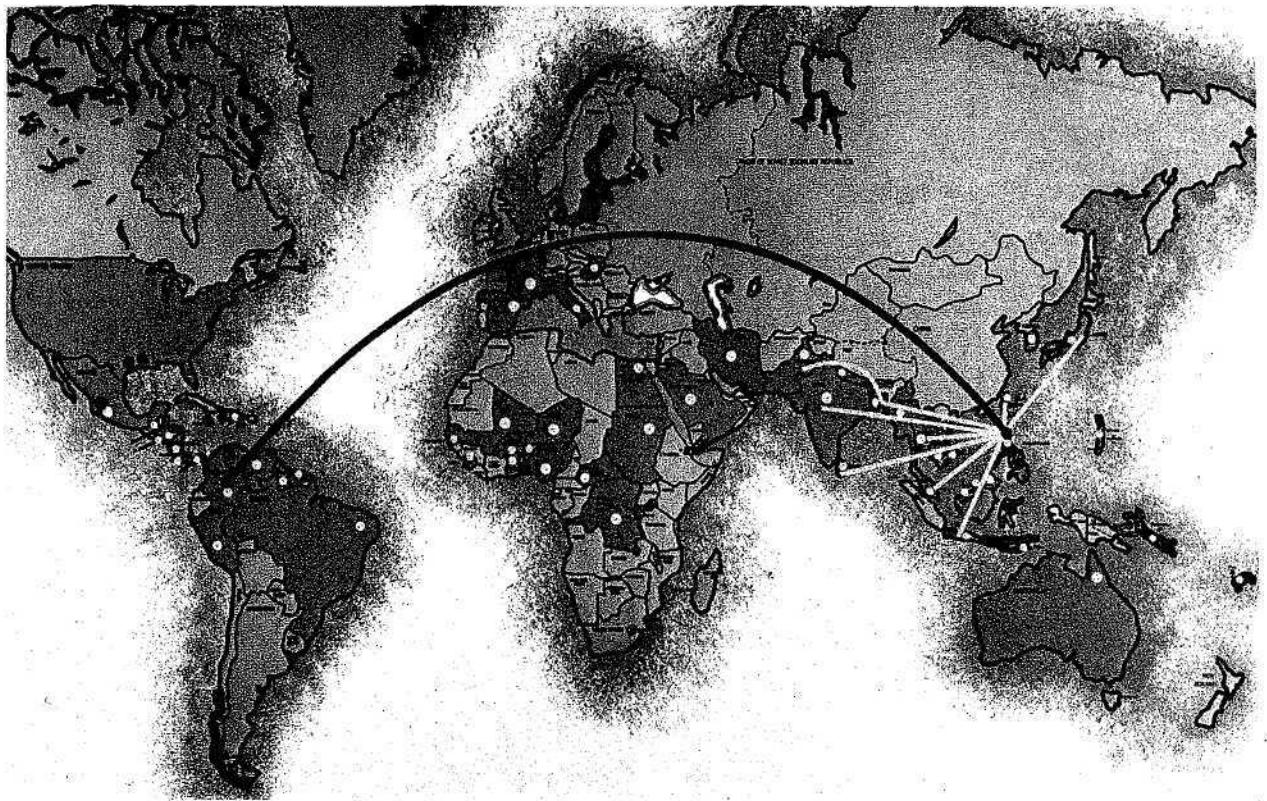
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INTERNATIONAL WHEAT IMPROVEMENT PROGRAM



INTERNATIONAL CORN IMPROVEMENT PROGRAM



INTERNATIONAL RICE RESEARCH INSTITUTE

What began as a demonstration of the practice of scientific agriculture in a single country has today developed into worldwide cooperative systems for the improvement of basic food crops. Two international centers supply the main impetus. The International Maize and Wheat Improvement Center in Mexico is the focal point from which flows support in terms of staff assistance, breeding materials, and information toward improving the quantity and quality of wheat and corn yields per acre in many countries (a cooperative wheat program has

been developed in Tunisia since these maps were prepared). The International Rice Research Institute in the Philippines serves as a catalyst and pace-setter in improving the effectiveness of research, training, and extension programs in national agencies throughout the rice bowl of Asia. Two new international centers for the improvement of tropical agriculture, one in Nigeria and the other in Colombia, are currently being constructed and staffed as joint ventures of the Ford and Rockefeller Foundations toward the conquest of world hunger.

and training institute under the direction of a board of trustees made up of eminent international leaders. In addition to a contract for support of Pakistan's wheat production campaign, CIMMYT is now providing experimental wheat varieties to scores of nations, and is supporting production campaigns in Argentina, Tunisia, Morocco, Afghanistan, and India. These wheat varieties, developed cooperatively by Foundation and Mexican scientists, are proving highly successful. To cite just one example, Turkey, in a bold move in late 1967, purchased 22,000 tons of Mexican seed wheat, and the resulting yields on many farms in the coastal regions are double or triple the previous average.

Corn improvement has paralleled that of wheat. Through the Rockefeller Foundation-supported **Inter-Asian Corn Improvement Program**, centered in Thailand since 1966, work is under way in the Philippines, Indonesia, Malaysia, Taiwan, India, and Pakistan. Through the Northern Andean corn program, production has been substantially improved in Colombia, Venezuela, Ecuador, and Peru. CIMMYT has provided direct assistance to other nations, particularly Kenya, Egypt, and Brazil; aid to Central America has been provided through the Rockefeller Foundation-supported **Central American Food Crop Improvement Program**. Kenya, as a result of its national corn production program, by 1967 moved from a deficit to a surplus position, largely through increased output by farmers with small holdings.

Rice

The International Rice Research Institute (**IRRI**), established in 1962, assembled an interdisciplinary staff of capable scientists of various nationalities and gave them the mandate to lead the development of highly productive systems of rice farming for the tropics. By 1965 they had produced new, short, stiff-strawed varieties, in one of the world's first uses of biological engineering—the development of plant varieties tailored to a preestablished and comprehensive set of specifications.

Simultaneously, entomologists found an effective control for the devastating rice stem borer. Pathologists, working with plant breeders, attacked the rice blast disease, and once they understood its complexities, were able to build in plant resistance to this pathogen. Agronomists, soil scientists, and physiologists defined optimum cultural practices—rates and timing of fertilizer applications, numbers of plants per unit area, and methods of weed control.

Meanwhile, with major support from the United States Agency for International Development (AID), engineers were working on mechanization and irrigation systems. Economists were defining the costs and returns involved in rice production and were assisting in the formulation of national policies that would stimulate production in the different Asian countries.

By 1968 the impact of IRRI's contributions was being felt throughout Asia. India has already extended the use of high-yielding varieties and modified agronomic practices to over six million acres—a dramatic achievement, even though only a small fraction of its rice acreage is involved. In 1967 the Philippines for the first time in decades achieved self-sufficiency in rice; Pakistan should do so by 1969. Thailand's national rice breeding program, entirely supported by the Government of Thailand, involves a network of 18 experiment stations. It is under the guidance of a Rockefeller Foundation staff member and has the cooperation of IRRI scientists. The Institute now is providing direct assistance to the All-India Coordinated Rice Improvement Program through a major grant from AID, and it has supported rice production efforts in Ceylon, Pakistan, Indonesia, and Malaysia through grants from the Ford Foundation.

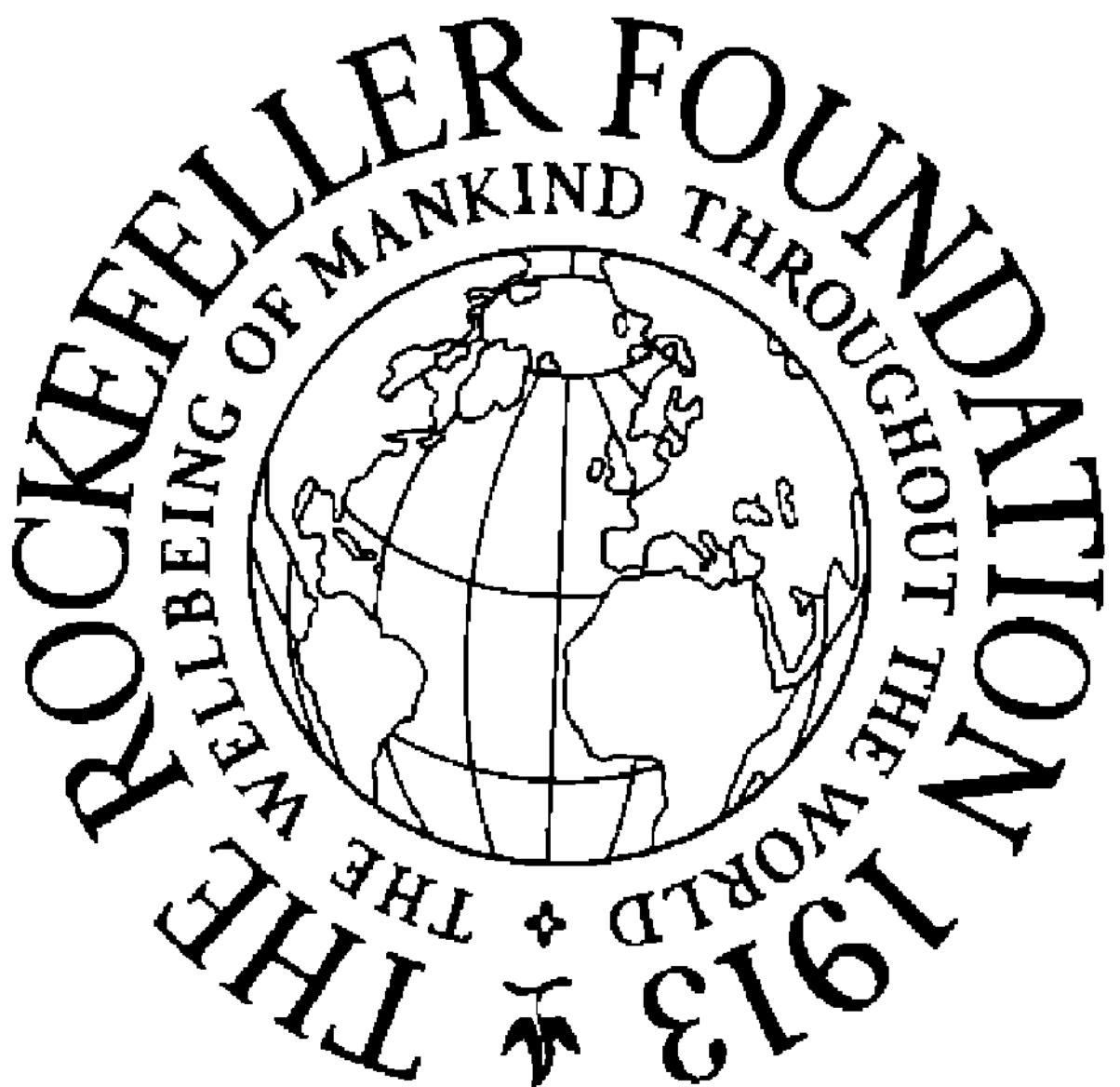
In 1967, the Institute's new technology was introduced into the Western Hemisphere with the initiation in Colombia of the **Inter-American Rice Improvement Project**. This work is led by a Rockefeller Foundation specialist who previously served with the Varietal Improvement Department at IRRI.

IRRI has now undertaken an international attack on the rice blast disease, in cooperation with the Food and Agriculture Organization of the United Nations.

The success of the Institute has caused leaders of other nations to become interested in production potentials in their countries. It has demonstrated that an interdisciplinary team of capable and dedicated scientists, if adequately supported, can make rapid progress toward major production goals, and that training of substantial numbers of specialists can effectively be combined with a dynamic research program.

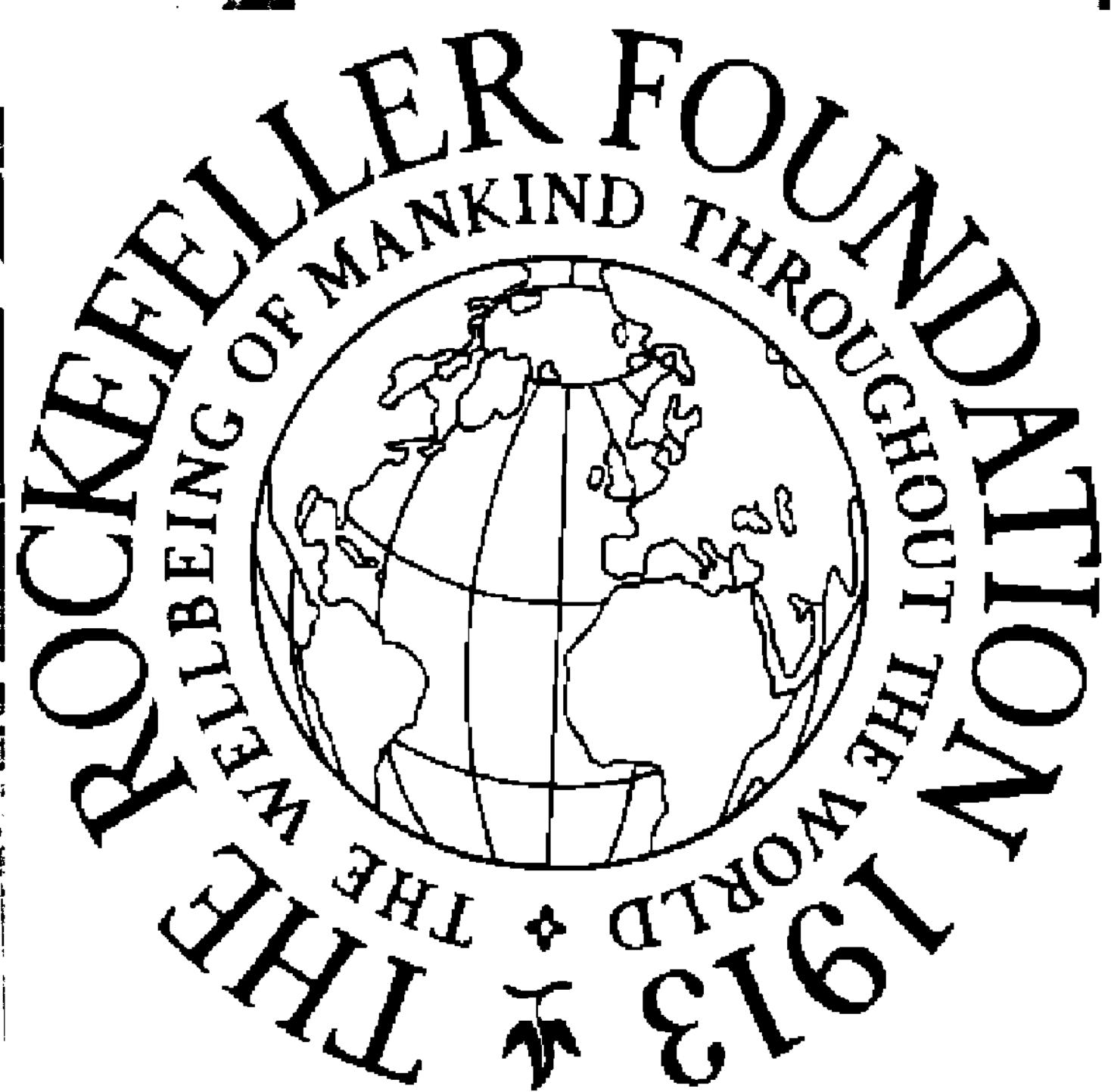
Tropical Agriculture

In response to the need, now beginning to be widely recognized, for the development of technical information, biological materials, and trained manpower to make possible a flourishing agriculture in



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The Puebla project in Mexico is a large-scale experiment to discover whether it is possible permanently to increase corn yields under natural rainfall conditions on small landholdings in cooperation with local farmers.



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Bahri Dagdas, Turkey's Minister of Agriculture, joins villagers celebrating outstanding crop of "Mexican" wheat.



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the largely unexploited lowland tropics, two new autonomous tropical institutes were launched in 1968. The Rockefeller Foundation, in cooperation with the Ford Foundation, helped establish the **International Institute of Tropical Agriculture (IITA)** in Nigeria, to work on the crop and soils problems of the humid tropics, to serve as a training center, and to function as a hub for cooperative research involving all interested nations of the area.

In Colombia, the **International Center of Tropical Agriculture (CIAT)** was organized with initial support from the Ford, W. K. Kellogg, and Rockefeller Foundations. This institute will work on agricultural systems for the tropics of the Americas, with emphasis not only on crops but also on the animal species that could convert the vast quantities of unused grasses and legumes into meat and dairy products. CIAT will serve as a training base for Latin Americans, and for persons from other areas of the world who are interested in tropical agriculture; it will seek to develop in the Americas a useful and continuing system of cooperative research and information exchange.

With the emergence of these four centers, a network of cooperative research is being created to facilitate the solution of biological problems that are international in character. These centers are permitting interdisciplinary teams of scientists, with funds from an increasing number of sources, to attack the formidable technical problems still facing world agriculture.

Much of the future success of efforts in agricultural improvement will depend upon the degree to which the international centers can continue and expand cooperation with strengthened national institutions.

There have now been enough successes to demonstrate clearly that most nations can, if they will, dramatically and rapidly increase agricultural output. Throughout the world, traditional or subsistence agriculture can and must be replaced by a highly productive, market-oriented system.

Specific National Progress: India

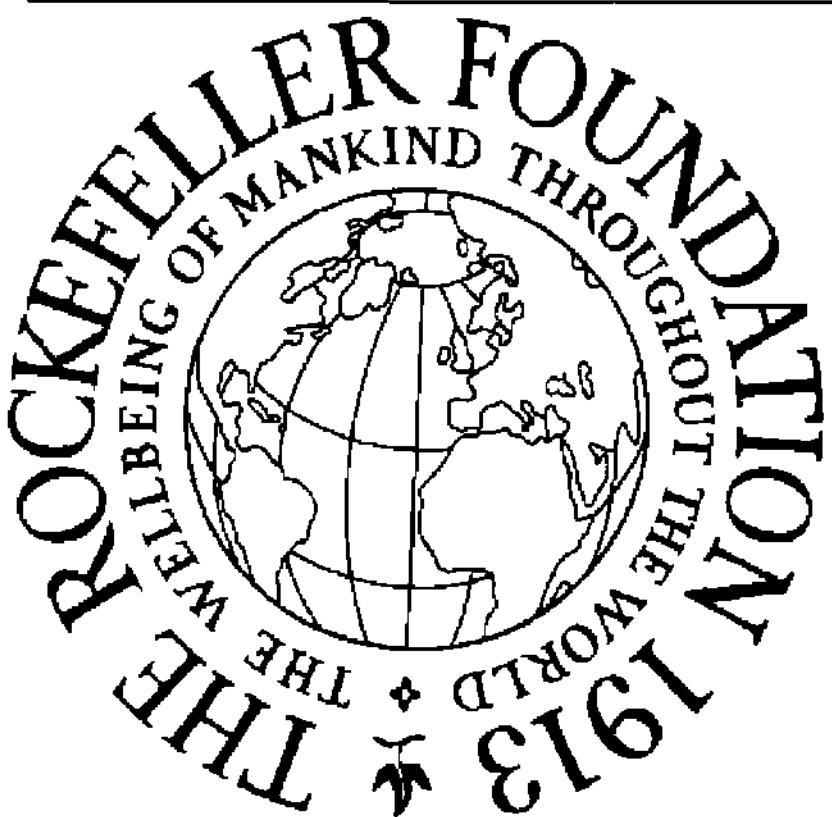
India, desperately short of food in 1963, and suffering the effects of severe droughts from 1965

The single most dramatic accomplishment of the International Rice Research Institute is the development of

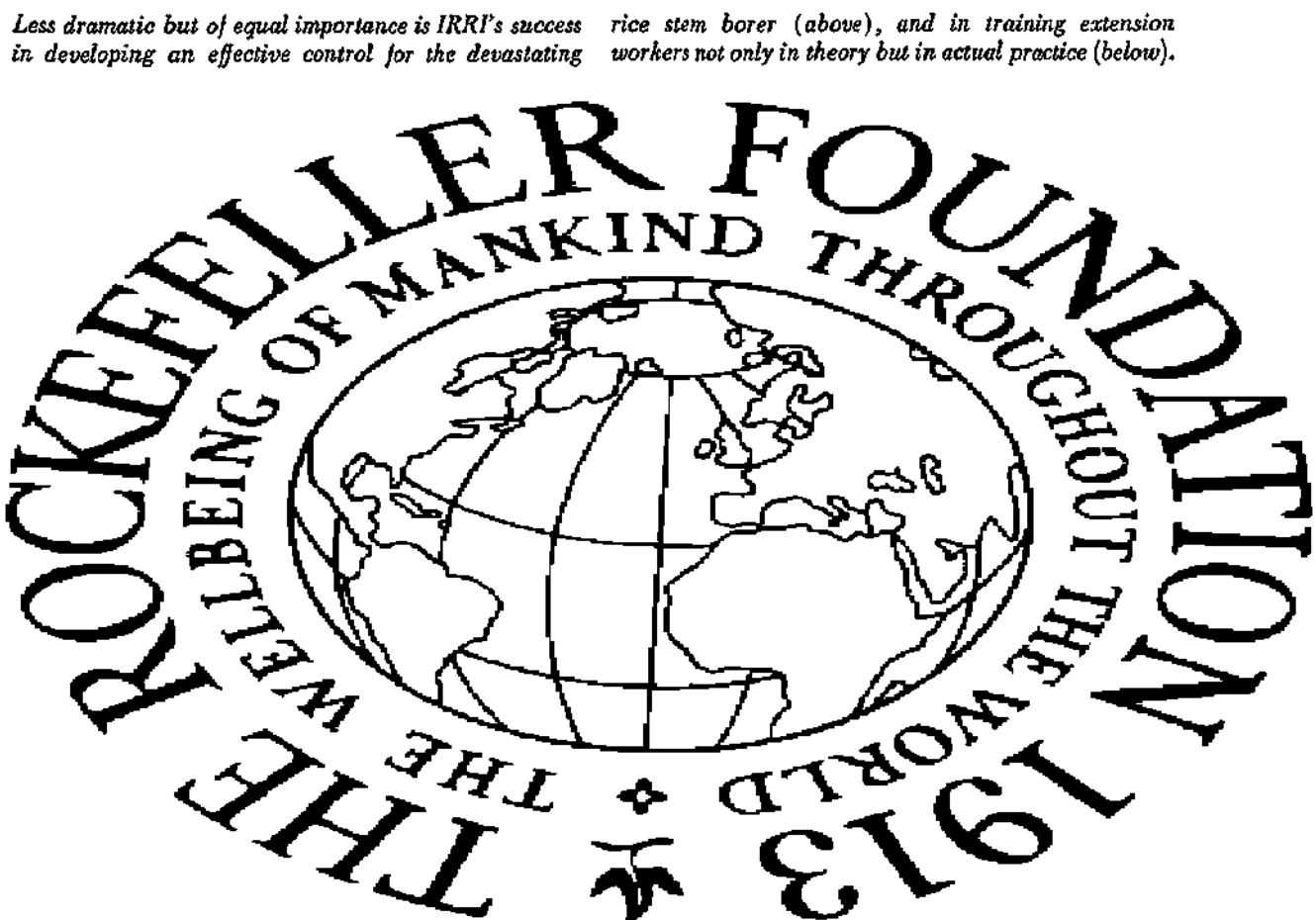
new rice varieties, now widely adopted in Southeast Asia, that are capable of doubling and tripling rice harvests.



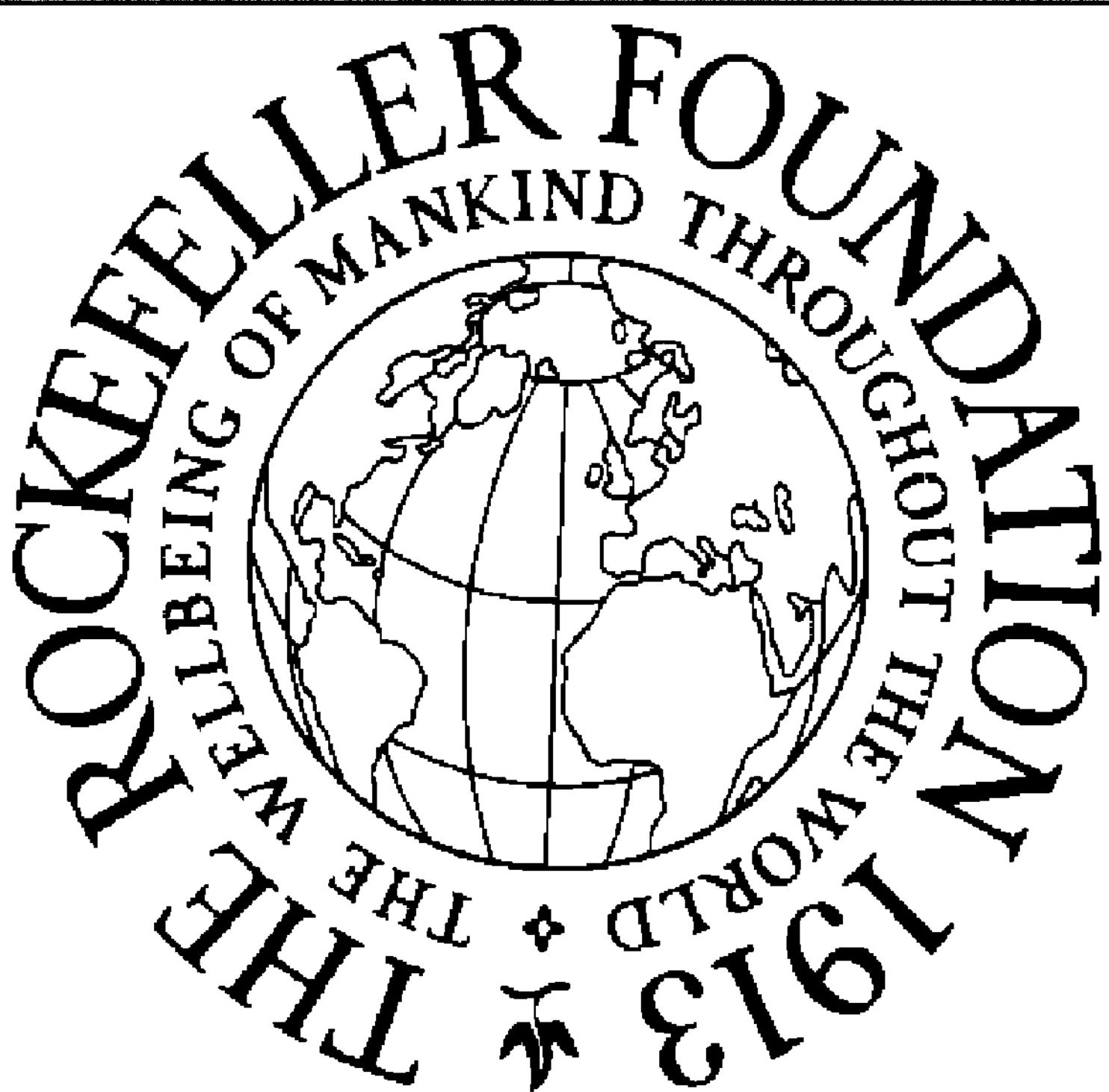
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through 1967, now has new hope. Tests of new semi-dwarf wheats during these critical years confirmed that two- to fourfold yield increases were possible in irrigated areas. This work, carried out by the Foundation's cooperative **Indian Agricultural Program**, with assistance from Foundation specialists in Mexico, brought together high-yielding varieties, proper management, and optimum fertilization into a package of practices that could dramatically increase wheat yields.

To speed its wheat program, India in 1966 imported with its own foreign exchange 18,000 tons of seed wheat purchased from Mexican growers—at that time the largest such purchase in history.

Asian yield records have also been broken for corn, sorghum, and the millets, by use of improved varieties and new hybrids developed by the first all-India crop improvement schemes.

In July, 1966, a half-ton of IR8 rice seed—a new, high-yielding variety developed at IRRI—was air-

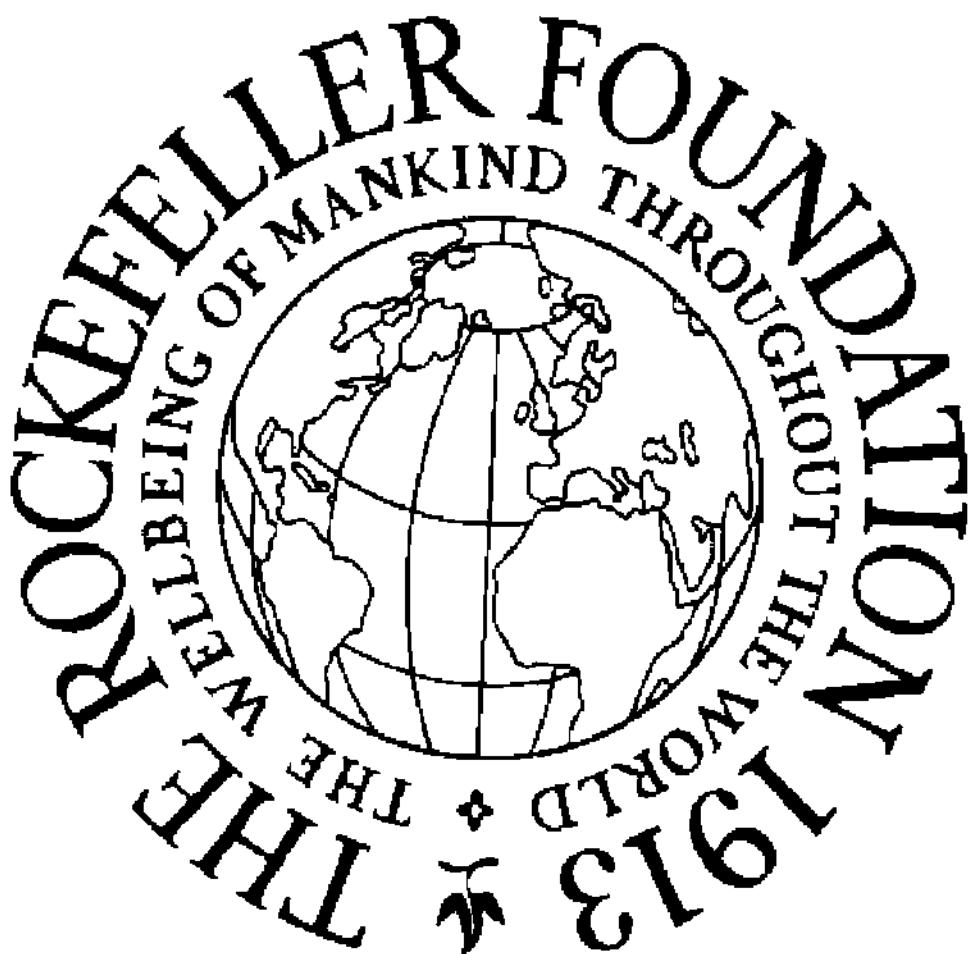
freighted to India for seed increase, and one year later India had 250,000 acres planted with this variety.

In 1965 the Government of India embarked on its High-Yielding Varieties Programme, involving the combined use of fertilizers, pest control measures, and improved varieties of wheat, rice, corn, sorghum, and millets, in irrigated areas. By 1968 over 16 million acres was planted, using new packages of practices—about half the 1970-71 target of 32.5 million acres. Grain production in 1967-68 passed 100 million tons—about 12 million tons over the previous high.

At India's request, Foundation staff members continue to serve as co-leaders of the national rice, wheat, and sorghum schemes. Leadership of the national coordinated maize program was provided by the Foundation for the first eight years. This important activity is now guided by an experienced Indian scientist.

Huge purchases by India of semi-dwarf seed wheat (left) developed under Foundation leadership in Mexico

resulted in 1968 Indian harvests so substantial that storage space was at a premium in many parts of the country.



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Perhaps the most profound change that has taken place in India during the past five years has been the altered attitude of national and local leaders and the consequent redirection of scientific efforts toward production problems. Apathy is giving way to excitement regarding present and potential agricultural progress; hope has replaced the sense of helplessness that once prevailed. Agriculture is increasingly being recognized as an industry of fundamental importance to the economic development of the nation.

Pakistan

Pakistan's food crop production campaign, essentially paralleling that of India, is making dramatic progress. Through Ford Foundation-financed contracts with CIMMYT and IRRI, Pakistan has quickly put to use the wheat and rice varieties and the technology developed at these centers, and is approaching self-sufficiency in these crops. It imported the new high-yielding seed varieties in large quantities, including one 42,000-ton purchase of seed wheat from Mexican producers. A new corn production campaign is under way, based initially on the

variety J-1 developed by the Rockefeller Foundation-assisted corn program in India. The high-yielding sorghum varieties from India are also being introduced, and in 1968 Pakistan initiated a national coordinated potato improvement program, with assistance from the Foundation.

NEW CONCEPTS REPLACE THE OLD

The Rockefeller Foundation's activities in agriculture have contributed to the development of certain new concepts that are radically affecting policy and action programs in developing areas. National leaders and others are increasingly realizing, for example, that successful agricultural production campaigns need not be made contingent upon improvements in the general education of rural people, desirable as these may be. Even the unschooled small farmer will adopt new practices that are obviously more productive and profitable than the old, provided that he can be shown how to use the new technology, that he can obtain the necessary manufactured inputs when he needs them and at reasonable cost, and that he is assured a market for his produce. This has proven to be true of wheat,

Asian yield records have been set in India for corn, millets, and sorghum (below) by use of improved vari-

eties developed by Indian scientists working in Indian institutions with close relationships to the Foundation.



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rice, sorghum, and corn growers in India and Pakistan, of rice farmers in the Philippines, and of corn farmers in Kenya and El Salvador.

Again, substantial progress in the acceleration of agricultural output is occurring in certain nations, even though their systems of landholding obviously still need to be changed. Action programs are not waiting for the consolidation of small farms into more economic units, the distribution of large underutilized holdings, or the abolition of tenancy, although all of these are desirable as long-range goals.

Some national leaders have shown that they can become enthusiastic promoters of agriculture, when it is clearly demonstrated to them, in most cases by agricultural scientists, that it is technically feasible to improve agricultural output substantially in a relatively short time. More and more, agriculture is being recognized as a basic industry in agrarian nations; leaders are realizing that orderly modernization of agriculture must proceed at the same pace as other forms of industrialization, if indeed it is not a prerequisite to all other development.

In nations where the Foundation has cooperated in agricultural programs, and where food production

is now being accelerated, the key catalysts were the solution of the technical problems blocking higher yields and the training of agricultural specialists at all levels.

NEW DEVELOPMENTS ARE PROMISING

New Sources of Support

The basic food crops, on which the world must depend for most of its food supply in the decades ahead, are now receiving serious attention from a number of agencies and institutions. The Ford Foundation, using its experience in rural development, has become involved in the improvement of basic food crops and the problem of undersupply. AID has in the last two years become directly involved in crop programs: in rice improvement, through contracts with and support to IRRI in excess of a million dollars; in wheat production, in its own program of help to Turkey; and in corn production, through support to Kenya by the United States Department of Agriculture. AID is now supporting limited work abroad on certain legume crops that promise to be important sources of protein for human consumption. There is also evidence that

In July, 1966, a thousand pounds of IR8 rice seed was shipped from IRRI in the Philippine Islands to India.

By 1970-71, India expects to have 24 million acres planted to improved rice, wheat, and corn varieties.



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agencies of other countries are indicating an interest in support of direct efforts, national and international, to increase food production.

Agribusiness is increasingly seeking approaches to more useful involvement in the acceleration of food production: conferences on this subject have recently been organized by business leaders, and a number of prominent businessmen participated in the Rockefeller Foundation's symposium "Strategy for the Conquest of Hunger," held this spring.

Institutional Development

A major goal of every Foundation cooperative activity in agriculture has been to develop effective local leadership and organizations. Some institutions of higher agricultural education are reexamining their role in the economic and social development of the regions they serve, with emphasis on making course offerings more relevant and on activating research aimed at finding rapid solutions to major biological and economic problems. These institutions are designing ways of coupling practical experience in professional agriculture with formal course offerings, and of cooperating with national action agencies in programs to improve farming practices and to better rural living conditions.

The Foundation is providing modest support to a number of institutions, including the **Graduate School of the National School of Agriculture** at Chapingo, Mexico, which hopes soon to offer the Ph.D. degree; the graduate school of the **Indian Agricultural Research Institute**; the **College of Agriculture of the University of the Philippines**; **Makerere University College** in Uganda and the **Faculty of Veterinary Science of the University College, Nairobi**, Kenya—both attached to the University of East Africa; the **Colombian Institute of Agriculture**, in a joint effort with the **National University**; and the Faculty of Veterinary Medicine of the University of Sam Marcos in Lima, Peru.

During the period 1963-68, the Foundation awarded 544 scholarships in the agricultural sciences—all in fields important to the conquest of hunger and all to persons who hold essential positions in key institutions.

Biological Breakthroughs

Through the cooperative efforts of the **University of Manitoba** and the **International Wheat Improvement Program** of CIMMYT, a new, man-made grain species, *Triticale*, has been created by

crossing rye and wheat. With Foundation support, both institutions have accelerated research efforts over the past several years, with the result that hundreds of experimental strains of the new species are currently under test in Canada, the United States, Mexico, and elsewhere. Initial results indicate that the new cereal grain may yield better than either parent species, particularly under dry conditions, and that it may likewise have higher protein value.

Dietary deficiency of protein continues to be a major world nutrition problem. In view of the prospect that needed quantities of food can be produced by the improvement of conventional agriculture, scientists are exploring ways of increasing the protein content and quality of cereal grains and of developing new protein sources. The protein of corn is now being substantially improved by incorporating genes that contribute higher levels of essential amino acids. If by genetic means higher quantities and quality of protein can also be provided in other cereal grains, significant improvement will have been made in human diets, a development of particular importance for young children.

Other means for increasing world protein supplies include the exploitation of marine resources and the development of coastal and inland fisheries. A Foundation grant to **Auburn University, Alabama**, which trains the majority of aquatic scientists for Asia, permitted the University's fisheries division to expand its fish ponds and laboratory facilities for studies in freshwater fishery technology.

A major deterrent to increased production of fish in brackish-water ponds has been the inability to induce spawning of desirable food fishes in the ponds. Good progress in overcoming this obstacle has been made by the **Oceanic Foundation** in Hawaii; with Foundation support it has established a fisheries laboratory to conduct research on the spawning and rearing of brackish-water food fishes. This center also affords opportunities for field research by graduate students and scientists from several universities. Similar research and training programs have been supported by Foundation grants to the **Joint Commission on Rural Reconstruction**, in Taiwan, and the **Philippine Fisheries Commission**.

Schistosomiasis

Schistosomiasis is primarily a rural disease, an almost unavoidable occupational hazard for agricultural workers in many areas of the world, and its costs in both human misery and reduced productiv-

ity are incalculable. Widespread throughout the tropics and infecting an estimated 200 million or more people, it constitutes a major obstacle to increasing food production in many parts of Latin America, Africa, and Asia. Control is difficult, and few carefully conceived research projects directed toward this end have been carried out anywhere in the world, principally because basic biologic knowledge has been limited, and scientific manpower and funds have been in short supply. Drugs available to date for the treatment of human infections have been toxic and relatively ineffective. Unlike the great scourges of the past—smallpox, malaria, yellow fever—schistosomiasis is not a dramatic or rapidly fatal disease, and both government and public concern have been slow in developing.

In 1966 a Foundation-staffed pilot project in research and control was initiated on the island of St. Lucia, West Indies. Although the disease was known to be present on the island for many years, its seriousness was not recognized until 1960, and no attempts at control had been undertaken.

Full-scale Foundation studies began early in 1967, with full support of the island's Government. An islandwide survey of school children, aged 6 to 14, showed prevalence rates of 15 to 80 percent. To complement the disease-control research project, the Foundation is supporting an economic and social survey by the University of Wisconsin.

The Foundation has supported the few United States laboratories that are engaged in research on schistosomiasis and has enabled promising young scientists to work in endemic areas of Africa, Asia, and Latin America. Institutions that have received grants include: Harvard, Johns Hopkins, and Case Western Reserve Universities, and the Universities of Ibadan, East Africa, the Philippines, and Minas Gerais (Brazil).

THRUSTS FOR THE FUTURE

The last five years' work toward the alleviation of world hunger has been marked by significant advances in both thought and action. The Foundation is now convinced that food supplies can be dramatically and rapidly increased in any food-deficit nation that is willing to commit its resources to this effort, provided appropriate assistance is available. This has been demonstrated in a sufficient number of nations to permit identification of the principles for orderly progress.

No developing nation, however, has embarked on more than a few of the many agricultural pro-

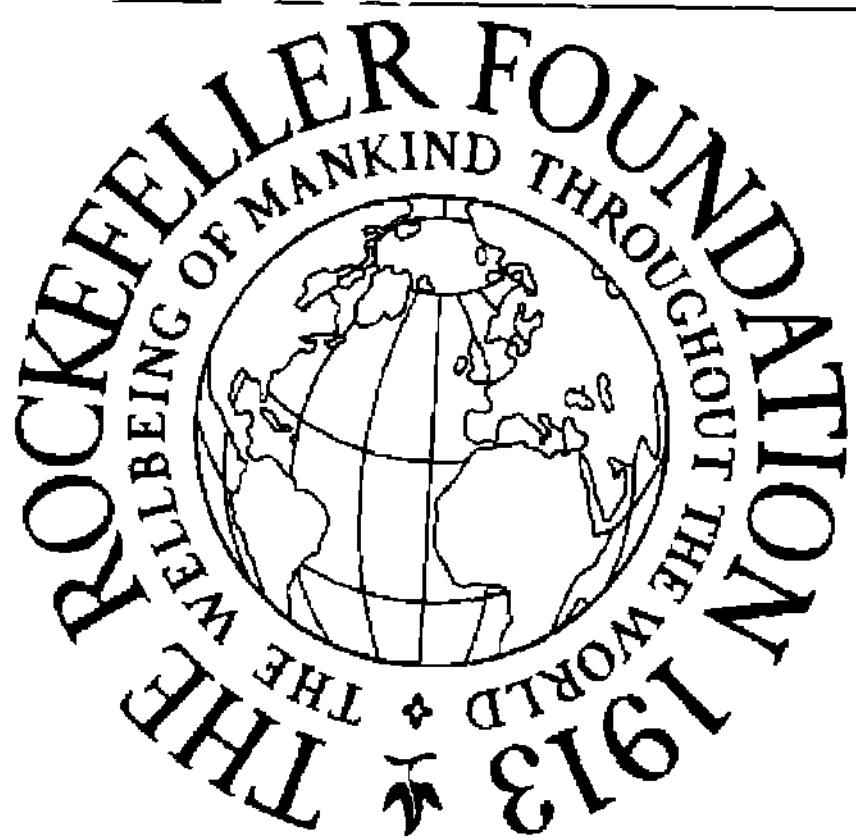
grams that would be needed to assure the increased availability of nutritious, varied food and the rural economic development essential for overall economic progress. Even in nations like India and Pakistan, tremendous efforts still are needed to diversify crop production and to extend improved agriculture into the vast unirrigated areas, as well as into the 90 percent of irrigated lands still using primitive farm methods. Drastic changes in training and extension techniques must be introduced to assure the benefits of science to small farmers.

Along with the very real advances made, the experience of the past quarter-century, and particularly of the last five years, has revealed several areas of weakness in world capability to accelerate agricultural output. Future programs must direct attention to these problems.

Biological Improvement of Food Crops

National and international programs must be established or strengthened throughout the world to improve the basic food grains on which most nations—and the majority of individual farmers—depend for survival. A definite start has been made by a few countries, yet too many are still heavily dependent on the Foundation's limited scientific resources or on the new international centers. It is estimated that only a small fraction—probably less than 15 percent—of the world's cultivated acreage, most of it in the technically advanced nations in temperate climates, has significantly benefited from advances in the biological sciences.

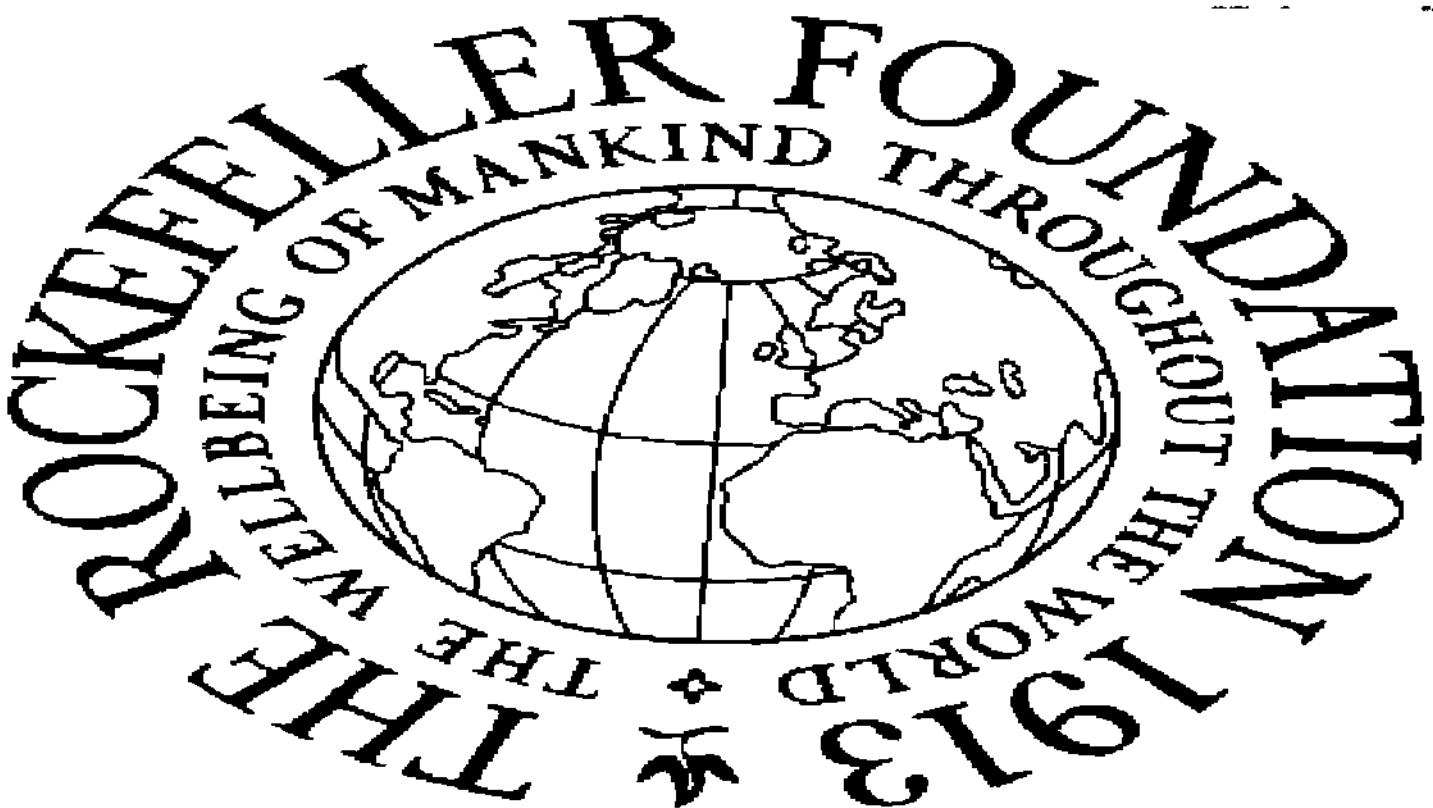
Certain areas in crop research still need intensive work: in the less-developed countries, modern technology for all crops must be developed, for much of the irrigated areas and for virtually all of the extensive unirrigated land. Corn varieties must be drastically changed, to make them useful over a greater range of ecological situations, like the new wheat and rice varieties. A major step toward this goal would be elimination of corn's sensitivity to day length. Wheat improvement must be extended to the widely important winter types and to the durums. Rice technology for irrigated lands still must be developed for much of Asia and most of Latin America and Africa; unirrigated rice has received virtually no attention. Internationally, work with sorghum and the millets must be greatly strengthened. And finally, coordinated international research and control measures aimed at reducing crop losses due to major international diseases and insect pests must be intensified.



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A major goal of the Foundation's agricultural program has been to help develop effective local research and training institutions, such as Mexico's Chapino com-

plex (below) and the Colombian Institute of Agriculture, whose corn germplasm "bank" (above) helps develop improved varieties in many parts of the world.



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The total technological needs are so vast, and requirements often so localized, that only through establishment of strong national production-oriented research programs, backed up by international centers, can adequate progress be made.

Productivity of the Tropics

Man must learn to master the tropics. Most tropical crops—including soybeans, cowpeas, forage grasses and legumes, root crops, and oil crops—urgently need improvement and attention. Corn and sorghum technology adapted to the humid tropics must also be developed. In order to establish productive agriculture on the millions of acres still unused or subject to the most primitive of agricultural systems, soil and crop management practices, cropping systems, and disease, insect, and nematode control measures must be devised.

The rapid acceleration of more intensive livestock production, especially of the kind that can utilize the vast grasslands of the tropics, is another critical need. A new standard for productivity and rate of progress needs to be established in the animal sci-

ences, as the Foundation and its cooperators have done in the plant sciences.

Arid and Desert Regions

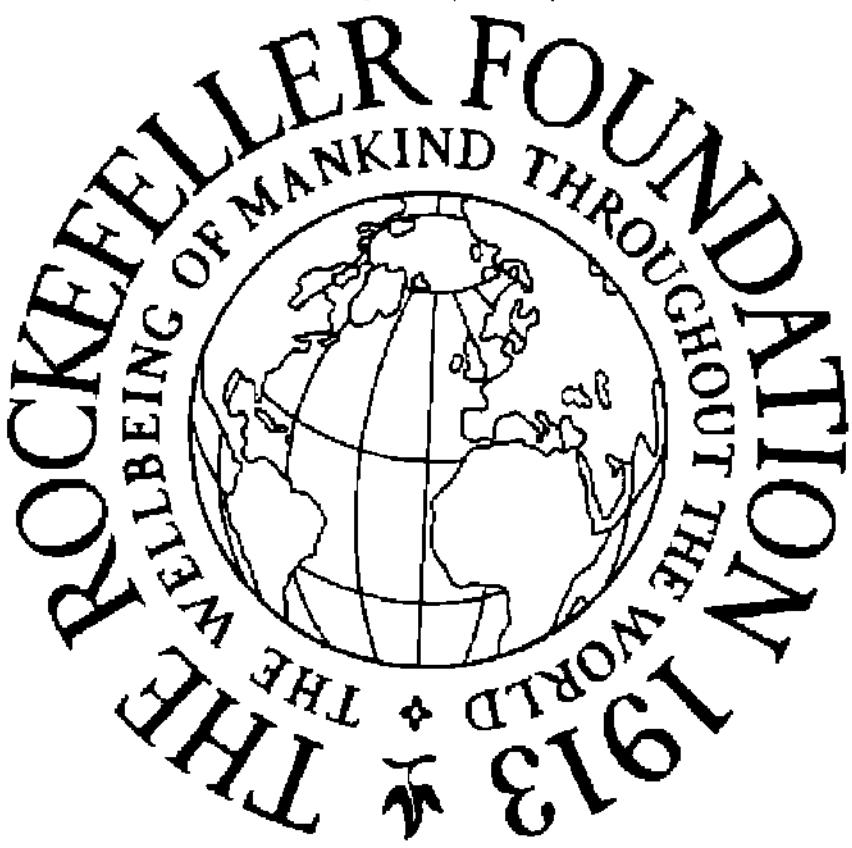
As the productive agricultural areas of the world become overtaxed by the demands of growing populations, the arid regions, comprising one-sixth of the total land surface, must be made to provide both living space and food and fiber production.

It is now possible to envision thriving new industrial and population centers in presently unutilized arid coastal, and even inland, areas—centers with nuclear or conventional power sources, desalinated sea water for human, industrial, and agricultural needs, and highly efficient crop production using moisture-conserving irrigation practices or totally enclosed systems.

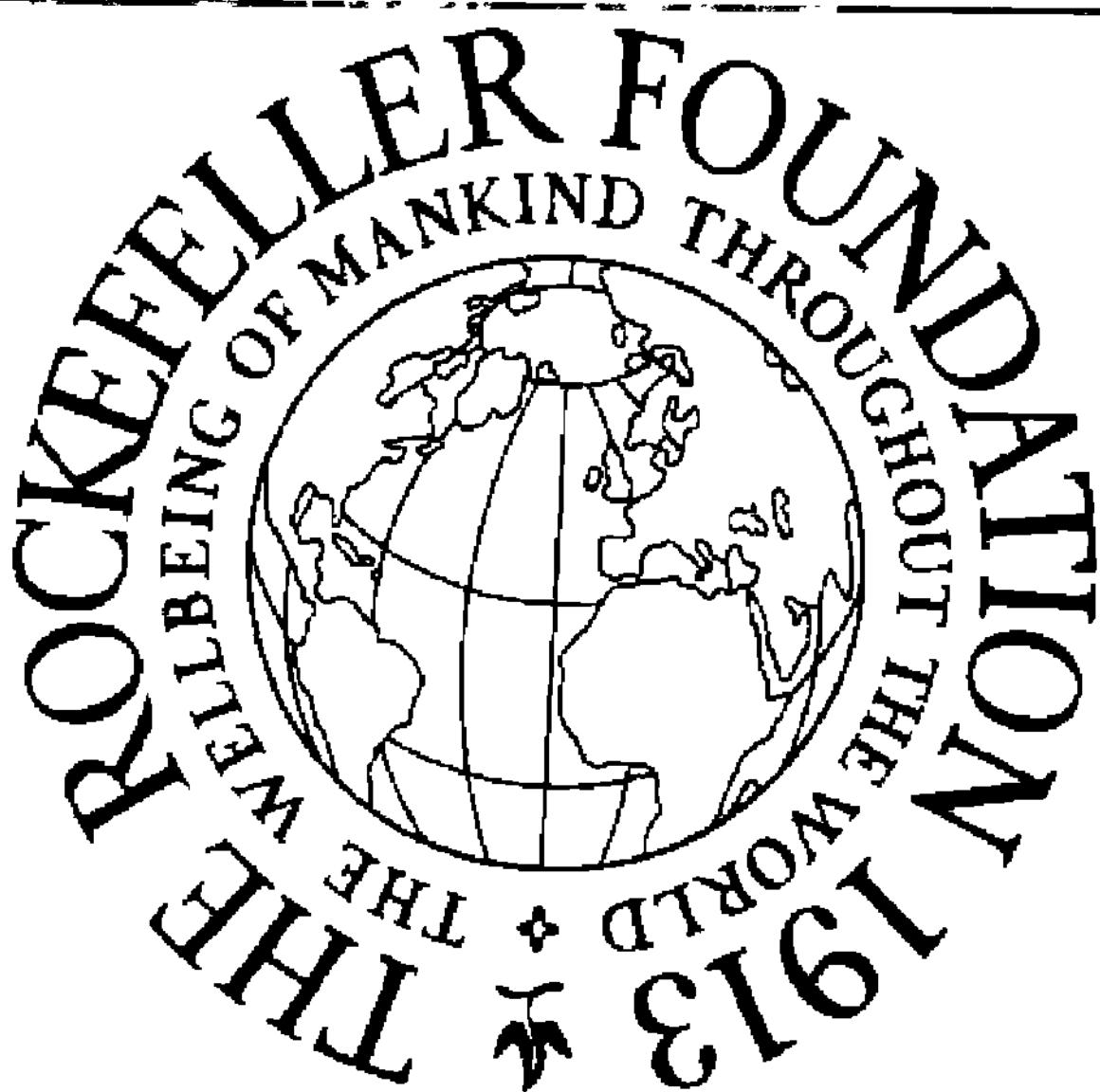
It appears technically feasible to use conventional electric power plants for the desalinization of sea water and for the production of crops in enclosed systems under plastic, which require a minimal water supply. A program using these techniques is well advanced, as a result of cooperative research

To increase world protein supplies, the Foundation encourages research and development of inland fish-

eries. Below: an experimental pond in Thailand, of a kind that could be maintained on small landholdings.



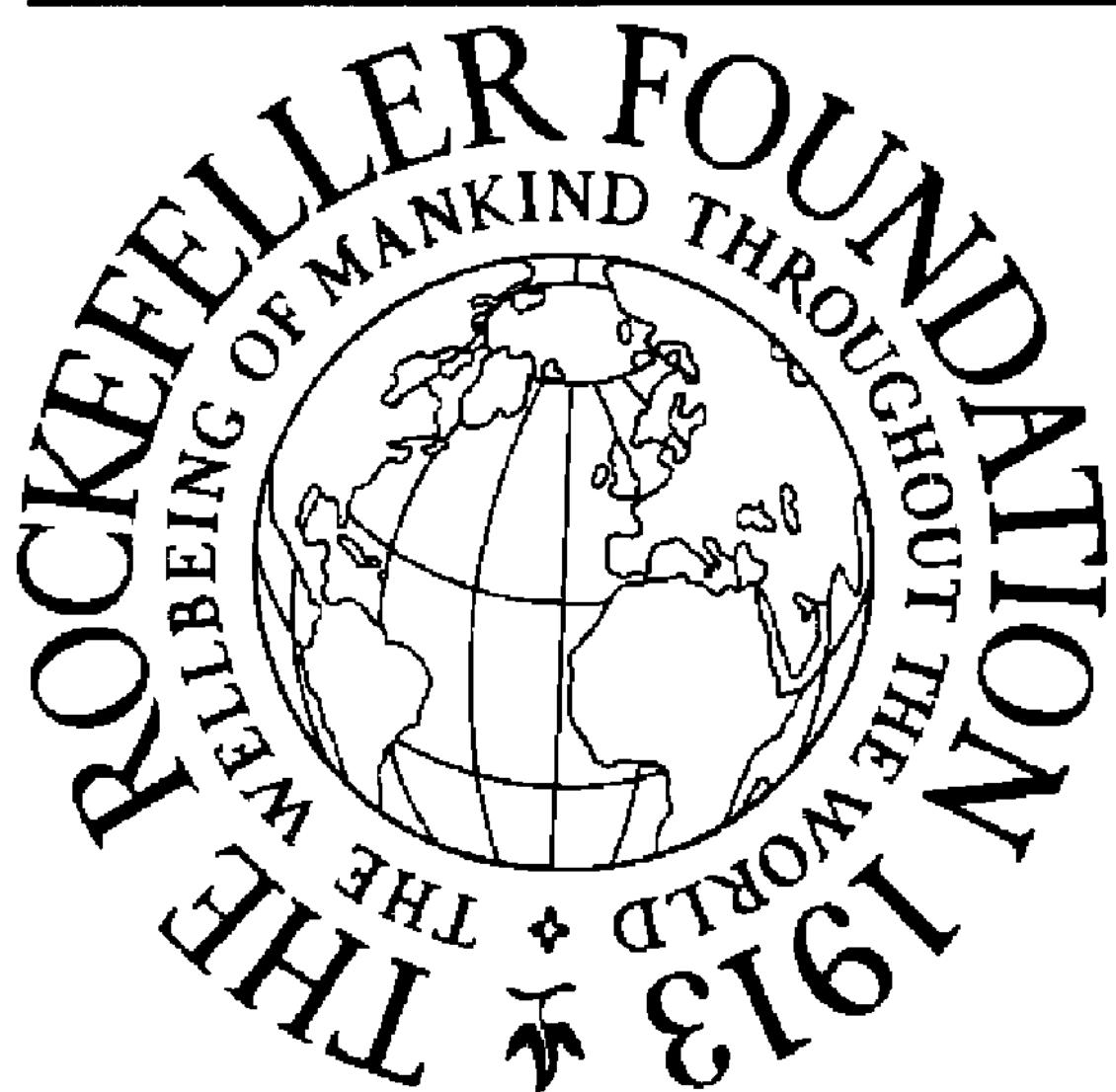
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Schistosomiasis, possibly the world's most prevalent endemic disease, blocks agricultural development in the tropics. The Rockefeller Foundation is in the midst

of a continuing campaign toward its control. On the island "laboratory" of St. Lucia a field worker marks a house in the course of a schistosomiasis survey.



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Infection occurs in irrigation ditches and other inland water bodies. A sanitary engineer of the St. Lucia project tests a stream as a possible habitat of parasite-bearing snails. The usefulness of large-scale irrigation projects in many parts of the developing world could be jeopardized unless schistosomiasis can be controlled.

by the University of Arizona and the University of Sonora, Mexico, both of which are receiving Foundation support for this purpose.

Also promising is the new use of nuclear power packages for the desalinization of water for large-scale irrigation projects. During the past year the Foundation has helped bring together for intensive discussions the scientists who are pioneering in water-use and crop-production systems and scientists and engineers from the Atomic Energy Commission and the Oak Ridge National Laboratory who are interested in coupling agricultural systems with nuclear power sources.

Increasing the Availability of Protein

Increased amounts of protein of high nutritive value must be sought through genetic improvement of cereal grains, development of high-yielding grain-legume crops for low latitudes, improvement of livestock production in the tropics, scientific man-

agement of marine resources, and exploration of new sources. The international centers in Colombia and Nigeria will focus efforts on the grain legumes, including soybeans and cowpeas, and a search will be made for other tropical legumes that could become important world food crops. CIAT will also devote research to utilization of tropical grasslands for raising ruminant animals. Opportunities will be sought for supporting the increased production of aquatic animals, both through learning how better to utilize the seas, and through improving fishery technology in brackish waters and inland lakes.

The utilization of leaf protein, the biochemical upgrading of carbohydrates to proteins, and the production of protein from petroleum substrates by microorganisms all are of increasing interest. The use of high-protein additives increases the nutritive value of common foods and is also a promising possibility in the developing nations. Biochemical and/or economic difficulties must be overcome in

A promising means of preventing and overcoming infant malnutrition (right) is the recent development of high-protein corn through biological engineering.

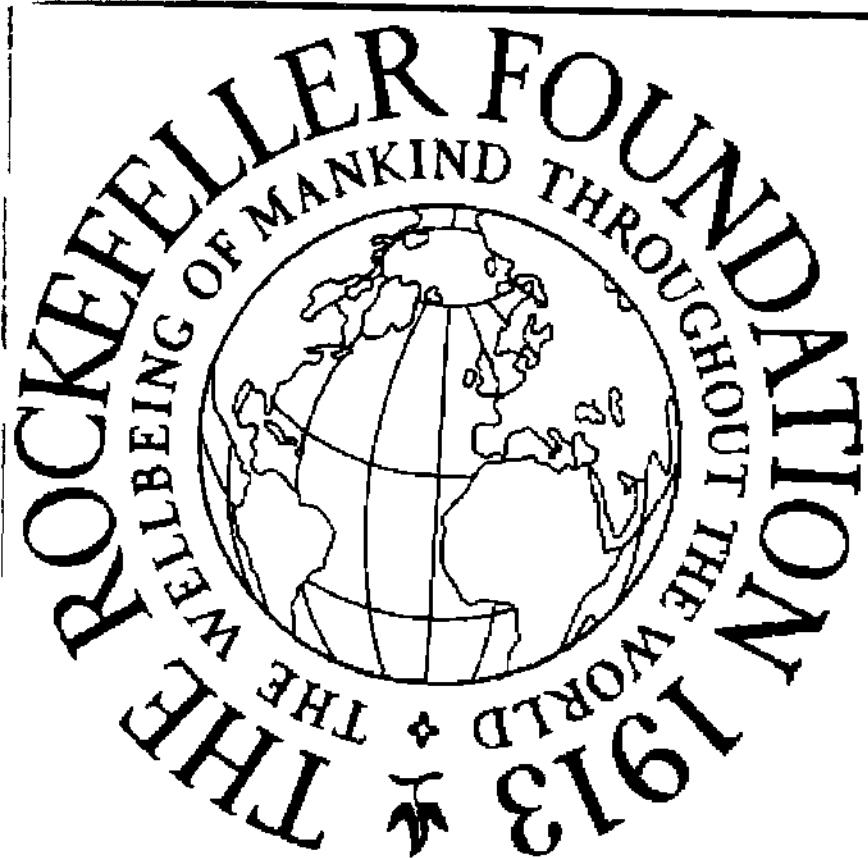
In Colombia, of the swine littermates below, C was fed common corn; O, genetically improved corn; and MS, a protein-corn diet supplemented with soybean meal.



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The future of mankind depends substantially on making arid lands far more productive. Cooperative research by the Universities of Arizona and Sonora (Mexico),

sponsored by the Foundation, shows that it is technically feasible to construct linked systems that desalinate sea water and produce food crops under plastic domes.

most of these promising processes, however, before they can be used for improving human nutrition in the developing nations.

Unfortunately, the protein needs of large numbers of people still using the barter system are unlikely to be met by products that must be purchased. But there is evidence that as urbanization increases and as more productive agriculture causes farm income to rise, families will spend a high portion of their earnings for a greater variety of foods; the importance of this approach to the solution of the protein problem should not be underestimated.

New Techniques

Worldwide problems of rodent infestation and of crop destruction by diseases and insects have not been brought under satisfactory control with present technology. New approaches must be explored and new techniques developed to reduce dependence on chemical control of rodents, plant diseases, and insect pests.

An understanding of the physiology of flowering mechanisms in crop plants may ultimately enable harvests to be better scheduled, to improve both quantity and timeliness of production. Research is needed to increase our understanding of the energy and nutrient factors that limit crop productivity. Imaginative new approaches should be examined to expanding our knowledge of the complex interaction of sunlight, nutrients, and carbon dioxide in plant growth.

Animal diseases, including virus diseases, that reduce livestock productivity likewise merit intensified study.

Education and Training

Considerable emphasis must continue to be placed on the creation of graduate schools and the strengthening of staff at selected institutions abroad. Education in such institutions should be relevant to the needs of developing countries; faculty and student research should contribute to the critical needs of

the regions served, and tuition costs should be low enough to permit the training of the very substantial numbers of specialists needed for agricultural progress. Development of technical personnel must continue to be stressed, with emphasis on the post-graduate training of crop and animal specialists and on the preparation of local leadership for research efforts and production campaigns. In Africa in particular, emphasis must be placed on increasing the number of agricultural scientists, technologists, and extension personnel.

National Production Programs

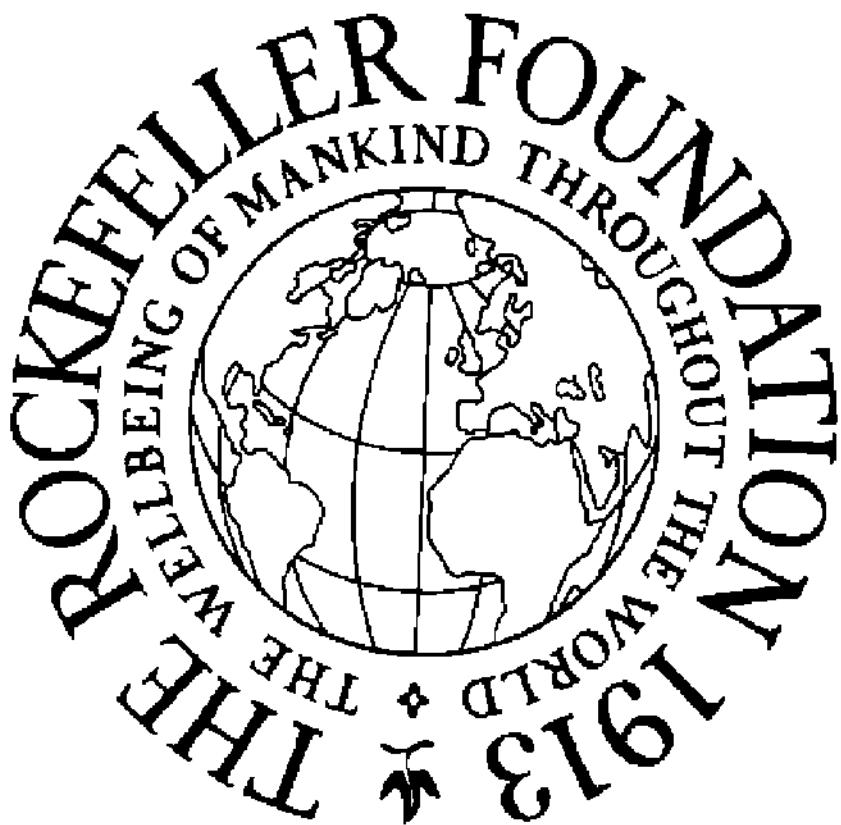
Nations must be assisted in designing and implementing effective food production programs—action programs to coordinate research and extension. Measures must be devised to foster maximum pro-

gress, relying as much as possible on local leadership and local scientific and technical personnel. To the extent possible, international banks, national and international technical assistance agencies, and private businesses must be encouraged to participate directly in the improvement of agriculture—the basic industry of all agrarian nations.

The evidence before this Foundation at the end of 1968 indicates that most nations can—if they will, and if they receive appropriate technical assistance—accelerate output of conventional agriculture and exploitation of marine resources so that food needs can be met at least for a decade or so; and this increased food supply, it is hoped, will buy precious time for intensification of efforts to achieve population stabilization.

Another thrust for the future is the development of new techniques to reduce dependence on chemical control of rodents, plant diseases, and insect pests, which in the aggregate account for huge crop losses. Worldwide

problems of crop destruction by rats, for example, cannot be solved with present technology. The Foundation is taking a strong interest in new approaches, mainly through research grants and improved communications.



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1968 GRANTS

TOWARD THE CONQUEST OF HUNGER

INTERNATIONAL

ROCKEFELLER FOUNDATION International Program in Agricultural Sciences:

International Agricultural Institutes

| | |
|--|---------------------------|
| International Rice Research Institute, Philippines | \$ 750,000 |
| Staff on assignment | \$ 248,000 |
| Core support | 502,000 |
| International Maize and Wheat Improvement Center, Mexico | 883,000 |
| Staff on assignment | 339,000 |
| Core support and special projects | 544,000 |
| International Center of Tropical Agriculture, Colombia | 581,400 |
| Staff on assignment | 273,000 |
| Core support and special projects | 308,400 |
| International Institute of Tropical Agriculture, Nigeria | 32,000 |
| TOTAL—Appropriations made in 1968 | <u>\$2,246,400</u> |

Special Cooperative Projects in the Agricultural Sciences

| | |
|--|---------------------------|
| Indian Agricultural Program | \$ 715,000 |
| Staff on assignment | \$ 308,000 |
| Project support | 407,000 |
| Colombian Agricultural Program | 149,000 |
| Staff on assignment | 88,000 |
| Project support | 61,000 |
| Ecuadorian Cooperative Project | 47,000 |
| Staff on assignment | 25,000 |
| Project support | 22,000 |
| Institutional leadership | 122,800 |
| Staff on assignment | 77,800 |
| Project support | 45,000 |
| Consultants and staff for special assignment | 230,000 |
| TOTAL—Appropriations made in 1968 | <u>\$1,263,800</u> |

ROCKEFELLER FOUNDATION International Program in Field Research in Medical Sciences:

| | |
|---|----------------|
| Schistosomiasis research and control project, St. Lucia | \$ 299,000 |
| Staff on assignment | \$ 128,000 |
| Project support | <u>171,000</u> |

INTER-AMERICAN INSTITUTE OF AGRICULTURAL SCIENCES, Costa Rica:

San José

Toward a program for training Brazilian agricultural librarians; \$15,000;

Toward costs of a conference of the Inter-American Association of Agricultural Librarians and Documentalists, held in Bogotá, Colombia; \$13,000;

Turrialba

Operating costs of the permanent secretariat of the Inter-American Association of Agricultural Librarians and Documentalists; \$9,000;

Support of a meeting in Turrialba of the organizing committee of the Fourth Latin American Conference on Higher Agricultural Education; \$2,300;

ROCKEFELLER FOUNDATION International Program in Nutritional Sciences: expenses in connection with a meeting on nutrition research, held in New York; \$3,000;

TOWARD EXPENSES of an international seminar, held at the University of Reading, England, to assess agricultural development programs that have led to increased crop production in emerging nations; \$8,000;

TOWARD EXPENSES of a conference on East African rangelands, held at the Villa Serbelloni Research and Conference Center, Bellagio, Italy; \$16,530;

BOLIVIA

DR. LUIS VINCENTI, Universidad Gabriel René Moreno, Santa Cruz de la Sierra: to visit veterinary schools in Lima, Bogotá, Belo Horizonte, and São Paulo to become acquainted with their academic and administrative organization; \$1,570;

BRAZIL

FEDERAL UNIVERSITY OF MINAS GERAIS, Belo Horizonte: research on the biochemistry of molluscs by Drs. Eurico Figueiredo, Giovanni Gazzinelli, and Armando Neves, under the direction of Professor Carlos R. Diniz; \$9,000;

DR. W. LOBATO PARAENSE, Central Institute of Biology, University of Brasilia: to visit the schistosomiasis control project in St. Lucia and to observe biology departments in United States universities; \$2,800;

RURAL UNIVERSITY OF THE STATE OF MINAS GERAIS, Viçosa: toward the costs of library materials; \$15,000 for a two-year period;

CAMEROON

RICHARD LESIRE, director, Federal Higher School of Agriculture, Yaoundé: to visit agricultural colleges and international institutions in the United States and Canada; \$3,090;

CHILE

UNIVERSITY OF CHILE, Santiago: research, under the direction of Dr. Fernando Mönckeberg, on protein malnutrition in infants and preschool children; \$7,500;

COLOMBIA

INTERNATIONAL CENTER OF TROPICAL AGRICULTURE:

Rockefeller Foundation International Program in Agricultural Sciences; *see International, above*;

Toward costs of establishing the Center; \$331,000;

DR. MARVIN KOGER and DR. ALVIN CROPPER WARNICK, University of Florida, Gainesville: to review the animal science work of the Foundation's cooperative agricultural program in Colombia; \$1,400;

DR. ALBERTO PRADILLA, University of Valle, Cali:

To visit centers of nutrition research in the United States; to present a paper at the annual meeting of the American Society of Agronomy, held in New Orleans; and to attend a symposium at The Rockefeller Foundation; \$1,100;

To present a paper at a seminar on protein foods in the Caribbean, held in Georgetown, Guyana; \$500;

ROCKEFELLER FOUNDATION International Program in Agricultural Sciences: Colombian Program; see *International*, above;

UNIVERSITY OF VALLE, Cali: research on protein malnutrition and on the genetic improvement of the protein characteristics of food plants, in cooperation with the International Center of Tropical Agriculture; \$125,000 through October, 1971;

ECUADOR

NATIONAL AGRICULTURAL RESEARCH INSTITUTE, Quito:

Toward development of its experiment stations and support of research and training programs in corn, wheat, forages, and beef cattle; \$142,500;

Toward development of a rice improvement program; \$12,000;

ROCKEFELLER FOUNDATION International Program in Agricultural Sciences: Ecuadorian Cooperative Project; see *International*, above;

ETHIOPIA

HAILE SELASSIE I UNIVERSITY, Debre Zeit: to enable Dr. Melak H. Mengesha, College of Agriculture, to evaluate the culture and productivity of teff under a broad range of environmental conditions; \$12,400 for a two-year period;

INDIA

DR. SATISH C. ANAND, Punjab Agricultural University, Ludhiana: to study wheat breeding methodology at the International Maize and Wheat Improvement Center, Chapingo, Mexico; to participate in the International Wheat Symposium at Canberra, Australia; and to visit wheat research stations in the United States; \$4,015;

DR. SUMER MAL GANDHI, Agriculture Research Station, Jaipur: to study wheat improvement programs in the United States and Mexico; \$950;

INDIAN AGRICULTURAL RESEARCH INSTITUTE, New Delhi:

Dr. Joginder Singh; to observe research programs in corn improvement in the United States, Mexico, Thailand, and Colombia; \$5,110;

Dr. Madan Mohan Payak; to participate in the First International Congress of Plant Pathology, held in London; to study cereal diseases at Purdue University; and to visit centers of corn research in Switzerland, the United States, Mexico, and the Far East; \$4,960;

Dr. Vedula Venkata Chenulu; to attend the First International Congress of Plant Pathology, held in London; to work with Dr. R. L. Steere of the Agricultural Research Service, Beltsville, Maryland; and to observe plant virus research at centers in the United States and Europe; \$4,810;

Dr. Abhiswar Sen; to observe teaching programs and research in microbiology in United States and European institutions; \$4,010;

Dr. S. M. Chatterji; to work with Dr. W. D. Guthrie at the European Corn Borer Laboratory, Ankeny, Iowa, on studies of corn resistance to borers, and to participate in the Inter-Asian Corn Program workshop in Bangkok; \$3,495;

Dr. W. V. B. Sundara Rao; to visit the Department of Microbiology of the University of Sydney, the Cunningham Laboratory in Queensland, and other research centers in Australia concerned with symbiotic nitrogen fixation and methods of large-scale production and quality control of legume inoculation cultures; \$2,990;

Dr. Hari Krishan Jain; to study recent advances in genetics research in Japan, Australia, and the Philippines; and to participate in the International Wheat Genetics Symposium in Australia and the International Genetics Congress in Japan; \$2,890;

Dr. M. N. Sarin; to visit laboratories in the United States and Japan to observe work on mineral nutrition; \$2,135;

DR. J. S. KANWAR, Indian Council of Agricultural Research, New Delhi: to visit European, United States, and Mexican institutions to review soil and water management research, and to participate in the International Citrus Symposium at Riverside, California; \$3,735;

ROCKEFELLER FOUNDATION International Program in Agricultural Sciences: Indian Program; *see International, above*;

DR. JITENDRA PRASAD SRIVASTAVA, Uttar Pradesh Agricultural University, Pantnagar: to study wheat improvement programs in Australia and Japan and to attend the International Wheat Genetics Symposium in Australia and the International Genetics Congress in Japan; \$2,935;

JAPAN

DR. YUJIRO HAYAMI, Tokyo Metropolitan University: to consult with Foundation economists and agriculturists in Bangkok, Thailand, and at the International Rice Research Institute, Los Baños, Philippines, regarding his prospective research project in agricultural economics at the University of Minnesota, Minneapolis; \$900;

KENYA

EAST AFRICAN COMMUNITY, Nairobi:

Expanded information resources and services program for the East African Agriculture and Forestry Research Organization; \$20,000;

To enable F. W. Wangati, East African Agriculture and Forestry Research Organization, to pursue doctoral studies at Makerere University College, Kampala, Uganda; \$1,450 for a two-year period;

UNIVERSITY COLLEGE, Nairobi (University of East Africa):

Research on the physiology and endocrinology of the tsetse fly; \$10,000;

Dr. Reinhold Rudolf Hofman; to work in the Department of Anatomy, Harvard Medical School; to visit veterinary institutions in the United States and Latin America; to attend an international symposium on ruminants in England; \$6,470;

MEXICO

DR. EDUARDO CABELLO F., National Center for Livestock Research, Palo Alto: to observe the research programs of the Colombian Institute of Agriculture, Bogotá, and to consult with Rockefeller Foundation staff in Colombia on possible cooperative arrangements with the International Center of Tropical Agriculture; \$945;

INTERNATIONAL MAIZE AND WHEAT IMPROVEMENT CENTER, Chapingo:

Rockefeller Foundation International Program in Agricultural Sciences; *see International, above*;

Equipment for its headquarters; \$60,000;

To enable Dr. Joseph A. Rupert to establish a spring and winter wheat breeding project at the University of California, Davis; \$15,000;

Toward costs of an accelerated potato production program in West Pakistan and an in-service training program in Mexico; \$8,250;

To enable a team of crop physiologists to travel to Mexico for consultations with the Center's corn specialists; \$5,000;

DR. CARLOS ROBLES B., La Posta Center for Livestock Research, Veracruz: to observe the research programs of the Colombian Institute of Agriculture, Bogotá, and to consult with Rockefeller Foundation staff in Colombia on possible cooperative arrangements with the International Center of Tropical Agriculture; \$945;

NATIONAL REPUBLIC OF CHINA

JOINT COMMISSION ON RURAL RECONSTRUCTION, Taipei, Taiwan:

Development of a research program in brackish-water fish pond ecology and management by the Taiwan Fisheries Research Institute; \$75,000;

To enable members of the Corn Research Center to study downy mildew of corn; \$14,500;

NETHERLANDS

DR. EELKE KOOISTRA, Institute of Horticultural Plant Breeding, Wageningen: to lecture on vegetable breeding at the meetings of the American Society for Horticultural Science in Davis, California, and to observe experiment stations in the United States and at Puerto Peñasco, Mexico; \$1,645;

NIGERIA

DR. R. O. ADEGOYE, University of Ibadan: to visit farm tenancy projects in the United States; \$5,400;

AHMADU BELLO UNIVERSITY, Zaria:

Dr. I. S. Audu; to visit Rockefeller Foundation agricultural program centers in East Africa; \$1,425;

Dr. Vernon C. Larson; to visit agricultural and veterinary programs in Uganda and Kenya; \$1,230;

T. S. B. Aribisala, Ministry of Agriculture and Natural Resources, Western State, Ibadan: to visit centers of agricultural interest in Wisconsin and New York; \$1,560;

INTERNATIONAL INSTITUTE OF TROPICAL AGRICULTURE, Ibadan:

Rockefeller Foundation International Program in Agricultural Sciences; *see International, above*;

Toward its operating expenses; \$121,588;

PAKISTAN

ZAHUR ALAM, Potato Research Farm, Murree, West Pakistan: travel to Mexico to attend a five-month potato training program sponsored jointly by the National School of Agriculture, the National Institute of Agricultural Research, and the International Maize and Wheat Improvement Center, all in Chapingo; \$1,650;

MUHAMMAD SAEEED, Agricultural Research Station, Quetta, West Pakistan: travel to Mexico to attend a five-month potato training program sponsored jointly by the National School of Agriculture, the National Institute of Agricultural Research, and the International Maize and Wheat Improvement Center, all in Chapingo; \$1,650;

PERU

AGRARIAN UNIVERSITY, La Molina: purchase of an automatic amino acid analyzer for the Department of Nutrition; \$22,500;

FERMIN DE LA PUENTE CIUDAD, Agricultural Research and Extension Service, Lima: to attend meetings of the Potato Association of America at Corvallis, Oregon, and the Technical Committees Projects at Sturgeon Bay, Wisconsin, and to observe plant breeding programs at the University of Idaho; \$1,430;

UNIVERSIDAD NACIONAL DE SAN ANTONIO ABAD DEL CUZCO: construction of cases to house the César Vargas Herbarium, a collection of native plant species; \$2,000 for a two-year period;

UNIVERSITY OF SAN MARCOS, Lima:

For use by the Faculty of Veterinary Medicine toward scholarships in the international graduate program and for the purchase of equipment, supplies, and library and teaching materials; \$84,500;

Dr. Augusto Castillo G.: to visit Colombian and United States institutions conducting anaplasmosis research and to present a paper at the Joint Meeting of State-Federal Regulatory and Anaplasmosis Research Workers, in Stillwater, Oklahoma; \$1,670;

PHILIPPINES

INTERNATIONAL RICE RESEARCH INSTITUTE, Los Baños:

Rockefeller Foundation International Program in Agricultural Sciences; *see International, above*;

Support for an accelerated research and training program on cropping systems for tropical areas, under the direction of Dr. Richard Bradfield; \$182,500 through June, 1971;

Support for its international cooperative training and extension activities; \$93,000;

To enable its staff photographer, Urbito T. Ongleo, to provide photographic coverage of rice programs in Thailand and India; \$1,281;

To enable two staff members to travel to the United States to pursue graduate studies; \$1,200;

DR. MARTA T. MORALES, Department of Agriculture and Natural Resources, Manila: to return from Michigan State University to her position in the Philippines, with stops at potato research centers in Wisconsin and Mexico; \$1,035;

DR. MARCOS R. VEGA, University of the Philippines, Los Baños: to present a paper at the Ninth British Weed Control Conference, held at Brighton, England; \$1,465;

THAILAND

TOWARD OPERATING EXPENSES of the rice and corn-sorghum research programs in Thailand; \$100,000;

EXPENSES of a local committee to consult and advise on the development of an international graduate training program in nutritional sciences; \$5,000 through June, 1970;

SAINT LOUIS UNIVERSITY, Missouri:

Equipment and renovations for the Anemia and Malnutrition Research Center, University of Chiang Mai; \$48,000;

Toward architectural services for the building of the Anemia and Malnutrition Research Center, University of Chiang Mai; \$5,000;

UGANDA

MAKERERE UNIVERSITY COLLEGE, Kampala (University of East Africa):

Dr. D. H. Parish; to visit research institutions in the United States, Central America, the West Indies, and Colombia; \$2,800;

Dr. Kristian Oland; to visit universities and research centers in the West Indies, Colombia, Mexico, and Hawaii to gain information relating to crop science and production; \$2,435;

Dr. John Ddungu; to attend the national meeting of the American Horticultural Society at Davis, California, and to visit centers of crop research in the United States and the Philippines; \$1,490;

UNITED KINGDOM

INSTITUTE OF DEVELOPMENT STUDIES, University of Sussex, Brighton, England: research on the economic implications of different agricultural production systems in the Nduli district of Tanzania; \$8,350 for 12 months within the three-year period beginning in January, 1968;

DR. WERNER KLATT, St. Antony's College, Oxford, England: travel in Asia to complete his observations for a study of land and labor there; \$5,000;

T. R. TARN, University of Birmingham, England: additional support to extend his stay in Mexico to study the evolution of tuber-bearing *Solanum* species; \$1,350;

UNITED STATES

AGRICULTURE COUNCIL, New York: toward its operating expenses; \$25,000;

ACRONOMIC SCIENCE FOUNDATION, Madison, Wisconsin: to enable Dr. Canuto Cardona A. and Dr. Mario Gutierrez J. to attend the annual meetings of the American Society of Agronomy, the Crop Science Society of America, and the Soil Science Society of America, held in New Orleans; \$1,220;

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, Washington, D. C.: toward the expenses of four major speakers at its symposium "Research for the World Food Crisis," held in Dallas; \$3,815;

CASE WESTERN RESERVE UNIVERSITY, Cleveland, Ohio:

Collaborative program with the Rockefeller Foundation's cooperative schistosomiasis project in St. Lucia, to be conducted by the Department of Preventive Medicine of its School of Medicine; \$50,000 for a three-year period;

To enable Dr. D. L. Boros, Hebrew University, Jerusalem, Israel, to work in a schistosomiasis research program, under the direction of Dr. Kenneth S. Warren, in the School of Medicine; \$2,800 through June, 1970;

CONSERVATION FOUNDATION, Washington, D. C.: toward costs of a conference on ecological aspects of international development, held in cooperation with the Center for the Biology of Natural Systems, Washington University; \$25,000;

INSTITUTE OF INTERNATIONAL EDUCATION, New York: expenses of participants in a planning meeting sponsored by the Council on Higher Education in the American Republics, held in San José, Costa Rica; \$1,800;

JOHNS HOPKINS UNIVERSITY, Baltimore, Maryland: schistosomiasis research under the direction of Dr. Kaz Kawata, School of Hygiene and Public Health; \$3,707 beginning in January, 1969;

MICHIGAN STATE UNIVERSITY, East Lansing: to enable Dr. Victor E. Smith to undertake research in the United States and Nigeria on the economic and nutritional consequences of changes in Nigerian technology; \$13,930;

NATIONAL INDUSTRIAL CONFERENCE BOARD, New York: toward the establishment of the Agribusiness Council; \$10,000;

NORTH CAROLINA STATE UNIVERSITY, Raleigh:

To enable Dr. David H. Timothy, Department of Crop Science, to make a collection of *Tripsacum* in South America; \$2,700;

Dr. Stanley W. Buol; travel to Brazil to inspect soil sample sites and collect samples; \$750;

NORTH DAKOTA STATE UNIVERSITY, Fargo: to enable Dr. Norman D. Williams, Department of Agronomy, to attend wheat genetics meetings in Australia and Japan; \$2,450;

OCEANIC FOUNDATION, Makapuu Point, Hawaii: support for the research program of its Brackish-Water Fish Culture Laboratory; \$50,000;

OKLAHOMA STATE UNIVERSITY, Stillwater: research project in the Department of Animal Science on the nutrition of ruminant animals; \$15,000;

OREGON STATE UNIVERSITY, Corvallis: to enable Dr. Harold J. Evans to undertake research and study at the ARC Unit of Nitrogen Fixation, University of Sussex, England; \$15,000;

DR. G. C. POPPENSIEK, DR. P. P. LEVINE, and DR. S. GORDON CAMPBELL, Cornell University, Ithaca, New York: to review graduate training in the veterinary schools of the Federal University of Minas Gerais, Belo Horizonte, Brazil; the University of San Marcos, Lima, Peru; and the National University of Colombia, Bogotá, and to explore the possibility of cooperative programs between these institutions and Cornell's New York State Veterinary College; \$4,405;

PURDUE UNIVERSITY, Lafayette, Indiana:

Research, under the direction of Dr. Oliver E. Nelson, Jr., on the qualitative improvement of corn; \$9,200;

To enable Hector Muñoz of the Inter-American Institute of Agricultural Sciences, Turrialba, Costa Rica, to complete work for his Ph.D. in the Department of Animal Science, School of Agriculture; \$3,000;

Dr. Paul L. Crane; to participate in the Andean Regional Corn Meetings in Lima, Peru, and to review corn breeding in the Foundation's cooperative agricultural program in Colombia; \$1,525;

DR. F. F. RIECKEN, Iowa State University, Ames: to study soil problems in Ghana and to confer with staff of the Soil Research Institute at Kumasi, Ghana, and the International Institute of Tropical Agriculture at Ibadan, Nigeria; \$1,760;

TRAVEL EXPENSES for the following participants in the symposium "Strategy for the Conquest of Hunger," sponsored by The Rockefeller Foundation at the Rockefeller University, New York; \$38,510;

H. E. Malik Khuda Bakhsh Bucha, Minister for Food, Agriculture, and Cooperation, Government of West Pakistan; to participate in the symposium and to visit institutions in the United States, the Middle East, Europe, and Mexico;

M. R. Chakratong Tongyai, Ministry of Agriculture, Government of Thailand, Bangkok; to participate in the symposium and to visit institutions in Europe, the United States, Mexico, and Japan;

Francisco de Sola, head of H. de Sola & Sons, San Salvador, El Salvador; to participate in the symposium and to visit Mexico;

Principal Y. K. Lule, Makerere University College, Kampala, Uganda; to participate in the symposium and to make visits to New Delhi, Ottawa, and London;

Ing. Jorge Mejia Salazar, president of the Bank of Bogotá, Colombia; to participate in the symposium and to visit educational institutions in the eastern United States;

Dr. Kullal Chickappu Naik, Vice Chancellor, University of Agricultural Sciences, Bangalore, India; to participate in the symposium; to attend the International Citrus Symposium at Riverside, California; to undertake a study tour of the International Rice Research Institute, Los Baños, Philippines; and to visit institutions in the United States and Mexico;

Dr. Orlando Olcese, Minister of Agriculture, Lima, Peru; to participate in the symposium and to visit educational institutions in the eastern United States;

Ing. Roberto Osoyo A., Director General of Agriculture, Ministry of Agriculture, Mexico City; to participate in the symposium;

President Carlos P. Romulo, University of the Philippines, Quezon City; to participate in the symposium and to visit institutions in the United States;

Chidanbara Subramaniam, former Minister of Food and Agriculture, Government of India; to participate in the symposium and in the Asian Development Society for International Development meetings in Washington, D. C., and to visit institutions in the United States;

UNIVERSITY OF CALIFORNIA:

Davis

Research in the Department of Animal Physiology on the use of antifertility drugs to control rat populations; \$78,000 for a three-year period;

Toward the operating expenses of the International Agricultural Institute; \$15,000 through December, 1970;

To enable Dr. J. G. Cunningham and Dr. P. M. Schantz to attend the First World Congress of the International Veterinary Students Union in Edinburgh, Scotland; \$864;

Riverside

Research, by the Department of Soils and Plant Nutrition, on soil environmental conditions in wheat production; \$10,000;

UNIVERSITY OF HAWAII, Honolulu: studies in the College of Tropical Agriculture on bacterial blight of rice; \$14,000;

UNIVERSITY OF MINNESOTA:

Minneapolis

For use by the Institute of Agriculture in support of a research project, "Agricultural Growth in an International Perspective," by Dr. Yujiro Hayami of Tokyo Metropolitan University, Japan; \$15,000;

Morris

Dr. Rodney A. Briggs; to attend a conference on agricultural research priorities for economic development in Africa, held in Abidjan, Ivory Coast; \$1,950;

St. Paul

Dr. Dale N. Moss and Dr. Donald C. Rasmusson; to observe small-grain improvement programs at agricultural research centers in Hawaii, the Philippines, Taiwan, and Japan; \$4,160;

UNIVERSITY OF NEBRASKA, Lincoln: in support of a research program, in cooperation with the International Maize and Wheat Improvement Center, on the modification of tropical corn germplasm for adaptation to higher latitudes, on sensitivity to photoperiod, and on breeding methods; \$125,000 for a five-year period;

UNIVERSITY OF PENNSYLVANIA, Philadelphia: attendance of an agricultural scientist at the Conference on the Role of Village Workers in Nutrition and Family Planning, held at the Villa Serbelloni Research and Conference Center, Bellagio, Italy; \$1,050;

UNIVERSITY OF WISCONSIN, Madison: research and training in potato improvement, in the areas of brown rot disease, germplasm evaluation, and potato breeding systems; \$60,000 through June, 1971;

VOLUNTEERS FOR INTERNATIONAL TECHNICAL ASSISTANCE, Schenectady, New York: toward the expenses of an evaluation trip to the Philippines by a VITA representative; \$3,350;

WEST VIRGINIA UNIVERSITY FOUNDATION, Morgantown:

Development of an annotated computer-based bibliography of the agricultural sciences in East Africa; \$15,000;

Toward costs of a three-month feasibility study on the agricultural technology and the natural and human resources required to improve conditions in a depressed rural area of West Virginia; \$8,600;

YALE UNIVERSITY, New Haven, Connecticut: to enable Professor William N. Parker to undertake research in the United States and Great Britain on the role of agriculture in economic growth; \$7,500;

WEST INDIES

Jamaica

STEPHEN YAO ATSU, University of the West Indies, Mona: to observe modern dairy production and grassland management systems at universities in the United States and Puerto Rico; \$725;

St. Lucia

DR. LOWELL T. COCCESHALL, retired trustee of The Rockefeller Foundation, Foley, Alabama: to observe developments in the schistosomiasis control project in St. Lucia; \$1,910;

DR. HARRY W. HUIZINGA, Illinois State University, Normal: to conduct studies of wild and domestic animals in St. Lucia that may be serving as host reservoirs of *S. mansoni*; \$1,070;

MINISTRY OF EDUCATION AND HEALTH, Castries: to enable Francis Fletcher to take training at the University of the West Indies, Jamaica, for the post of senior public health inspector; \$1,750;

ROCKEFELLER FOUNDATION cooperative projects in schistosomiasis research and control; see *International, above*;

UNIVERSITY OF VALLE, Cali, Colombia: to enable students in the Faculty of Sanitary Engineering to assist the Research and Control Department, Castries, in the design of small water systems for its schistosomiasis control project; \$4,825;

Trinidad

JOHN CROPPER, University of the West Indies, St. Augustine: to observe modern dairy production and grassland management systems at universities in the United States, Puerto Rico, and the West Indies; \$925;

UNIVERSITY OF THE WEST INDIES, St. Augustine: toward expenses of 11 participants in the "Caribbean Symposium on Nematodes of Tropical Crops," sponsored jointly with the Commonwealth Development Corporation, London, England; the Food and Agriculture Organization of the United Nations; and the Commonwealth Bureau of Helminthology, St. Albans, England; \$8,500;

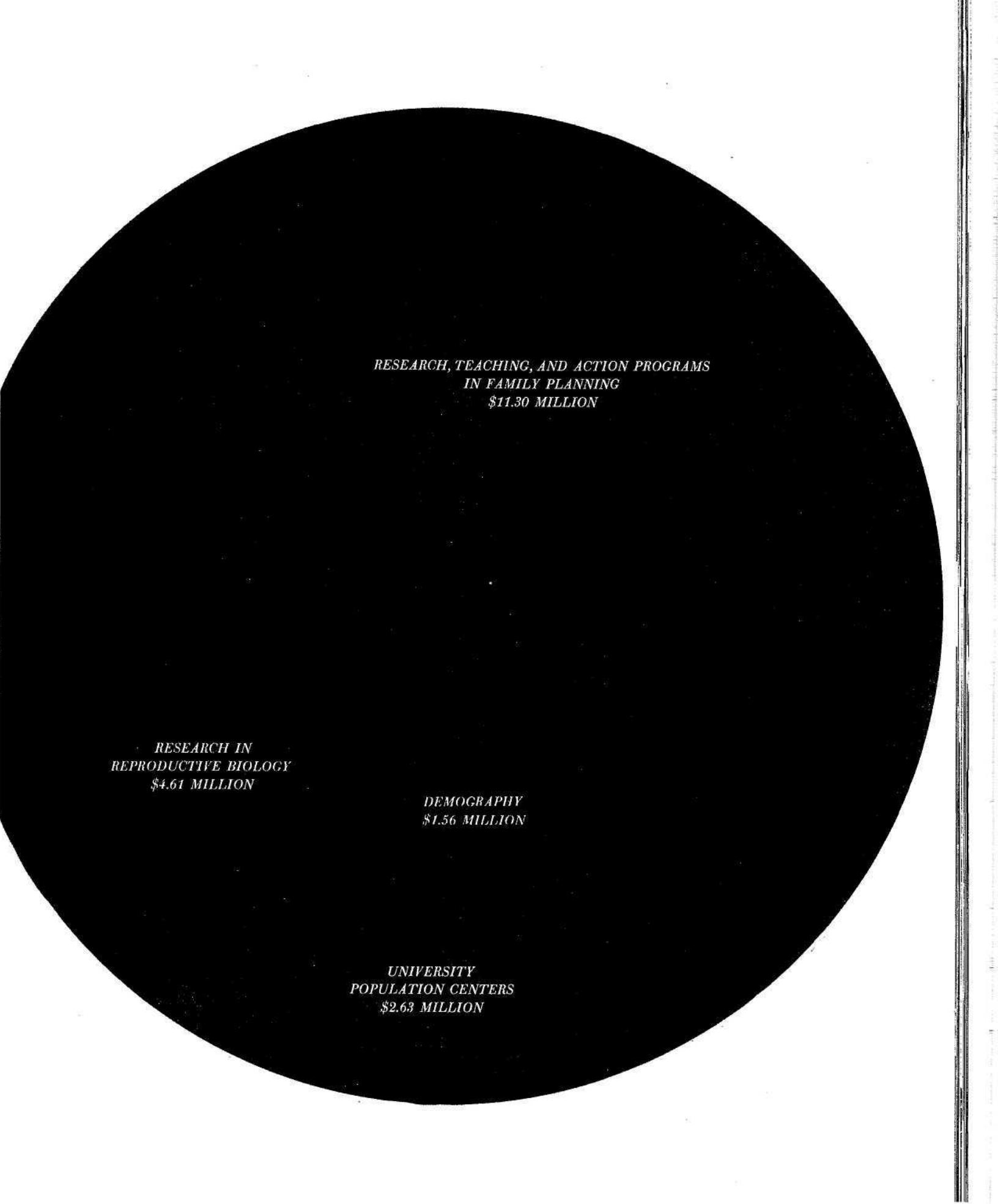
YUGOSLAVIA

DR. ZDENKO VITASOVIC, University of Zagreb: to study hybrid corn seed production and to visit agricultural research and education centers in the United States and Mexico; \$945.

PROBLEMS OF POPULATION

"Experience of the past few years indicates that the oral pill and the IUD, while far superior in many respects to contraceptive methods available previously, have serious drawbacks that limit their effectiveness. . . . We are faced with the danger that within a few years these two 'modern' methods, for which such high hopes have been held, will in fact turn out to be impracticable on a mass scale. . . . It is clear that major improvements in contraceptive methodology are required. . . . Radically better methods can come with certainty only from research of high quality undertaken in depth from different approaches. First-rate research is today well below the level needed to bring about major developments in reproductive biology."

*GRANTS APPROVED 1963
TOTAL \$20.10 MIL*



*RESEARCH, TEACHING, AND ACTION PROGRAMS
IN FAMILY PLANNING
\$11.30 MILLION*

*RESEARCH IN
REPRODUCTIVE BIOLOGY
\$4.61 MILLION*

*DEMOGRAPHY
\$1.56 MILLION*

*UNIVERSITY
POPULATION CENTERS
\$2.63 MILLION*

THE WORLD VIEW

The last decade has seen very significant advances in the population field throughout the world. This progress, which has accelerated rapidly over the last five years, has been largely in the direction of increased recognition on the part of governments of the problems posed by population growth, accompanied in the developing countries by awareness of the urgent necessity to begin to limit that growth.

About two dozen countries in Asia, Africa, and Latin America have adopted official policies aimed at reducing population growth rates, or have instituted large-scale, usually nationwide, family planning programs under governmental auspices, or both. These programs and policies began in the 1960's in all of these countries except India, where a population policy was formulated in 1952; here, however, a major reorganization of the program took place in 1965.

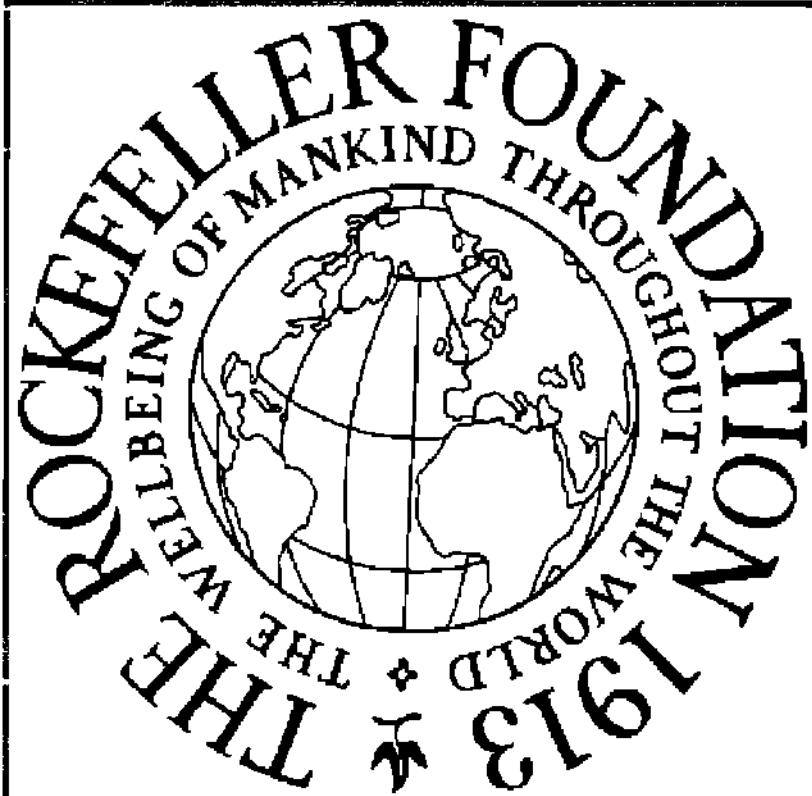
Universities or health departments in a further ten countries that had no national policy or program began during this same period to carry out family planning programs on an exploratory or dem-

onstration basis. Taken together, these two efforts account for about two-thirds of the population of the developing world. Of the 13 largest developing countries, with populations over 25 million, only three—Nigeria, Brazil, and Burma—have taken no official action to encourage family planning.

During the past ten years, considerable progress has been made in these countries in organizing, financing, and setting up the administrative and technical machinery required to provide mass birth control services. These are clearly essential steps toward control of population growth, although far removed from the eventual goal of reduction of birth rates, which have as yet begun to decline in only a few countries with small populations and more manageable problems—Hong Kong, Singapore, and Taiwan—and also possibly in one larger country, South Korea.

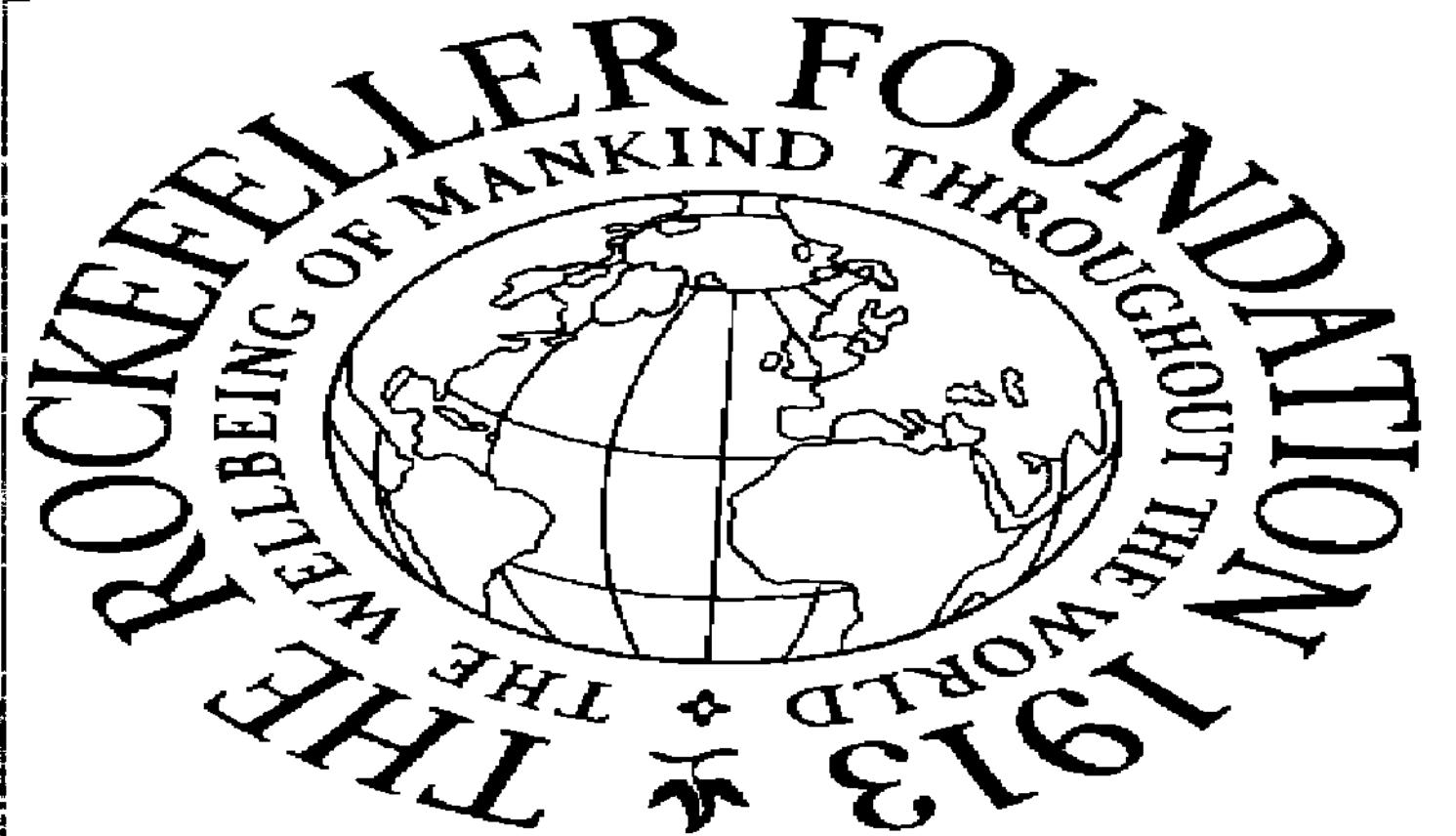
There have also been important advances in education and training in the area of population. In many countries with national family planning activities, extensive training programs have been established in order to equip local personnel responsible for field operations with the necessary background

| POPULATION (MILLIONS) | OFFICIAL POLICY AND/OR PROGRAM | SOMETHING OFFICIAL | NOTHING OFFICIAL | |
|--------------------------|--|--|--|--|
| 500 + | China (1962?) India (1952, 1965) | | | |
| 100-500 | Pakistan (1960, 1965) | Indonesia | | |
| 50-100 | | | Nigeria Brazil | |
| 25-50 | Turkey (1965) United Arab Republic (1966) S. Korea (1961) | Mexico Philippines Thailand | Burma | |
| 15-25 | Iran (1967) Colombia (1967) | | Ethiopia Congo N. Vietnam S. Vietnam | |
| 10-15 | Morocco (1966) Taiwan (1964) Ceylon (1967) | Peru Algeria Nepal | Sudan Tanzania N. Korea | |
| Less than 10 | Malaysia (1966) Kenya (1966) Chile (1966) Tunisia (1966) Hong Kong (1964) Honduras (1965) | Singapore (1966) Jamaica (1966) Costa Rica (1967) Mauritius (1965) Barbados (1966) | Venezuela Cuba Guatemala Dominican Republic | Africa 31 Countries Asia 12 Countries Latin America 9 Countries |



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India is one of several nations (see chart at left) that have integrated national population stabilization programs with overall development plans. One of the staggering problems is how to extend the programs from centers such as New Delhi's All India Institute of Medical Sciences (above) to thousands of rural communities.



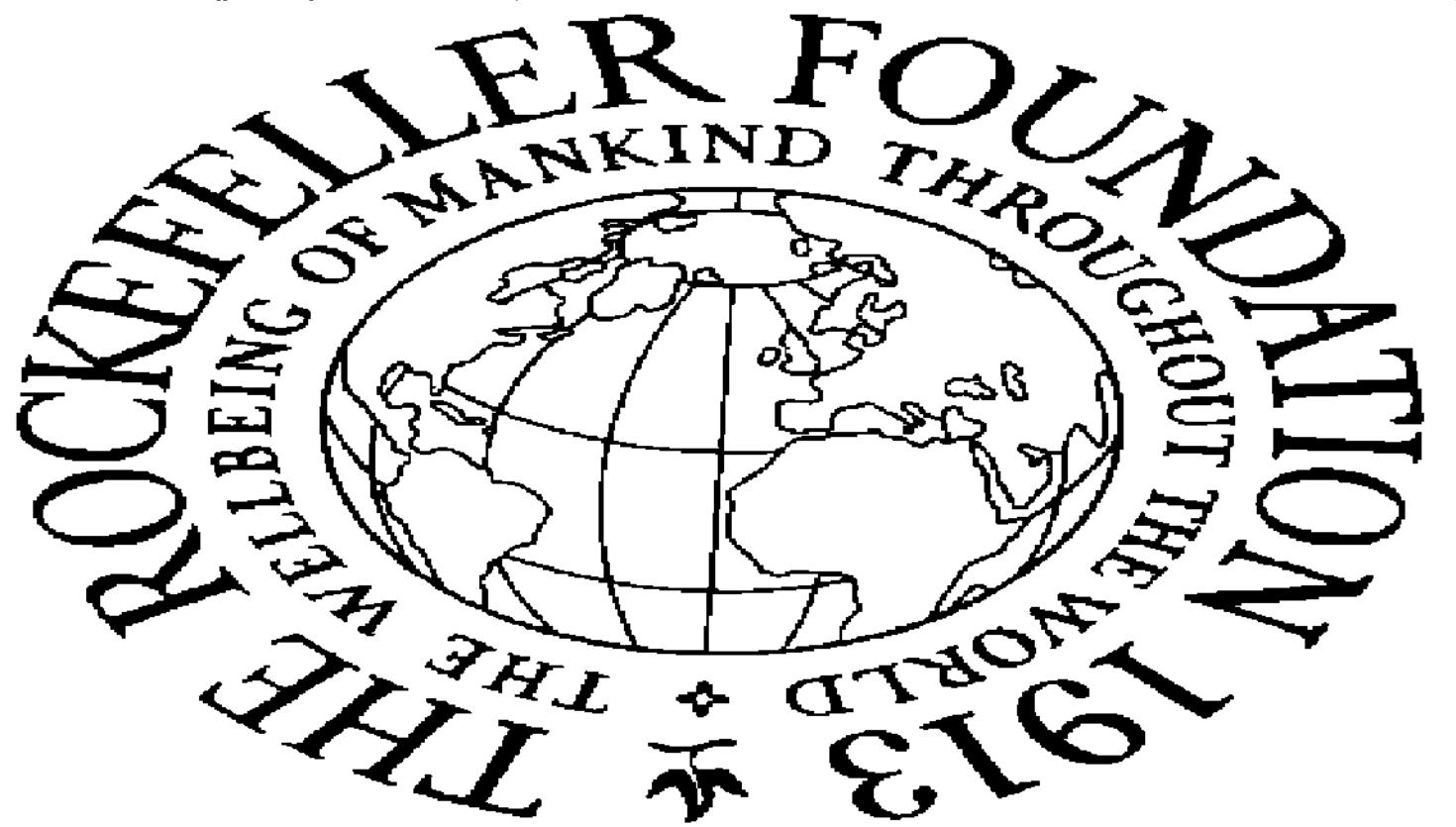
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Population programs often have modest beginnings. Young Turkish fathers meet with a field worker in a coffeehouse; Liberian mothers pick up information at

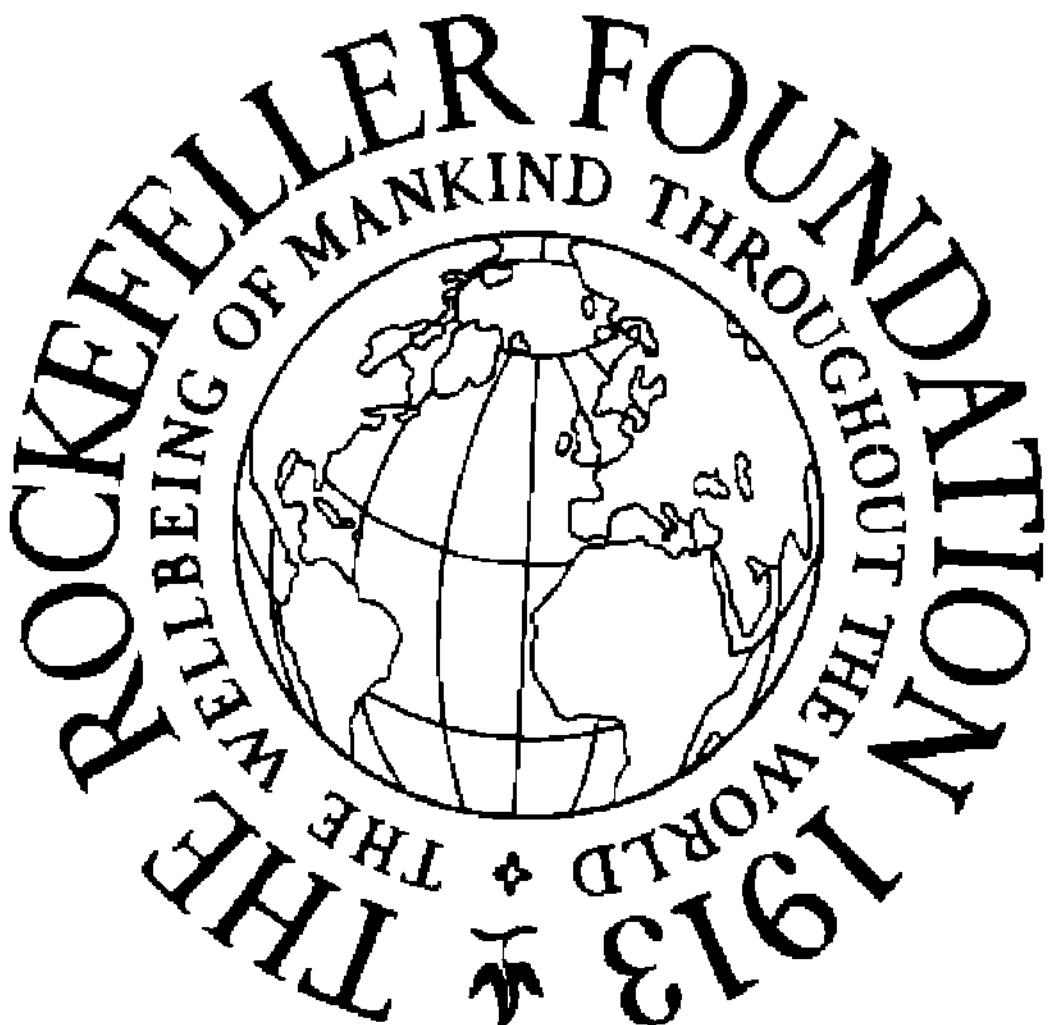
a child clinic. The interest of a few can spark the formation of private voluntary groups, and growing awareness can lead to official programs as it did in Turkey.



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As governmental agencies become convinced that organized action is essential to national development, they often turn to the Population Council for technical assistance. In Southeast Asia, family planning information is becoming an optional part of health services

delivered by official agencies. The Rockefeller Foundation has long supported training programs of the Council, and has stimulated family planning in the rural health centers in which universities cooperating with the Foundation's University Development Program are active.



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and skills. Advanced educational programs for graduate students and postdoctoral scholars in the wide range of disciplines essential to population studies have been organized in a number of universities in the United States (Harvard, Johns Hopkins, and Columbia Universities; the Universities of North Carolina, Pittsburgh, Michigan, and California) and elsewhere (in Chile, Colombia, Thailand, the Philippines), usually through the mechanism of special population centers set up on a university-wide, interdisciplinary basis.

These advances have in large part been stimulated by progress in contraceptive technology. Over the last five years there has been a very large accumulation of experience with the oral pill and the plastic intrauterine device (IUD) in many countries and under a wide variety of conditions. This experience has led to a more precise definition of the optimum techniques for use of these methods and has thrown light on their limitations; these drawbacks appear to be sufficiently serious to urgently warrant greatly increased research efforts to develop better methods of fertility control.

PRINCIPLES OF THE FOUNDATION'S PROGRAM

Close scrutiny of needs, of opportunities, and of the work of many other organizations was clearly necessary if the Foundation was to make an important contribution to the solution of a problem which encompasses so much of human knowledge and experience and which cuts across so many disciplines. Problems of population involve such diverse areas as demography, economics, politics, theology, ethics and morals, psychology, motivation theory and other behavioral sciences, reproductive biology and physiology, clinical and preventive medicine, public health, public administration, management science, communications, marketing, and advertising—to name only the major subjects closely related to the field.

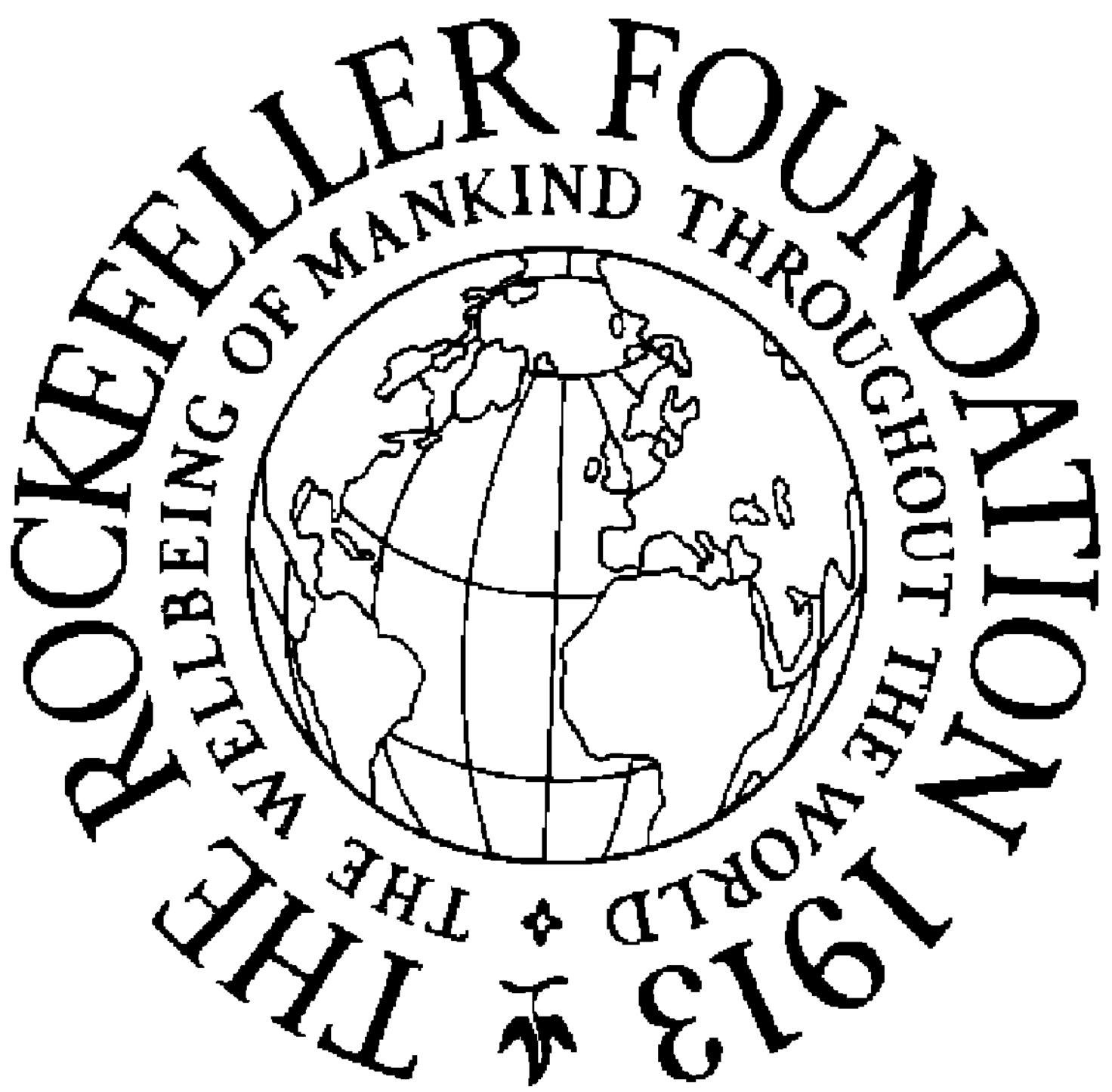
These considerations have led the Foundation to concentrate its support on projects that, firstly, are directly relevant to the overall goal of population stabilization, and that, secondly, could not be realized without support from the Foundation. The Foundation continuously reviews its own operating

One of the outstanding achievements in the worldwide effort to stabilize populations is the program in Santiago, Chile, spearheaded by Dr. Benjamin Viel (below,

leaning in doorway). Movies, followed by informal explanations, shown to newly delivered mothers are persuasive means applied at a receptive time in their lives.



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principles and keeps closely in touch with representatives of other organizations that have population programs, in order to avoid duplication of effort and to insure that the resources available are used in such a way as to complement and reinforce their activities.

THE EVOLUTION OF NATIONAL FAMILY PLANNING PROGRAMS

Several organizations are concerned with the early stages of development of family planning in countries where there is no apparent interest in it as yet, or where political leaders are opposed to population measures. Here, progress can be made by identifying an individual or a small group whose interest can be developed, either in beginning family planning programs on a small scale or in bringing influence to bear on government leaders, or both. This kind of operation, which is essential to creating a climate of opinion favorable to family planning, is characteristic of the Pathfinder Fund; organizations like the American Friends Service Committee and the World Council of Churches have also had substantial—and successful—experience along these lines, usually as a part of broader social welfare programs.

These programs are intended to lead to the next stage of development—the formation of private voluntary groups to provide for expanded family planning through revision of clinical services. Since in developing countries these groups often include local leaders, added prominence is given to population concepts, with the consequence of further progress toward establishing a national policy or program. Characteristically, such local groups affiliate with the International Planned Parenthood Federation, which then provides needed outside financing. The Foundation has assisted both the Federation and the American Friends Service Committee with the costs of these activities.

In the next phase of development of family planning, a government decides to formulate a national population policy, to undertake a national family planning program, or both. It needs the service of experts to conduct a study of its demographic characteristics and their implications for the future, to formulate policy, to help with the design and organization of a family planning program adapted to the local situation, and to provide continuing advice on and supervision of the day-to-day administration of the action program and the evaluation of its effectiveness.

The Population Council is an organization well equipped to undertake this kind of activity, and has had long experience in it, with demographic consultants or technical-assistance advisers currently resident in a dozen countries in Asia, Africa, and Latin America. The Foundation has supported the Council's Technical Assistance Division as its contribution to national family planning programs abroad, rather than operating such programs through its own staff or providing technical advisers and consultants to governments conducting them.

UNIVERSITIES AND POPULATION PROGRAMS

In this country, and in a few selected universities abroad where circumstances were favorable, the Foundation has been giving special attention to assisting medical schools to establish full-time family planning units, usually in departments of obstetrics and gynecology, in order to provide an academic framework for systematic teaching and research in this field.

In the past, the subject has not been adequately covered in the majority of medical schools, and whatever instruction was given was more or less an adjunct to the regular curriculum. As a result, the teaching of family planning was not only limited in scope, but was presented in a random and unorganized way; it therefore carried little impact and failed to convey to the student any real sense of the urgency and importance of the population problem. Opportunities for research in family planning were almost totally lacking. As a result, physicians as a group were inadequately trained in the technology of family planning and in the broader significance of population matters. This defect is the more serious in that, of the contraceptive methods available at present, those (the pill and the IUD) most effective and most suitable for use in developing countries and in poorly educated and poorly motivated populations, require medical participation and supervision. It thus becomes important to insure the informed interest of the health professions in family planning and population problems in the broader sense. This has special significance in developing countries, particularly in Latin America, where physicians are often in leadership roles. In Chile and Colombia, for example, the medical profession led the way in the development of population programs, and took the initiative in securing governmental acceptance of family planning.

The introduction of the study of family planning and related fields into medical school curricula,

both undergraduate and graduate, in a systematic and concentrated way, should do much to increase the involvement of the medical and allied professions in population programs and thus bring their special skills and influence to bear on the problem. It should also create a favorable environment for the growth of teaching and research in the field, and help to attract to it a reasonable proportion of talented students.

Programs of this kind have been assisted at the **Universities of Washington, North Carolina, and Chicago**; at **Case Western Reserve, Baylor, Tulane, and Cornell Universities**, and abroad at the **University of Chile**, the **University of Valle in Colombia**, and **Hacettepe University** in Turkey. In all of these, the primary aim is to give emphasis and focus to teaching and research in family planning and population for medical students and others in the health professions. The methods and approaches being used in the several institutions show interesting differences.

At Tulane the program was designed to test the hypothesis that the provision of family planning services of high quality to the indigent—who, as in many cities, lacked access to them—would reduce their high infant-mortality, maternal-mortality, and stillbirth rates; characteristically, these indices among the poor are about double the national average. If this approach proves valid, the demonstration will reinforce the efforts of federal agencies, such as the Children's Bureau and other branches of the Department of Health, Education, and Welfare, to promote family planning as a standard part of good health care. Also, if it can be shown that making voluntary family planning services available to the poor results in reduction of family size, and thus over the long run contributes to their social and economic betterment, the Office of Economic Opportunity will be helped in its attempt to obtain support for increasing its family planning activities.

Accordingly, the Tulane program has as its goal complete coverage of the indigent population of Orleans Parish (metropolitan New Orleans), which includes an estimated 50,000 women in the reproductive age groups, about 80 percent of whom are Negro. A program on a mass scale is required if the necessary facts are to be obtained within reasonable time. In its first 13 months of operation, the clinic, aided by several satellite clinics set up in housing developments, has already enrolled and is following over 8,000 patients, or about one-sixth of the target population.

A further aim of the Tulane program is to assist the state government with the design of a comprehensive state-operated family planning service to cover the indigent of all rural parishes. Here the problems of administration of services, logistics, and follow-up are very different from those of a metropolitan area. For this purpose, a pilot service was established in Lincoln Parish, which is typical of rural Louisiana. After it had been operating for a full year, the indigent birth rate in this county fell by about one-third in comparison with the rate for the year preceding the family planning program; birth rates in neighboring untreated control parishes rose slightly. The illegitimate birth rate dropped by about 40 percent over the previous year.

At the University of Washington in Seattle, the emphasis is on the epidemiological approach to unwanted pregnancy viewed as a disease, and prevention of the disease not only through family planning, but, at a more fundamental level, through intensive educational campaigns. These are carried out within the school system and through adding instruction in reproductive biology and population to the curricula of the University's Schools of Education, Social Work, and Nursing, the professions which deal most directly with the poor in metropolitan Seattle.

At Cornell and Case Western Reserve, major attention has been given in the beginning phases of the program to improving the instruction of medical students in family planning and its importance for the health of families. For the past 15 years Case has had in effect a curriculum which stresses the importance of the environment and the life situation for health. Under this system the beginning student is assigned to a family in which there is a pregnant woman; during his medical school career he has primary responsibility, under close supervision, for the total health care of all members of the family. With the expansion of the medical school's family planning clinic, made possible by the Foundation's grant, birth control advice and services were added to this system, and the student is now responsible for this aspect of health care, again under faculty supervision.

At Cornell, a curriculum revision provides for integrated instruction in reproductive biology extending through the four-year course; the first-year pre-clinical course includes lectures on "Conception Control and World Population." Students will participate in the work of the family planning clinic when construction of a new outpatient building is completed. A grant from the Foundation provided

one-half the costs of that portion of the building to be used for the family planning clinic; the space and facilities now available do not permit more than routine service to a limited number of patients. In the meantime, a recent resident in obstetrics has been appointed full-time director of the family planning clinic, after completing a year of graduate study in population at Johns Hopkins University under a fellowship from the Population Council.

There are also interesting variations in the university programs receiving Foundation support abroad. At the University of Chile in Santiago, a family planning program was accepted by the government as a means of reducing the incidence of induced abortion. At that time the only method of limiting family size available to the poor, abortion was the chief cause of maternal mortality in the country and was responsible for substantial social and economic costs. The University's Department of Preventive Medicine, which is responsible for medical care services in a low-income district of Santiago, has undertaken to test whether preventive measures are feasible. With aid from the Foundation it is developing

a family planning program for about 100,000 women in the reproductive age groups in this population. About one-fifth of these are currently receiving services; after the first three years of the program, the birth rate in the district fell by about one-fourth; there was an accompanying decrease of about one-third in the number of hospitalized abortions. More recently, the Department has begun a demonstration project to test methods of delivery of family planning services in rural areas.

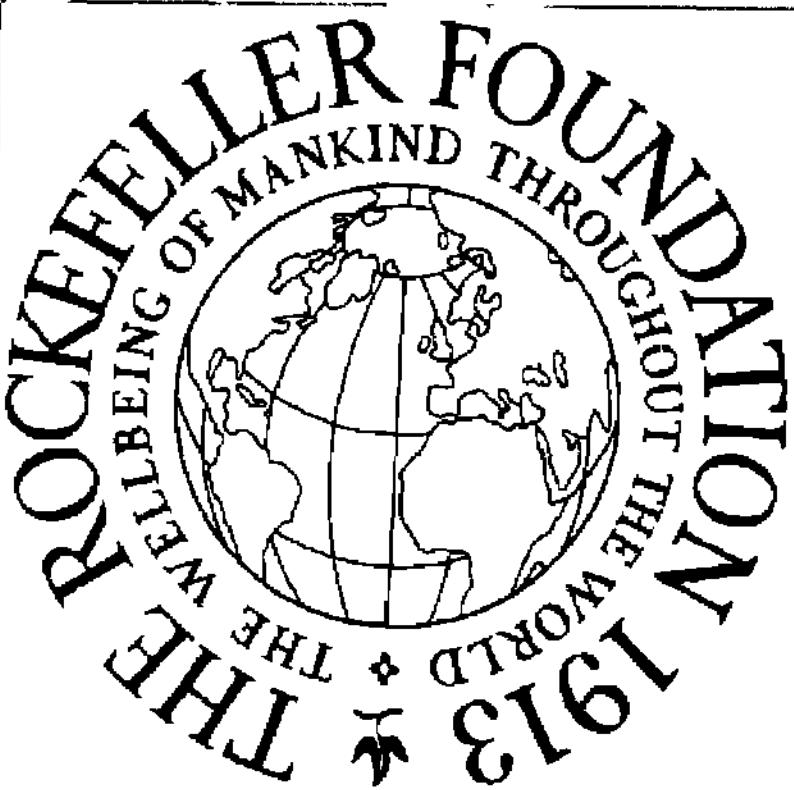
At the University of Valle, in Colombia, the family planning program is part of a major university-wide population studies center whose work has contributed to making Colombia the leading Latin American country in research and planning in the population field. The center is also responsible for training in family planning methods for doctors staffing the national family planning program. Through outlying clinics in rural and semirural areas, such as the Candelaria community health project, it is experimenting with techniques for providing family planning services to non-urban populations.

The Rockefeller Foundation attaches considerable importance to encouraging U. S. medical schools to make population problems a part of their curricula, research

activities, and community services. At the University of Washington's medical school, Dr. Ronald J. Pion (below) directs a new division of family planning and education.



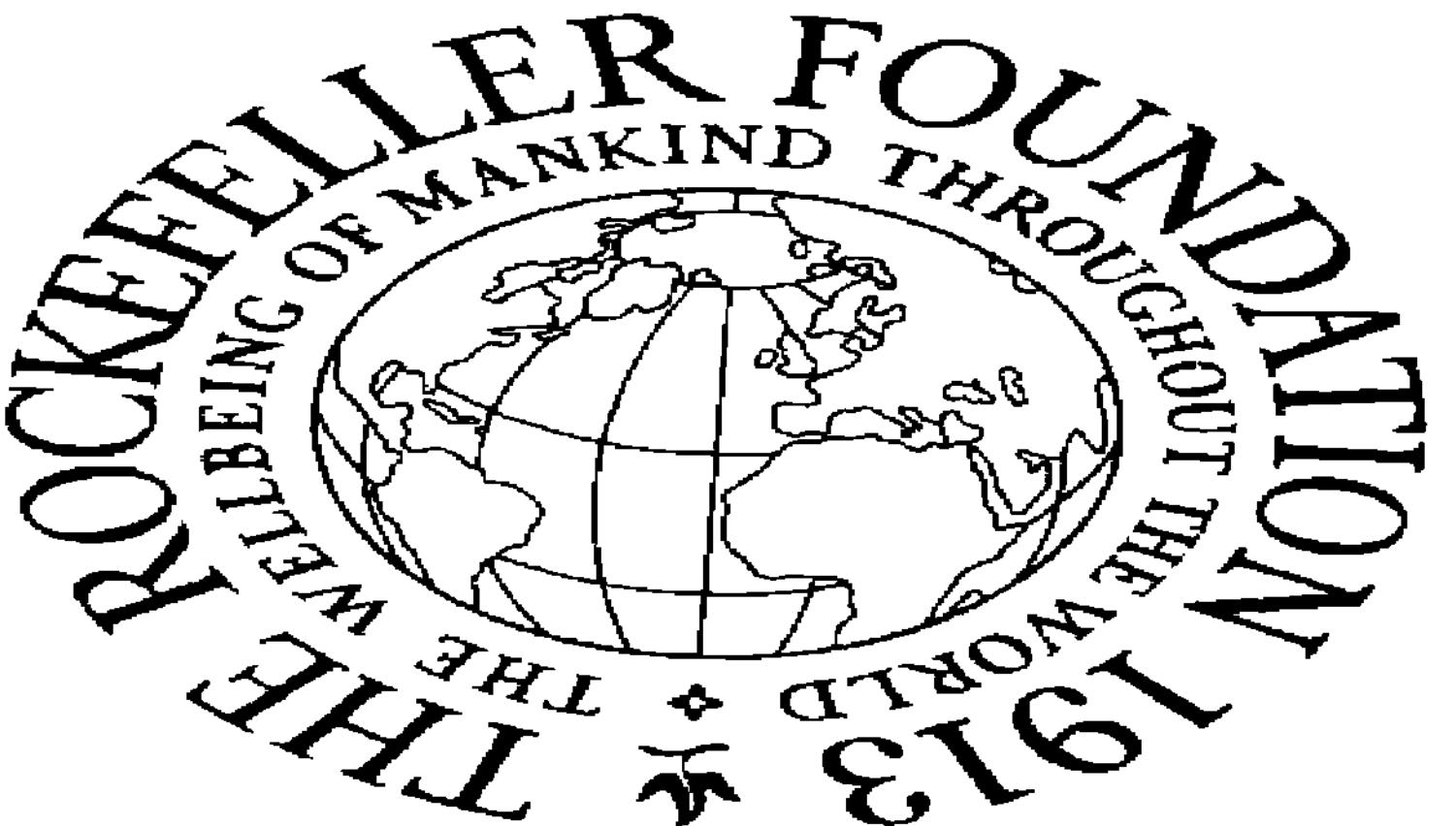
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At Case Western Reserve (above), every medical student helps care for a patient during and after her pregnancy; family planning is taught in the school's curricu-

lum. In New Orleans (below), family planning clinics are part of Tulane's successful Center for Population and Family Studies, an effective action and study complex.



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REACHING LARGER NUMBERS

The extension of family planning from research and training centers to communities, both urban and rural, is of course crucial to the development of programs aimed at reducing birth rates. A number of approaches to this problem are receiving continuing attention from the Foundation. The addition of family planning to comprehensive community health services in rural areas is being tested at Candelaria, and also in the village complex of Ballabhgarh near New Delhi. This project is being carried out by the **All India Institute of Medical Sciences**. A similar development is envisaged for the community health project of the **University of the Philippines** at Bay, a group of rural villages near Los Baños.

Another possible method for extension of family planning to the community is through a systematic educational and service campaign carried out in large obstetrical hospitals and reaching women in the immediate postpartum period. An extensive experimental program organized by the Population Council in 26 such hospitals in 15 countries including the United States was supported in part by the Foundation. It was responsible for securing acceptance of family planning, using primarily the IUD, by more than 100,000 women in the first 18 months of the experiment. An important finding was that the average age of those accepting was substantially lower than that of acceptors in the national family planning programs of those countries with data available. This means that the fertility of postpartum acceptors, and the potential number of future births averted, was significantly greater than was the case with acceptors in routine programs. Another point of extreme interest emerged—the number of "indirect" acceptors (friends and relatives of women hospitalized for delivery, to whom family planning services were made available on request) almost equalled the number of postpartum women at whom the program was directed. This finding underscores the significance and the value of making information and education on family planning available to large numbers of people.

Another extension approach supported through a recent Foundation grant will be made by the **Planned Parenthood Federation of America**. This experienced organization will establish a Center of Family Planning Program Development, designed to give advisory and technical services to community agencies interested in providing family

planning to the urban poor in the United States, to assist in the organization of efficient and well-run birth control programs, and to help with obtaining funds for their support from federal, state, and municipal sources.

Another community-oriented approach is being explored by the **Mount Sinai School of Medicine** in New York, again with assistance from the Foundation. Here, the Department of Obstetrics and Gynecology is giving attention to one aspect of the population problem of the urban poor—the large numbers of pregnant unmarried teenagers.

The problem of delivery of family planning services to the poor in metropolitan areas is directly linked to the more general problem of provision of better health care. Two grants from the Foundation, one to the **Albert Einstein College of Medicine** of **Yeshiva University** and the other to the **Harvard Medical School**, for systematic studies of methods of rationalizing and improving the delivery of effective and economical health services, were made this year under the Equal Opportunity Program, but they relate as well to this aspect of the population problem.

These and other action programs described above represent about 56 percent of the total of \$20 million appropriated by The Rockefeller Foundation for problems of population since 1963, a concentration which reflects the decision to give priority to action programs closely related to population control.

The rest of the Foundation's investment in the population program was divided among three major categories of population studies. About 8 percent (about \$1.56 million) was appropriated for research and training in demography, with major grants to **Princeton University's Office of Population Research**, one of the world's leading resources in this field; to the **United Nations Economic Commission for Asia and the Far East (ECAFE)** for the services of regional demographic advisers; to the **Population Council** for its demographic fellowship program; and to the **Colegio de México** for research programs in its Center for Economic and Demographic Studies. About 23 percent (\$4.6 million) was appropriated for research in reproductive biology. About 13 percent (\$2.6 million) was for the support of various aspects of the programs of university-wide centers for interdisciplinary research and training in population, located at **Columbia** and **Harvard Universities**, the **University of North Carolina**, and the **Universidad de Valle** in Colombia.



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When family planning information is made available, the demand is often far greater than anticipated by national leadership. This Colombian father is one of thousands of people who have availed themselves of the

opportunities offered by a rural health center in Colombia that is a part of the health care and training programs of the University of Valle medical school. A broad spectrum of family planning means is offered.

THRUSTS FOR THE FUTURE

Experience of the past few years indicates that the oral pill and the IUD, while far superior in many respects to contraceptive methods available previously, have serious drawbacks that limit their effectiveness. The pill causes noticeable side effects in some users; a small but significant increase in blood-clotting disorders and pulmonary embolisms among women using the pill has been shown in at least one study; and medical authorities continue to be concerned about other possible ill effects.

Similarly, carefully controlled studies with the IUD in a number of countries and under a variety of conditions have shown that after a period of two to three years, only about one-half of those accepting the IUD are still using this method; for the other 50 percent, the IUD is not satisfactory for various reasons. In India, where a massive national effort based on the IUD was begun, the results to date have not been encouraging.

We are faced with the danger that within a few years these two "modern" methods, for which such high hopes have been held, will in fact turn out to be impracticable on a mass scale. A few other methods, with at least theoretical advantages, are on the horizon; but experience thus far indicates that much research remains to be done before present limitations on the usefulness of these methods are removed and before they have been tested sufficiently to assure their effectiveness and safety.

Long-acting injectable hormone preparations have caused problems of irregular and unpredictable bleeding, which are detrimental to acceptability. When the same hormones are given orally in small daily doses, they are effective contraceptives and appear to have less hazard of side effects or mortality, but they also cause bleeding problems, which may limit their usefulness. A semipermanent or renewable subcutaneous implant of these hormones has been suggested, but whether or not the same difficulties would result has not been determined.

The so-called morning-after pill has not yet been tested in human beings; its effectiveness and the hazards of its use are unknown. The male pill is being very little investigated; several types of drugs are known to diminish male fertility, but those that have been tested have serious problems of toxicity. Very little work is in progress on immunological methods, such as vaccines, to reduce fertility, and much more research is required if a solution is to be found here.

It is clear that major improvements in contraceptive methodology are required. The exceedingly complex chain of events associated with the reproductive process is vulnerable to interruption at many points. With the present state of knowledge of these processes, however, it is not possible to devise precise methods that have the required degree of specificity of action. Radically better methods can come with certainty only from research of high quality undertaken in depth from different approaches. First-rate research is today well below the level needed to bring about major developments in reproductive biology.

The Foundation will endeavor to assist in filling this important gap in several ways:

Seeking out or encouraging the development of, and providing partial support to, a few centers of excellence in universities and research institutions in the United States and abroad in which the methods and points of view of molecular biology are teamed with the more traditional approaches of histology, embryology, and endocrinology in research pertinent to development of fertility control methods;

Supporting research of individual investigators, oriented toward development of contraceptive methods or of basic information on human reproduction relevant to such developments;

Encouraging, by making research funds available, as well as by other means, established and beginning investigators to turn their attention to aspects of research in reproductive biology that have implications for human fertility and its control;

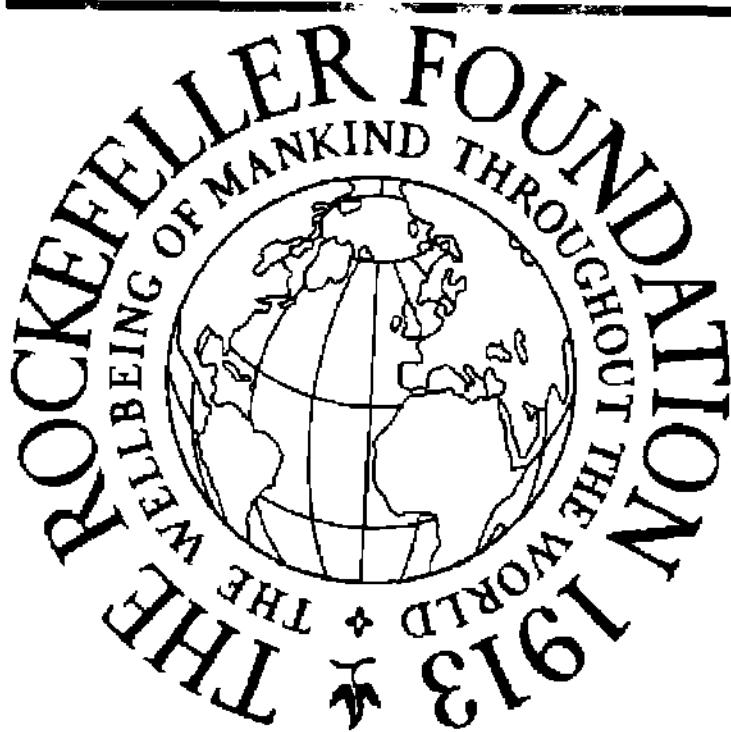
Encouraging more biology and biochemistry

Worldwide experience with existing methods of contraception has incontrovertibly demonstrated the necessity for more effective new methods. The Foundation is assisting the development of a number of research

centers. Dr. Claude A. Villee, Jr., (below) Professor of Biological Chemistry, is associated with Harvard University's Laboratory of Human Reproduction and Reproductive Biology, a center with international implications.



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The University of North Carolina has established a Population Center through which the University's resources are focused on many aspects of population stabilization. A grant from the Foundation has enabled

the Center to develop applied research in reproductive biology that is directed toward improvements in contraceptive technology through the work of such outstanding specialists in this field as Dr. Jaroslav F. Hulka (left).

students to elect careers in reproductive biology and human fertility control, through support of research and teaching programs in departments of zoology, biology, and biochemistry.

In the past, the Foundation has supported a certain amount of research designed to provide information leading to more effective fertility control, for example through the grant to Harvard University for its Laboratory of Human Reproduction and Reproductive Biology; it expects to seek opportunities for such support more actively in the future.

The Foundation proposes to continue and intensify assistance in improving the delivery of family planning services and fertility control procedures. It will follow closely the progress of the several academic family planning units in university schools of medicine established with Foundation assistance, and of other Foundation-assisted studies of delivery of health care that include family planning. Advantage will be taken of useful developments for guidance and assistance with additional domestic programs. The units now established are expected to form operational patterns that others may follow.

While the Foundation does not anticipate a need to provide support to many more family planning clinics in schools of medicine, it expects to remain alert to the possibility of encouraging and supporting additional unique opportunities of this kind.

Experiences and information gained from family planning activities in the comprehensive community health programs abroad, supported under the University Development Program (pages 66, 68), likewise will be useful in guiding and fostering appropriate action programs. It is anticipated that the Foundation will continue to provide support for technical assistance programs in family planning abroad through action-oriented organizations.

There are an estimated five million women among America's poverty and near-poverty groups who need birth control service, only one out of every eight of whom are now receiving services either from public or private agencies. The unchecked fertility of the indigent does much to perpetuate poverty, undereducation, and underemployment, not only in urban slums, but also in depressed rural areas. Social and economic development of this group

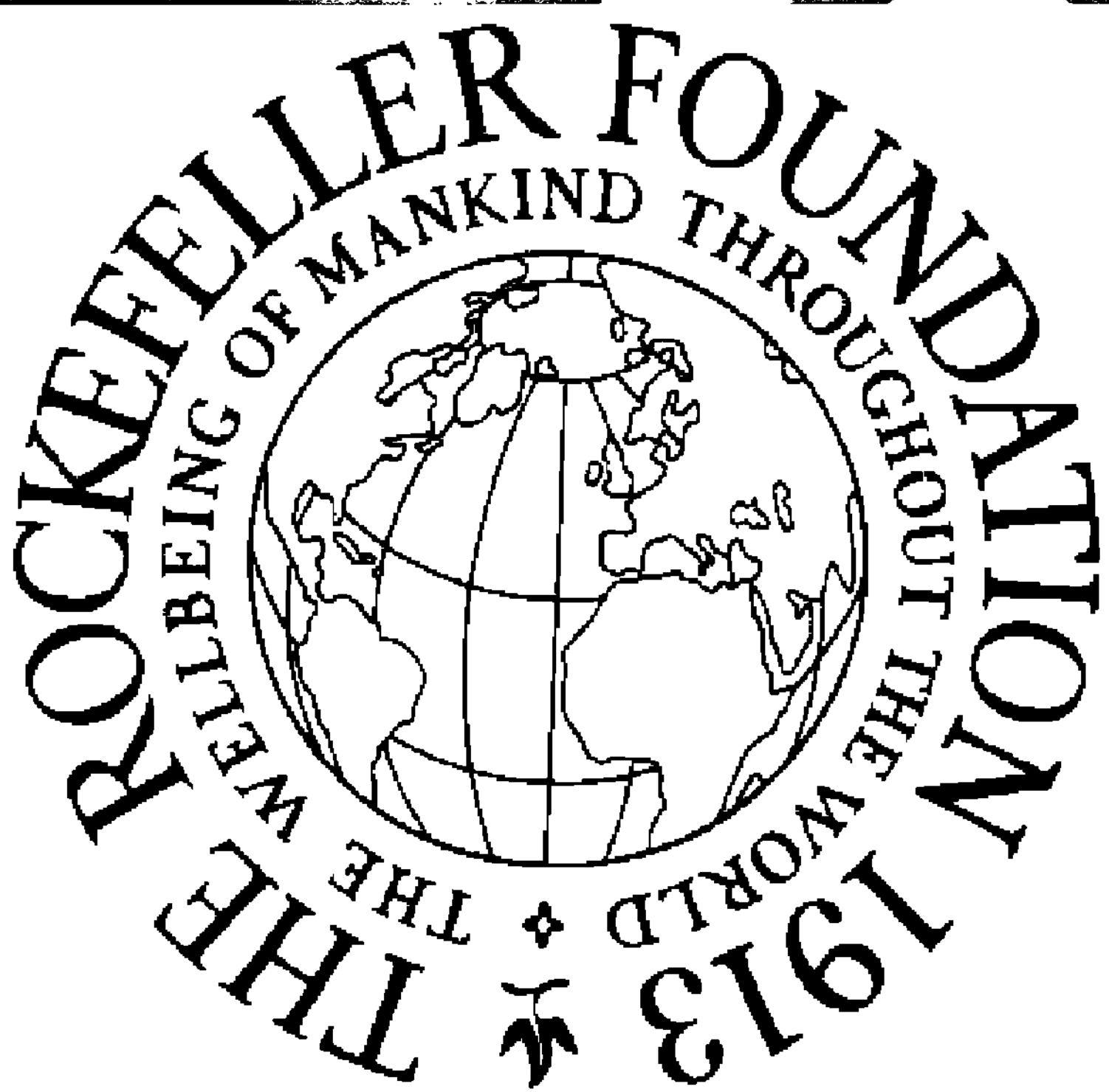
is impeded—even prevented—by early and uncontrolled fertility, just as economic improvement in many developing countries is hindered by population growth. Although birth control is obviously not a sufficient condition for improvement in either situation, it is a necessary condition. The Foundation's program of support to academic family planning units in medical schools is an approach to this problem, since the teaching hospitals assisted are responsible for medical services to substantial indigent populations. This is not enough, however, since the teaching hospitals, because of limitations of location, staffing, and financing, cannot provide adequate service to more than a fraction of the needy population. The Foundation is giving continuing consideration to methods by which it can assist with further extension of family planning services.

The Foundation will seek opportunities to support critical research on the effects of population growth on per capita economic growth, unemployment, costs

of education, health, and other social services, and other factors limiting economic and social development of the less-developed countries and of deprived segments of the population of developed countries, especially the United States. It will explore potentialities of training programs, seminars, public forums, symposia, and other devices for conveying information about the impact of population growth on economic and social development to government officials from ministries of health, planning commissions, and other appropriate agencies, in the interest of motivating greater action on population policy and population control programs.

Similar activities, including research, dissemination of information, and action programs—like the Population Council's postpartum program and Mount Sinai Hospital's work with teenage girls—directed to the motivation of individuals and families to limit the numbers of their children, will also be explored by the Foundation.

Dr. Sheldon Segal (left), director of the Population Council's Bio-Medical Division, and associate director Dr. Harry Rudel, are investigating the effectiveness of silicon polymer capsules containing synthetic progestational hormones which, when implanted under the skin of animals, appear to prevent conception for long periods.



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1968 GRANTS

PROBLEMS OF POPULATION

INTERNATIONAL

FOUNDATION FOR INTERNATIONAL COOPERATION, Chicago, Illinois: costs of a conference sponsored by the International Conference of Christian Family Movements; \$24,500;

PAN AMERICAN FEDERATION OF ASSOCIATIONS OF MEDICAL SCHOOLS, Bogotá, Colombia: costs of a meeting of Latin American educators to advise the Federation on the development of its population program; \$12,800;

COLOMBIA

UNIVERSITY OF VALLE, Cali: population studies under the direction of the University Committee for Population Studies (CUIP); \$70,000;

CHILE

CATHOLIC UNIVERSITY OF CHILE, Santiago: equipment, supplies, and library materials for research in reproductive biology by Dr. Claudio Barros; \$7,000;

HARVARD UNIVERSITY, Cambridge, Massachusetts: study in Chile of methods for providing family planning services through rural health centers, to be conducted by its School of Public Health; \$25,000;

INDIA

HARVARD UNIVERSITY, Cambridge, Massachusetts: toward costs of population and family planning studies to be carried out in India by its Center for Population Studies; \$60,000 through March, 1970;

MEXICO

COLEGIO DE MEXICO, Mexico City: research program in demography in its Center for Economic and Demographic studies; \$120,000 through December, 1971;

ST. LUCIA

ST. LUCIA PLANNED PARENTHOOD ASSOCIATION, Castries: to develop a family planning clinic; \$3,300;

UGANDA

MAKERERE UNIVERSITY COLLEGE, Kampala: research, under the direction of Professor A. G. Shaper, on blood clotting mechanisms in relation to ovarian steroid hormones and their analogs; \$8,500;

UNITED STATES

ASSOCIATION FOR THE STUDY OF ABORTION, New York: toward the costs of an international conference on abortion; \$15,000;

ASSOCIATION OF AMERICAN MEDICAL COLLEGES, Evanston, Illinois: toward the costs of an Institute on Medical Education and Family Planning, to be held in Washington, D. C., in March, 1969; \$23,000;

CREIGHTON UNIVERSITY, Omaha, Nebraska: toward the costs of a conference on the teaching of family planning, family-life education, and population dynamics; \$14,000;

EXPENSES OF CONFERENCES at The Rockefeller Foundation, New York, to discuss the need for support of research in reproductive biology; \$2,500;

FOREIGN POLICY ASSOCIATION, New York: to compile and publish an updated, expanded edition of "Focus on World Population," which first appeared in 1964 as an issue of *INTERCOM*; \$10,000;

JOHNS HOPKINS UNIVERSITY, Baltimore, Maryland: to enable Dr. George Jacob Marcus, Weizmann Institute of Science, Rehovoth, Israel, to serve as visiting investigator in the Department of Population and Family Health, School of Hygiene and Public Health; \$14,000;

MOUNT SINAI SCHOOL OF MEDICINE of the City University of New York: study of motivation for family planning; \$105,000 for a three-year period;

PLANNED PARENTHOOD FEDERATION OF AMERICA, New York: toward the costs of its Center for Family Planning Program Development; \$450,000 for a three-year period;

PRINCETON UNIVERSITY, New Jersey: to enable Professor Norman Ryder of the University of Wisconsin, Madison, to participate in research at the Office of Population Research during the 1968-69 academic year; \$12,000;

UNIVERSITY OF CHICAGO, Illinois: toward the costs of developing a family planning service operated by the Department of Obstetrics and Gynecology; \$175,000 for a three-year period;

UNIVERSITY OF NORTH CAROLINA at Chapel Hill: support of research on reproduction and contraception under the auspices of the Carolina Population Center; \$300,000 for a three-year period;

UNIVERSITY OF WASHINGTON, Seattle: development of a Division of Family Planning and Education in the Department of Obstetrics and Gynecology; \$415,000 for a five-year period.

UNIVERSITY OF VA

UNIVERSITY DEVELOPMENT

UNIVERSITY OF IBAN

"A university must not be an end in itself; it must be an institution responsive to the needs of society, a powerful force in social and economic development, engaging in the kinds of teaching and research required for the transition from traditional to modern ways of life. Its greatness does not derive from its physical plant, gross numbers of faculty and students, one or two strong departments, or the presence of a few outstanding scientists, but from complementary strength across interrelated disciplines that reinforce and draw support from one another; out of this kind of creative interchange there evolves an outstanding institution."

UNIVERSITY OF EAST ASIA

UNIVERSITY OF THE PHILIPPINES

UNIVERSITIES IN BANGKOK

| | | | | | |
|--------------|-----------|-----------|-----------|----------------|--------------------------|
| | | | | | |
| 1,062,000 | 1,129,000 | 1,022,000 | 1,663,000 | 1,030,000 | TOTAL \$5,906,000 |
| | | | | | |
| 525,000 | 1,248,000 | 1,044,000 | 997,000 | 468,000 | TOTAL \$4,282,000 |
| | | | | | |
| 359,000 | 830,000 | 1,113,000 | 1,263,000 | 549,000 | TOTAL \$4,114,000 |
| | | | | | |
| 583,000 | 1,211,000 | 927,000 | 1,394,000 | 725,000 | TOTAL \$4,842,000 |
| | | | | | |
| 269,000 | 382,000 | 914,000 | 2,295,000 | 928,000 | TOTAL \$4,783,000 |
| | | | | | |
| JULY 1963/64 | 1963/65 | 1965/66 | 1966/67 | 1967/JULY 1968 | |

SUMMARY OF FUNDS ALLOCATED

Recognizing the importance of the university in accelerating social change and national development, the University Development Program has as its major objective to help create strong universities recognized as centers of excellence, largely staffed by indigenous scholars, and engaged in teaching and research relevant to national and regional needs.

Research and its application have played an important role in the social and economic development of the more advanced countries; the poorer countries, however, have been slow to share in the benefits of the scientific and industrial revolution. Primary reasons are the absence of an adequate scientific base and the lack of sufficient numbers of trained people. The problems of social and economic development are enormously complex, and knowledge on which to base action is frequently not available. An indigenous problem-solving capacity is essential, and to attain this, large numbers of specialists must be trained. The Foundation's assistance in the development of institutions with the strength, purpose, will, and ability to cope with local and regional problems may be the most significant and productive investment for the future of developing countries that it has made.

A university must not be an end in itself; it must be an institution responsive to the needs of society, a powerful force in social and economic development, engaging in the kinds of teaching and research required for the transition from traditional to modern ways of life. Its greatness does not derive from its physical plant, gross numbers of faculty and students, one or two strong departments, or the presence of a few outstanding scientists, but from complementary strength across interrelated disciplines that reinforce and draw support from one another; out of this kind of creative interchange there evolves an outstanding institution. When the University Development Program was adopted as a major area of concentration, the Foundation, drawing on decades of experience, selected a few institutions with the potential of serving national and regional needs— institutions having identifiable strength in several disciplines, the determination to progress, sound academic and administrative leadership, and substantial promise of increasing support from the country or area served and from other sources.

A fundamental step in development at a university is the formation of a core of well-trained, capable, local scholars. To this end, the Foundation has provided scholarships and fellowships for advanced study and research abroad. As departments become

stronger, indigenous graduate programs are established and scholarship support is restricted increasingly to candidates who, having completed the graduate training offered at the local university, are candidates for the doctoral degree or postdoctoral training. In several instances, new ways have been found to enable the universities to attract and hold returning scholars until they can be appointed to establishment posts.

In each institution, resident Foundation staff members, on long-term assignments to provide continuity, are supplemented by scholars on one- and two-year assignments in teaching and research posts at the request of the local university; many of these visiting faculty members are recruited directly by the Foundation; others, through grants to American, Canadian, or British institutions. Appointment to the local universities follows the normal established procedure at each university. Staff members and visiting scholars have served as deans and heads of departments and research institutes; they have assisted with the development of undergraduate and graduate teaching, and have helped set new standards of research, scholarship, and service. A major Foundation contribution to university development has been the services of these outstanding scholar-administrators who have assisted in the development of key departments and faculties, and who, because of their eminence and unselfish devotion to the task, have inspired local staff, university administrators, and government officials to high levels of attainment.

Grants have provided support for specific research projects, laboratory equipment, experimental-farm development, improved teaching materials, curriculum revision, language and reading laboratories, library development, and scholarships for graduate study at the local university. Major emphasis in strengthening teaching has been on development of books and study materials based on local research and writing on fundamental problems of the developing countries. Agricultural, medical, social, and economic research adapted to local needs provides essential knowledge for the developing economy and forms the basis for graduate teaching and action programs in agriculture, public health, industrialization, and other areas.

The Foundation's experience over the past five years has pointed up the importance of certain basic principles in university development:

Persons who have key roles in determining the development of the university must have strong motivation and commitment to progress and



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In addition to its educational function, the Division of Health Sciences of the University of Valle provides health services in urban and rural centers. The Foundation has assisted the University with over \$7.4 million.

change. Essential changes in most centers include: administrative organization; strengthening of faculty; greater emphasis in teaching and research on community, national, and regional needs; increased cooperation among faculties in curriculum development, teaching, and research; faculty recruitment and promotion based on merit; and improvement of salaries and employment practices to attract and retain the best scientists, scholars, and administrators.

There must be prospects for increasing financial support from the state and national governments, the private sector, and international sources. Foundation resources can only provide limited critical support having a catalytic effect on total development.

People are more important in assistance than dollars. Regular Foundation staff, assigned to key roles for extended, indeterminate periods, are essential for progress toward the Program's goals.

University development is a long process; at least a decade is required to develop a mature scholar from a university graduate. Changing basic attitudes and implanting new concepts and procedures will take at least as long.

Each program must follow well-defined plans, tailored to the university's needs and opportunities, and adjusted to developments as the program proceeds. Foundation emphasis is on units, such as economics, agriculture, and medicine, that are most directly relevant to the country's needs, with support to other social and natural sciences, and to arts and humanities, as needed for balanced academic development.

The timetable for development is different for each institution, and continuing reassessment is essential.

The institutions that have been included in the University Development Program during the past five years are: the University of Valle, in Cali, Colombia; the University of the Philippines; the University of East Africa, with constituent colleges in Kenya, Tanzania, and Uganda; the University of Ibadan, Nigeria; three universities in Bangkok, Thailand; the Federal University of Minas Gerais, in Belo Horizonte, Brazil; the University of Khartoum, the Sudan; and a complex of institutions in Santiago, Chile.

THE UNIVERSITY OF VALLE

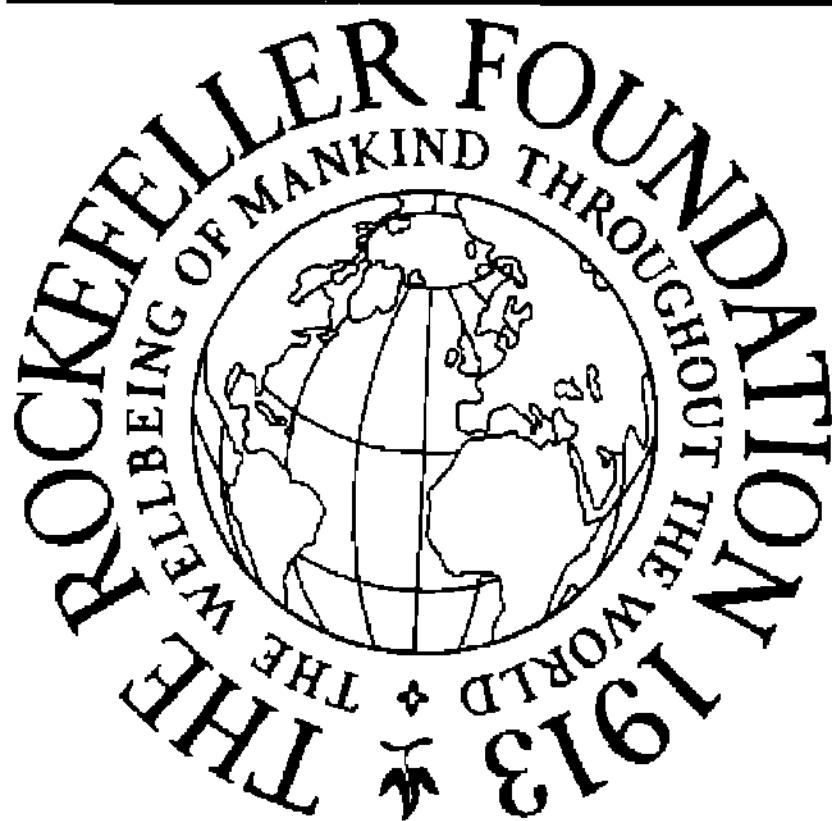
When the University of Valle was selected for inclusion in the University Development Program, it

consisted of a Faculty of Medicine and schools of chemical engineering, architecture, electromechanical engineering, and economics. It was chosen chiefly because of the strength of its medical school, which had been receiving Foundation support, and the interest of its leadership in developing new designs of education and research focused on the needs of its constituency. The Foundation had invested well over \$4 million in the University prior to the initiation of the University Development Program. The Faculty of Medicine, endowed with exceptional leadership and a core of highly trained, energetic, and dedicated young physicians and scientists, was already attracting attention in Latin America, the United States, and Europe. A new curriculum incorporating the best aspects of the four-year North American program, adapted to Colombian needs, has been developed.

Staff members of the Faculty have assisted with the organization of new medical schools and the reorganization of older institutions in Peru, Ecuador, Bolivia, Paraguay, Argentina, Guatemala, Brazil, and Venezuela. The school has also inspired leaders of the six other medical faculties in Colombia to set high standards, and it has played an important role in training academic personnel for other Colombian and Latin American schools. The University recognized that, to equip doctors to meet social as well as medical needs, a strong medical school needed to be part of a strong university, to give its students access to a broad education. This led to the creation of the basic general studies course, which drew strength from the natural and social sciences and the humanities.

Following the appointment in 1966 of a new rector, there has been a reorganization and modernization of the administrative structure, providing for an executive vice-president, a vice-president for academic affairs, and a vice-president for administration—a newly created office; a divisional structure has been set up, replacing the former nearly autonomous faculties.

The **Division of Health Sciences** brings together previously independent units, including the Faculty of Medicine, the School of Nursing, the Auxiliary Nurses Training Program, the Training Course for Medical and Laboratory Technicians, the teaching hospitals, the Urban Health Centers in Cali, and the Rural Health Center in Candelaria. This Division has stressed development of improved means of delivering health care, including family planning, in both urban and rural areas. The Foundation recently



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Dr. Patrick Owens (right) came to the University of Valle as a visiting professor, today is also the Foundation's representative in Cali. He is shown with engineering sciences students inspecting a modern milk plant.

provided a visiting scientist to the Division to assist with the application of modern techniques of systems analysis to this problem.

The Division of Engineering Sciences includes programs of chemical, electrical, mechanical, and sanitary engineering. With assistance of a Foundation officer, it is leading the way in South America in developing new concepts of engineering education and relevant research.

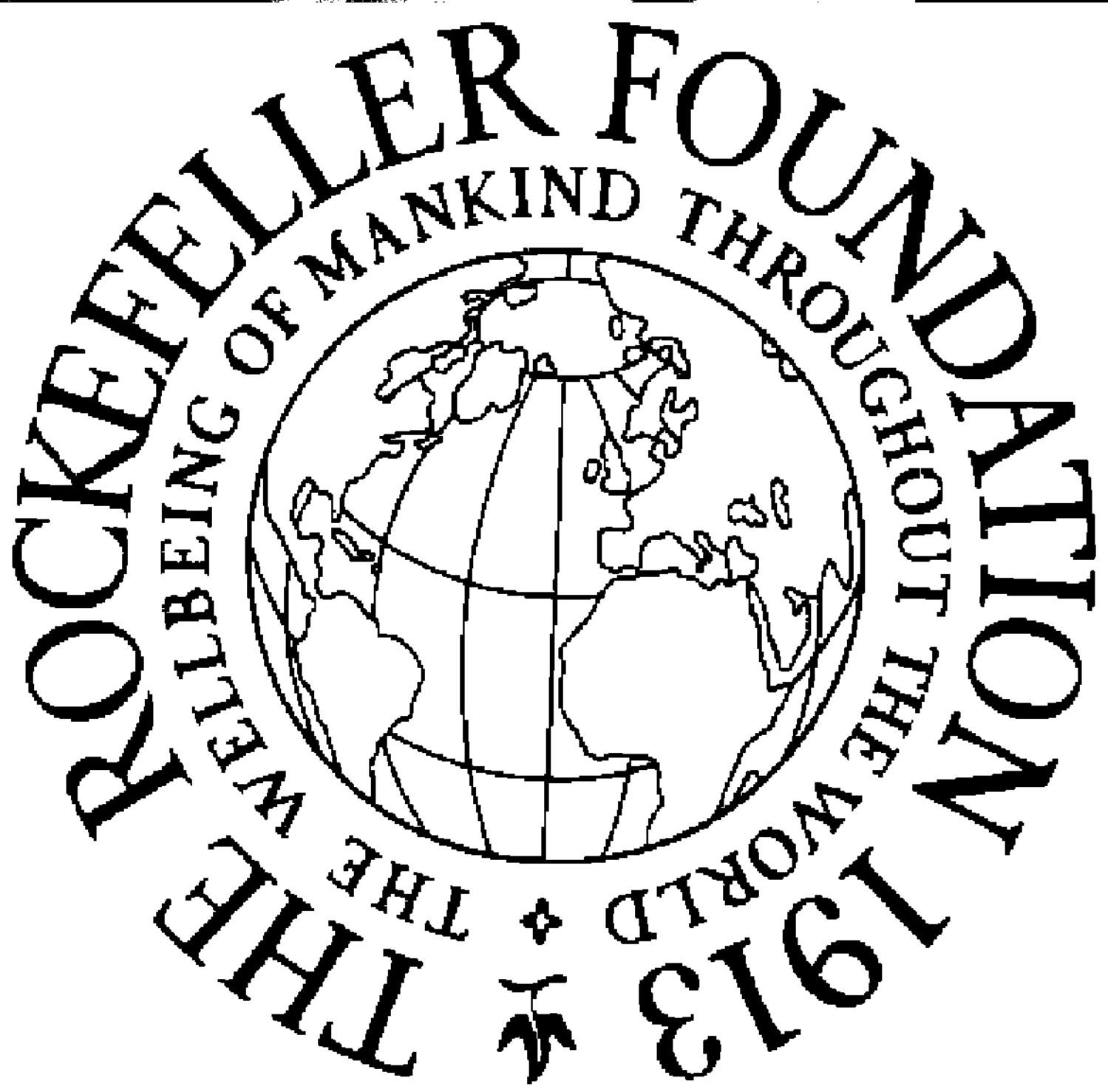
The Faculty of Philosophy, Letters, and History, organized in 1963, is composed of the Departments of Language, Philosophy, History, Literature, Music, and Drama. Prior to 1961, teaching and research in the humanities were almost nonexistent. The Faculty provides courses in the general studies program for first- and second-year students, and now offers, in addition, degree programs in history, philosophy, and literature.

The Division of Social Sciences and Economics, formed by reorganization of the Faculty of Economics, now includes undergraduate and graduate studies in economics, agricultural economics,

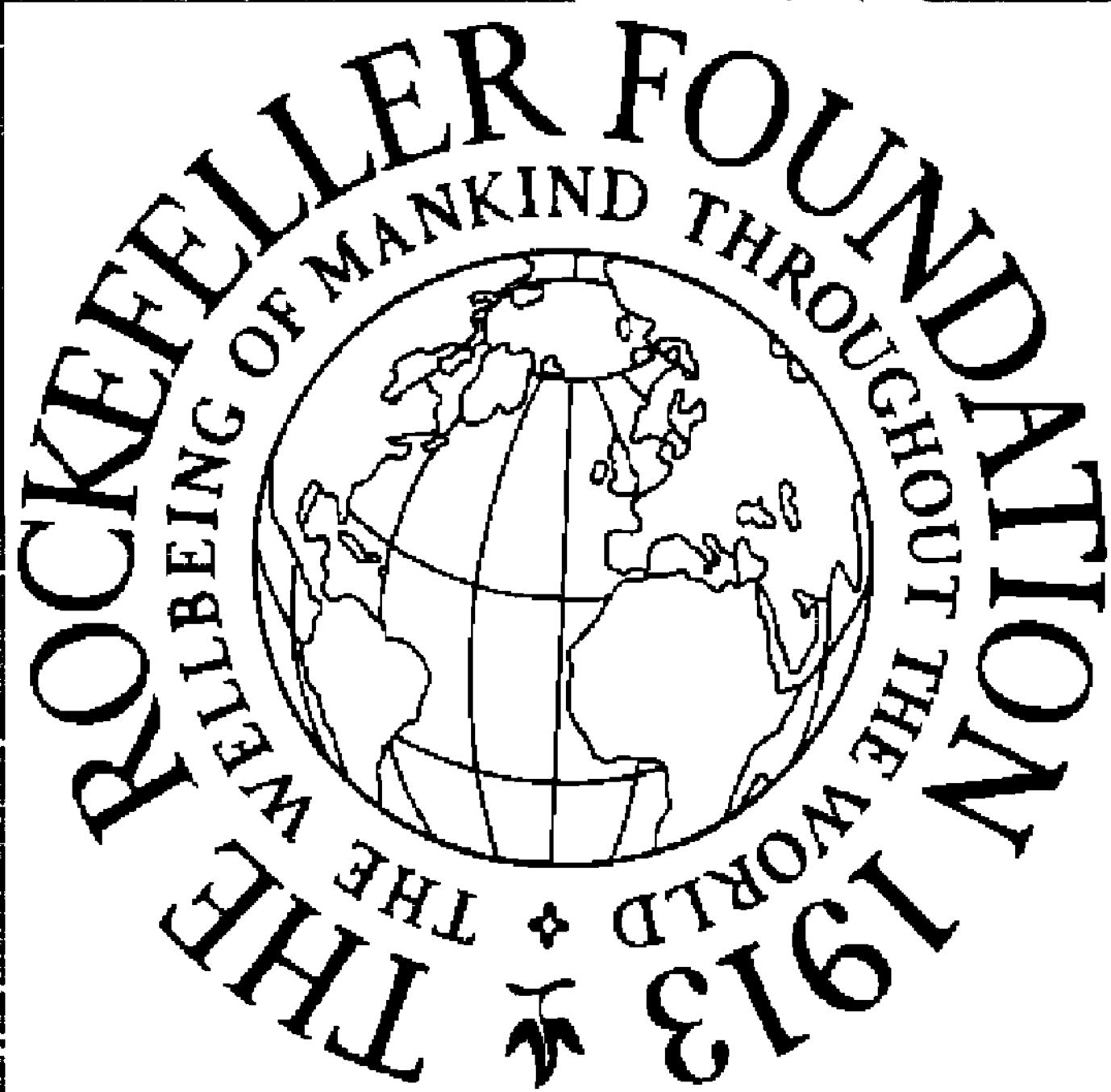
and industrial management, and undergraduate instruction in political science and sociology. Since 1963, strong Colombian leadership has been identified in political science, sociology, and agricultural economics.

Through highly successful training and other management programs, the University has gained growing support from the Cauca Valley business community. Master's-degree programs have been approved for industrial management and for agricultural economics, the latter in cooperation with the Agronomy Faculty of the National University at Palmira. The Division is conducting research relevant to agricultural and industrial development of the Cauca Valley, and, specifically, the state of Valle.

The Division of Sciences includes Departments of Mathematics, Physics, Chemistry, and Biology and provides instruction in the general studies program and special courses for other units of the University. Efforts to strengthen teaching and research are being made with assistance from the Foundation and from selected American universities.



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The **Fundación para la Educación Superior (FES)** is a private, tax-exempt foundation created to help attract non-government resources for support of the University, particularly from the Cauca Valley business community, and thus to provide an example to other Latin American universities of a means for increasing financial support from private sources.

In recognition of the need for an integrated approach to population studies, the **Comité Universitario de Investigaciones sobre Población (CUIP)** was established in 1964. On it are representatives from most relevant departments of the University, including statisticians, economists, sociologists, architects, basic medical scientists, obstetricians, and public health personnel. Population studies and family planning activities are being carried out in urban and rural areas under its direction. With this experience, the Division of Health Sciences faculty, working through the association of Colombian medical schools, has assisted in extending the program of family planning clinics to other parts of Colombia, making this country a leader in Latin America in population control programs.

THE UNIVERSITY OF THE PHILIPPINES

Foundation interest in the University of the Philippines goes back to 1922, but the University Development Program is more closely related to the assistance given to the Faculty of Economics since 1953 and to the College of Agriculture since 1955. Up to 1963, The Rockefeller Foundation had appropriated approximately \$2.7 million in support of the University of the Philippines. Under the University Development Program, the Foundation began a co-ordinated program of general support aimed at the development of advanced research and graduate education. The Diliman campus, constructed after World War II, was spacious, and the plant generally good. The faculty was young, forward-looking, and able, and the new president, Carlos P. Romulo, provided vigorous and imaginative leadership. There appeared to be an opportunity for significant contributions by the Foundation toward the development of a regional center of excellence for Southeast Asia.

The Foundation has, over the past 15 years, provided a large number of scholarships for M.S.- and Ph.D.-level studies to staff members of the **College of Agriculture** at Los Baños. Major assistance has also been given by the Ford Foundation through a grant to Cornell University. The Faculty has shifted increasingly from strictly academic pursuits to more direct involvement with improvement of agriculture

and of the economic condition of the nation's farmers. It is undertaking expanded crop improvement and training programs in corn, soybeans, sorghum, and rice. Aided by the International Rice Research Institute, the College is becoming a major center for advanced training of agricultural scientists for the Philippines and for other Asian countries; it was recently selected by the Southeast Asian Ministry of Education as its regional center for this purpose.

The University of the Philippines already had reasonable competence in key social science departments, particularly economics. Emphasis was therefore placed on further strengthening of the humanities and social sciences to achieve a balanced development of the University's academic programs.

The development of the **Faculty of Economics**, which includes the Institute of Economic Development and Research and the Department of Economics, is indicative of the potentiality of the University as a whole. With early Foundation assistance, a core of well-trained Filipino economists with a strong interest in research on problems relevant to the Philippine economy was developed. The Foundation also provided:

Local scholarships for graduate study leading to the M.A. degree under the direction of the Philippine faculty;

Support for doctoral training abroad, primarily in the United States, of the best M.A. graduates;

Visiting scholars to work with staff and advanced students;

Support for research by Filipino scholars.

The Faculty of Economics has achieved outstanding stature in Southeast Asia, has developed an excellent Master's-degree program, and is designing a program leading to the Ph.D. degree.

In 1963, the University's **College of Medicine**, although the strongest school of medicine in the Philippines, had specific areas where improvement was clearly possible, particularly in the basic medical science departments; this contributed to the flight abroad of most of the graduates seeking advanced training. At the request of the University, a Foundation staff member who had substantial experience in planning and running a complex medical center, was assigned to assist in development of the medical school and in planning a new Medical Science Center for the Diliman campus. Considerable improvement has been made in teaching and research programs, laboratory facilities, and staff training in the basic medical sciences, as well as in programs for delivery



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Dr. Harold Trapido is a Foundation staff virologist who teaches and performs research at the University of Valle. The Foundation's interest in arthropod-borne viruses had its origins in the yellow fever campaigns.



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At the University of the Philippines, Dr. Agustin Kintanar, Jr., an economist, discusses with a student

group how the general concepts of economics apply today to the developmental needs of the Philippines.

of health services. Among the most significant developments has been the Comprehensive Community Health Program, which provides educational and research experience in delivery of comprehensive health care to a rural population. Located in the Province of Laguna, the program serves a population of over 14,000. Plans have been announced for the medical center at the Diliman campus, but they have not yet been implemented for lack of funds.

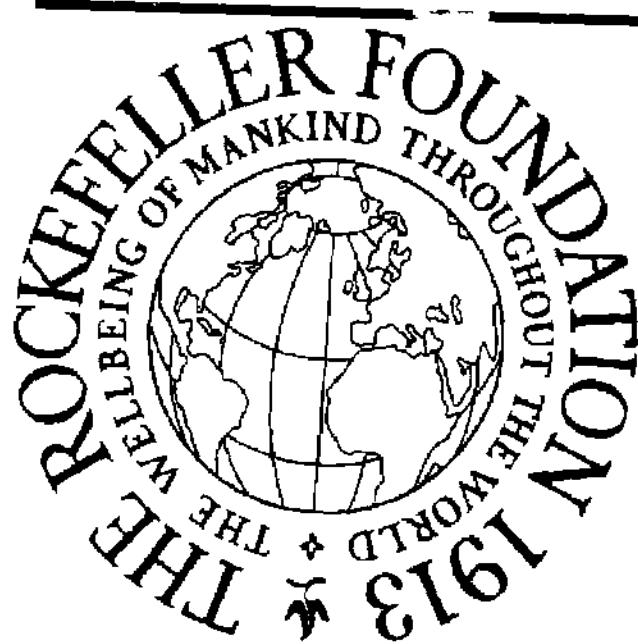
THE UNIVERSITY OF EAST AFRICA

The University of East Africa (located in Kenya, Uganda, and Tanzania) was designed to provide university facilities to be shared by the three countries. In 1921 the Government of Uganda started a technical training college at Kampala, which in 1949 became the University College of East Africa (related to the University of London) and later Makerere University College. Somewhat later, a technical school in Nairobi, Kenya, expanded to include arts and sciences and raised the level of train-

ing in engineering sciences to become, in 1958, the Royal College, Nairobi, now the University College.

The University of East Africa incorporated Makerere University College and the Royal College, and developed the University College, Dar es Salaam. Each College was to develop during the first quinquennium a full undergraduate curriculum in the arts and sciences, while professional faculties were to be shared by all three institutions. Makerere provided professional training in medicine, agriculture, education, and fine arts. The University College, Nairobi, had faculties of engineering, architecture, and public administration, as well as the veterinary faculty, which was transferred from Makerere. The University College, Dar es Salaam, was to have a law faculty and, eventually, a school of agriculture and advanced work in public administration, international law, and political science. The Foundation had allocated \$1.3 million to the new University by 1963.

At that date, less than 10 percent of the University's teaching and research staff were Africans. To



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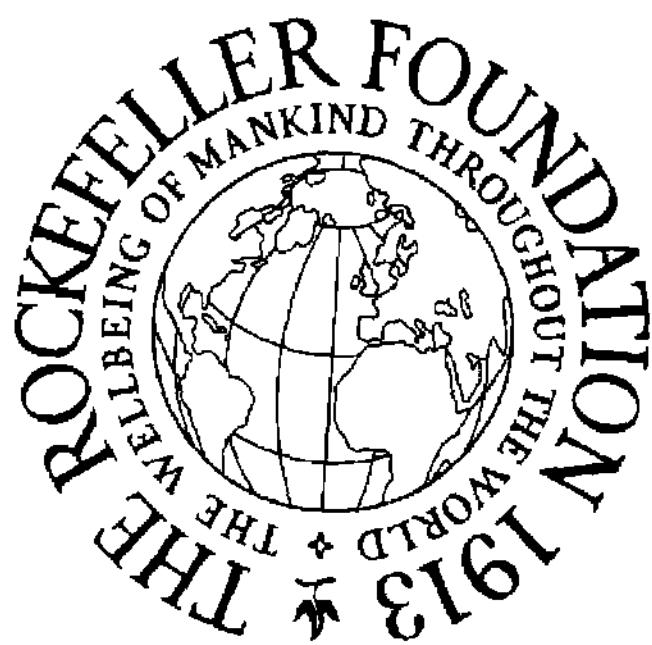
A medical team from the Comprehensive Community Health Program visits a sick child in a distant village.

assist with staff development, the Foundation supported scholarships for advanced training of Africans and initial support for the Special Lectureship Program, which provided positions for returning scholars until regular faculty posts became available. The proportion of East Africans on the teaching and research staff increased to over 25 percent in 1968; the majority of them initially had appointments as Special Lecturers. The goal of 40 percent East Africans at the end of the first triennium was not reached because the University, in response to the growing manpower needs of the East African countries, increased numbers of staff and students more rapidly than anticipated. The Special Lectureship Program has now become a general staff development plan, with support from the British, the Norwegian, and the West German Governments, as well as from The Rockefeller Foundation.

The Faculty of Agriculture at Makerere offers the best base in tropical East Africa for developing imaginative programs of agricultural education and

research and of community service that can have a major impact on agricultural and economic development. The Faculty has been reorganized to emphasize agricultural production and development. The new Departments are: Crop Science and Production, Animal Science and Production, Agricultural Engineering and Land Planning, Soil Science and Agricultural Chemistry, and Rural Economy and Extension. By invitation of University officials, a Foundation staff member serves as the first permanent dean of the Faculty. The College farm is being developed into a first-rate experiment station, and research has been expanded on crop and livestock improvement.

East Africa is an ideal location for a strong animal health research and teaching center. The key facility is the Faculty of Veterinary Science at Nairobi, which has authorization to award the professional degree. With support from the Foundation, it has developed a strong body of students and staff with high morale and a will to cope with the needs of East Africa.



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The University College, Nairobi, is in the process of developing its library into a useful reference center.

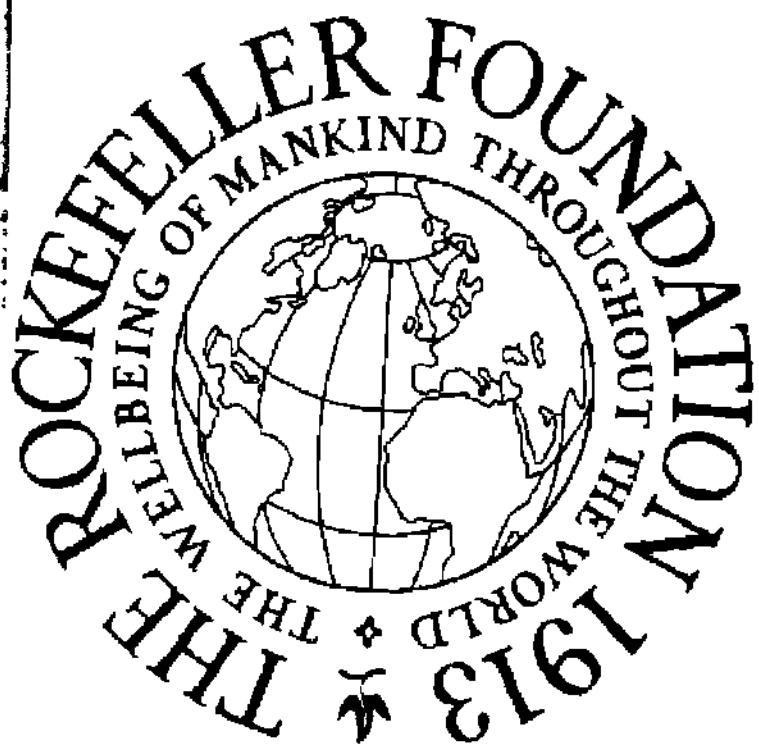
In response to the needs of each Government for objective analysis of policies and programs related to economic development, economic and social research institutes have been established at each College following the pattern of the Makerere Institute of Social Research. While emphasis at the beginning was on economic research, provision was also made for research in other social science fields, initially on specific projects of an interdisciplinary character.

The University of East Africa is becoming an important center for the study of the development of new societies. A most significant factor is the emergence of outstanding African scholarly leadership in the social sciences: political science at Makerere; history and geography, as well as the Social Science Division of the Institute for Development Studies, at Nairobi; history and geography, as well as the Law Faculty at Dar es Salaam. Plans are proceeding for development, coordinated through the University's Social Science Council, of graduate studies at all three Colleges, based on experience with the M.A. for African studies at Makerere.

When the University of East Africa was established, the Faculty of Medicine at Makerere needed strengthening in the areas of community health, delivery of health care, and research on African diseases. The Foundation assisted the development of an interdepartmental program at the health center at Kasangati, near Kampala, providing urgently needed resources for field work, instruction, and research for the staff and students in the Faculty.

Concerning the future of the University of East Africa, a Foundation policy statement in 1963 said: "It is believed that in the long run, the improvement of this institution can play a major role in the future progress of the country in which each college is located, despite the changing social and political patterns in East Africa. Even though these countries may one day agree to terminate the present arrangement in favor of full-scale national universities at each site, initial association will have had many benefits."

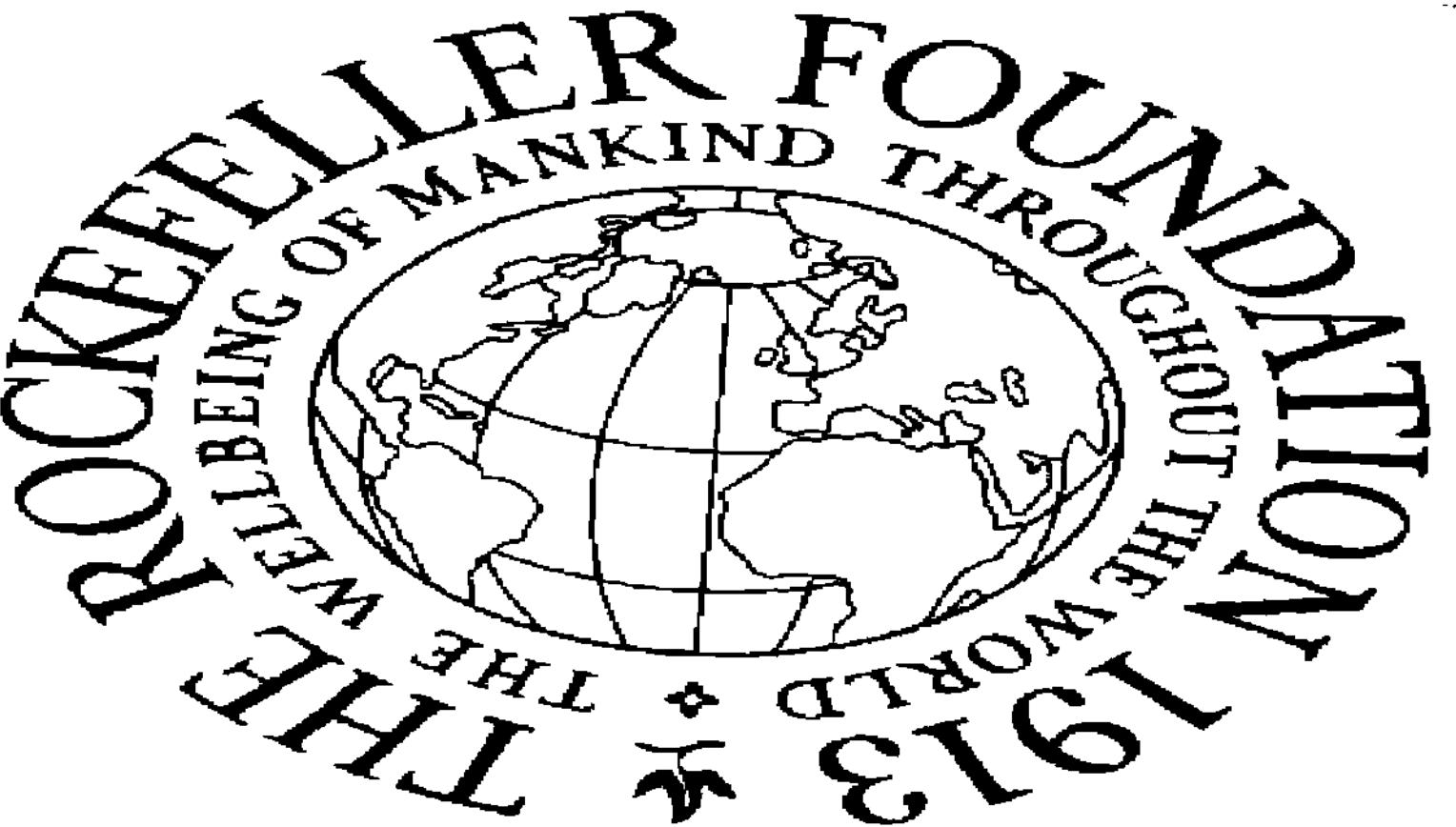
The University will continue with its initial organizational structure at least through June 30, 1970. A commission of the new East African Economic Com-



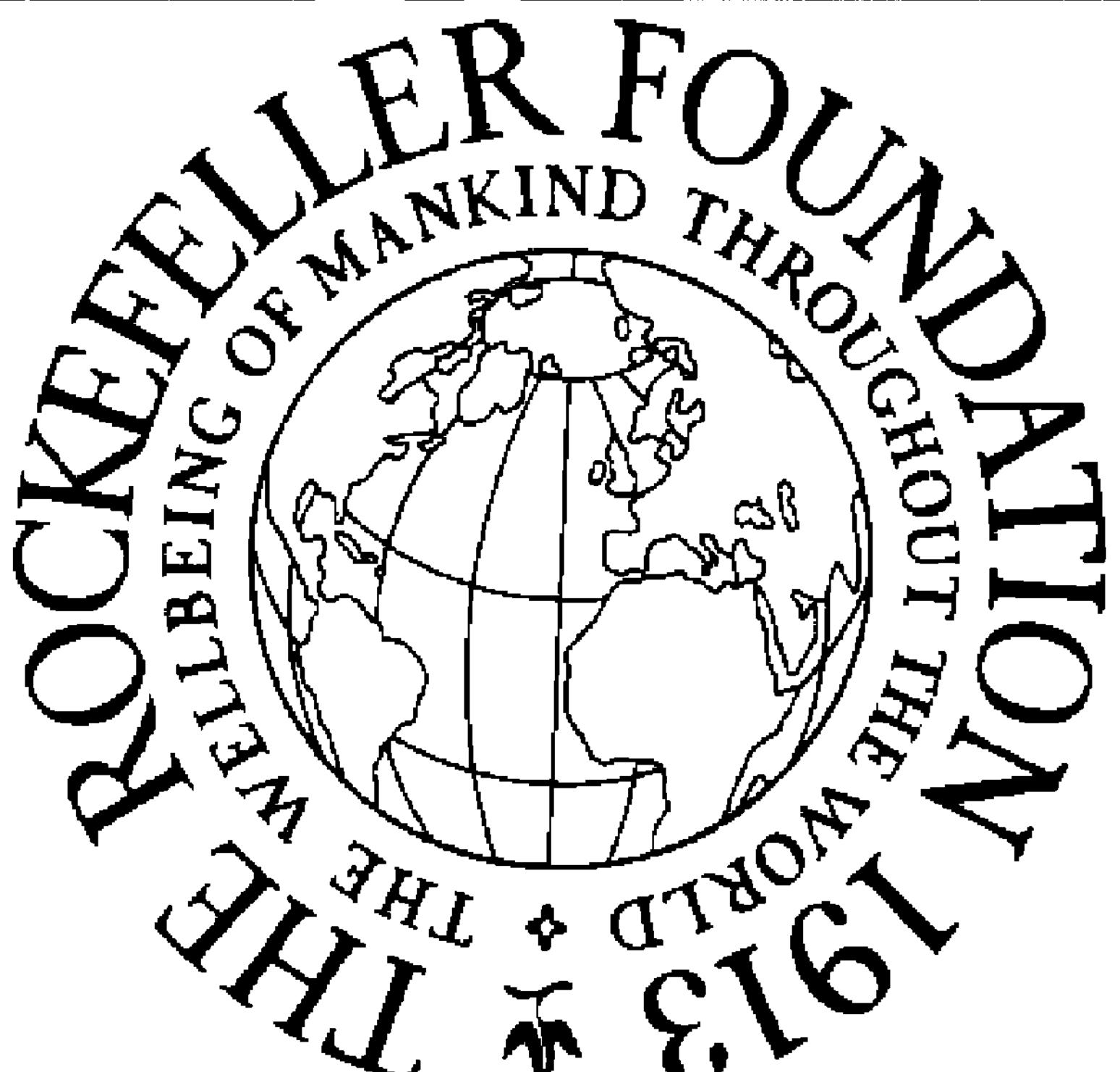
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At the University of East Africa, the development of African scholars and scientists has been one of the main objectives of the Foundation. The study of economics at University College, Nairobi, focuses on problems facing

the region. Agricultural education, research, and extension is centered at Makerere University College in Uganda. Below: At the College farm, a blood sample is drawn from an animal infected with trypanosomiasis.



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munity will make recommendations on its future role and organization. Whatever institutional form the University may adopt after that date, patterns of cooperation and specialization established during the first two trienniums will persist, and will benefit future higher educational development in East Africa.

THE UNIVERSITY OF IBADAN

The University College of Ibadan, established in 1948, became in 1963 the University of Ibadan. It was an outstanding institution destined to play a key role in providing African scholars for new universities in Nigeria and elsewhere in English-speaking West Africa. Some departments, such as chemistry and physics, and the School of Medicine, were prepared to offer graduate training to the doctoral level.

Other departments offered undergraduate training that met University of London standards, but they lacked facilities and staff to proceed immediately to graduate studies. By 1963 the Foundation had provided \$1 million for development of the University.

Since 1963 there has been a most impressive development of physical facilities; staff has expanded to approximately 350, of whom half are Nigerian; and student enrollment approaches 3,000. The curriculum has been changed in content and emphasis, the better to meet the needs and aspirations of the country; teaching materials have been developed, and research has been expanded which is closely related to the social, economic, political, cultural, and physical needs of the people served by the institution. Foundation assistance, through both leader-

The University of Ibadan in Nigeria has developed into a strong educational center. Left: Dr. T. O. Ogunlesi and medical students make the rounds of the Igbo-Ora

rural health and training center. Below: An outstanding drama program has played an important role in developing a contemporary Nigerian theatre movement.



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ship and financial support, has been provided in history, arts and letters, health and nutrition, agriculture, economics and other social sciences, and other aspects of contemporary African culture and development.

The Faculty of Agriculture is proceeding on recommendations made by a Foundation-supported team of consultants, to reorganize teaching and research so as to provide a strong emphasis on increased agricultural production.

The Faculty of Medicine, in cooperation with the Government of the Western State, and with Foundation support, has established a rural medical education and research center at Igbo-Ora. In addition to providing clinical services to surrounding communities, the center serves for training medical students in community health and social and preventive medicine.

Foundation support in the humanities has focused on drama and African studies. The drama program has played an exceedingly important part in the emergence of a modern Nigerian theatre movement and in stimulating thought on national identity. The Institute of African Studies is a focal point for significant work in anthropology, Nigerian languages, and oral literature, and provides African material for the curricula of various departments.

In 1963 all department heads in the social sciences were expatriates, including two Foundation staff

members, one of whom was also dean of the Faculty of Economics and Social Studies. Today, three department heads are outstanding Nigerian scholars, while a younger Nigerian is acting chairman of a fourth department. With the return of Nigerian staff members who were taking graduate work abroad, many on Foundation scholarships, the social sciences faculty has been strengthened, particularly in economics; areas of specialization have been expanded and graduate teaching initiated.

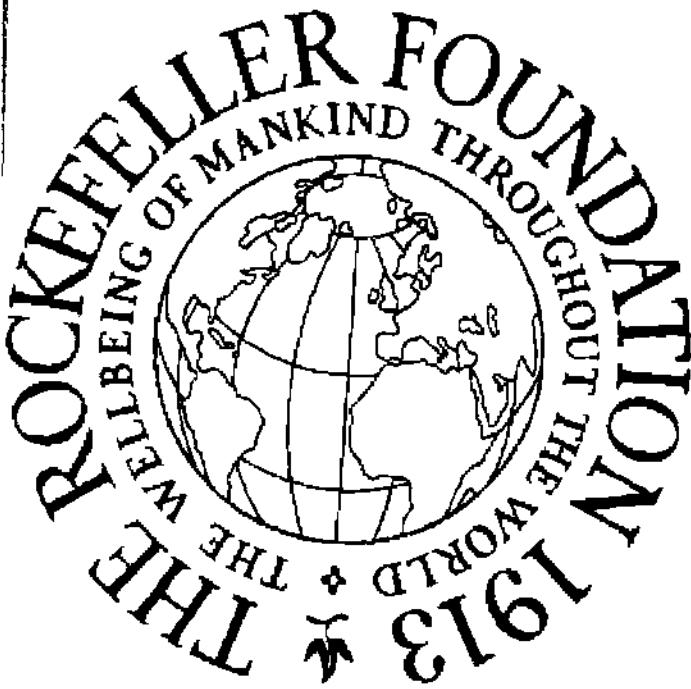
The Computer Centre, for the past two years under the direction of a Foundation field staff member, has been increasingly used in teaching and research programs throughout the University.

The University of Ibadan continues to be the foremost university in Nigeria and West Africa and is a growing center for graduate study. Nigerian scholars are increasingly providing leadership in the various faculties. The University has maintained international academic standards in spite of Nigeria's internal political conflicts and the loss of a number of senior people. In the world history of higher education, universities have proven to be one of the hardest of social institutions—tough and resilient, with a marvelous capacity for survival and growth. This has certainly been true for the University of Ibadan.

Following the civil war in Nigeria, the University of Ibadan can play a critically important role in reconstructing and unifying the society. The Nigerian

An inter-university committee under the chairmanship of General Netr Khemayodhin (center) studies proposals

to coordinate the efforts of the several Thai universities that offer programs of graduate study and research.



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National Universities Commission may attempt to develop greater complementarity of program and staff among the Universities that receive predominantly federal support. In such a plan, the University of Ibadan will undoubtedly be a major center for graduate studies. Foundation interest in the University is enhanced by the location nearby of the **International Institute of Tropical Agriculture**, whose staff can collaborate with faculties of the various University departments.

BANGKOK, THAILAND

The University Development Program in Thailand differs from that at other locations in that the Foundation provides assistance to three universities in separate but closely coordinated programs. The goal is to develop outstanding undergraduate and graduate training and research programs in a few selected areas of study essential for Thailand's development; these programs will also be useful as graduate training centers for Southeast Asia.

Prior to 1963, the Foundation expended approximately \$1.6 million on institutions and projects in Thailand. Support to modern medical education, largely through Siriraj Hospital, dates from 1921.

The Faculty of Medical Sciences of the **University of Medical Sciences** is developing six basic medical science departments to provide undergraduate and graduate teaching and research programs.

The goal is a modern academic institution rivaling the finest in Southeast Asia in physical facilities, staff, and curriculum. The Foundation has provided scholarships and fellowships for the advanced training of Thai faculty; staff members to serve as associate dean, department heads, and visiting faculty; and laboratory equipment, research support, and library assistance. The Faculty has expanded its curriculum from a two-year course in life sciences to a four-year B.S.-degree program, and now has Master's and doctoral programs, superior for Thailand's needs to most offered in the United States.

The **Ramathibodi Teaching Hospital**, of the University of Medical Sciences, housed in a new building next to the Faculty of Medical Sciences, provides clinical training and research facilities. The Foundation has assisted in the planning and development of hospital and related medical services, of hospital administration, and of a community health program for teaching and research.

When the University Development Program in Bangkok was initiated, a major reorganization had transformed **Thammasat University** from an institution with primarily part-time students and visiting lecturers into one with full-time students and teachers. A year's liberal arts education was required of all students before they joined one of the specialized faculties, a requirement in which Thammasat remains unique among Bangkok universities.



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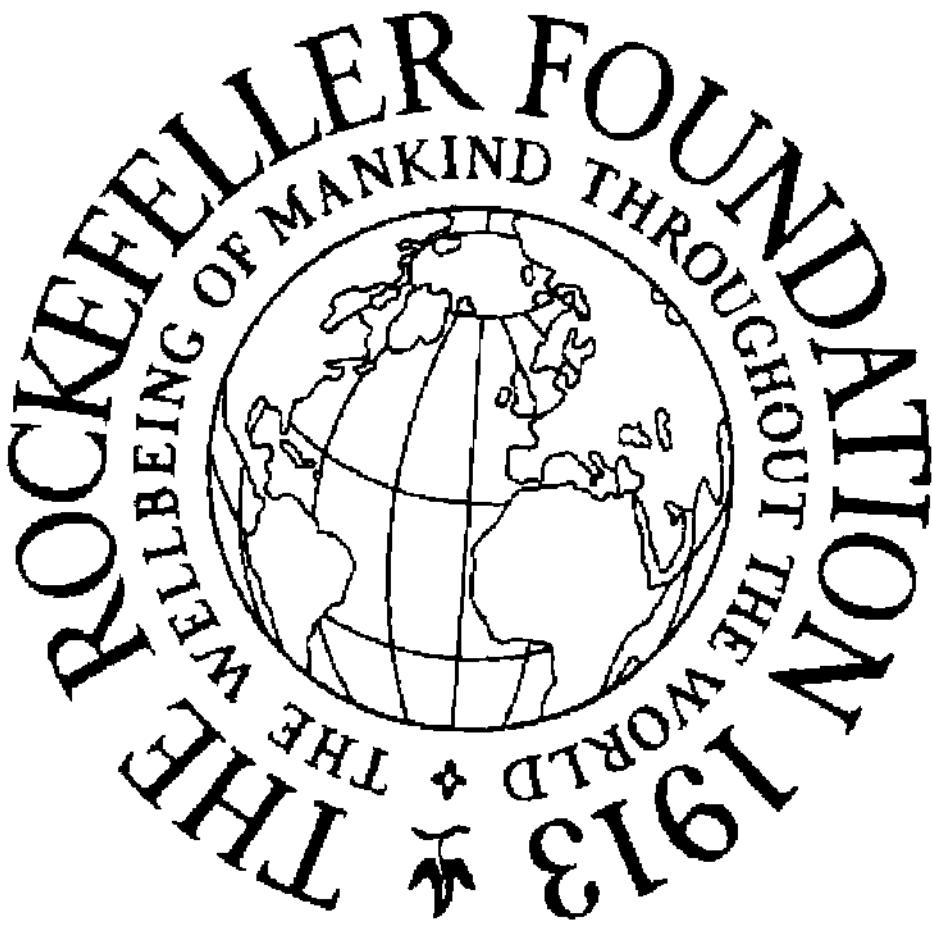
Training and research in economics were urgent needs in the country, and efforts to develop a first-class economics faculty and curriculum seemed to provide an attractive opportunity for Foundation assistance. A special program in economics has been developed, coordinated with the curriculum of the Faculty of Liberal Arts; it also serves as a model for the new Department of Political Studies in the Faculty of Political Science. Beginning next year, the Faculty of Economics will initiate a Master's program in cooperation with the Faculty of Economics and Business Administration of Kasetsart University. These developments in the Faculties of Liberal Arts and Economics are now having university-wide effects. Parts of the University will be moved, in about three years' time, to a new site close to the Asian Institute of Technology and the Asian Institute of the Economic Commission for Asia and the Far East (ECAFE); here a residential campus will be built and an environment created that can foster further development.

Assistance to Kasetsart University has been provided in the form of support to its joint programs with the Ministry of Agriculture in rice, corn, and sorghum improvement. A Foundation staff member heads the plant breeding programs of the Rice Department of the Ministry, and another leads the corn and sorghum programs of its Department of Agriculture. The primary research facilities of the Ministry are on the Kasetsart campus, which greatly simplifies the efforts of the staff members working with the Ministry's programs to assist also with the development of teaching and research at Kasetsart. The goals of the joint programs have been to improve corn and sorghum production rapidly, to accelerate increases in rice yields, and to strengthen research and teaching at Kasetsart in areas of primary relevance to the improvement of Thailand's agriculture.

Kasetsart's 300-acre farm is being developed, with Foundation assistance, into an outstanding experiment station and center for training students in the practice of agriculture. Recently the Foundation

The Foundation's representative in Thailand and the dean of the Faculty of Medical Sciences discuss lab-

oratory space, using a model of the buildings recently completed to house the University of Medical Sciences.



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provided a consultant to assist the rector and University officials with plans for expanding Kasetsart's physical facilities, for enlarging the faculty and the student body, and for initiating graduate programs.

It seems likely that each of the Bangkok universities will add faculties it now lacks. However, a Committee on Graduate Education has been established under the leadership of General Neutr Khemayodhin, to guide development of graduate education in a complementary manner, taking advantage of strengths in the various institutions. The Foundation expects to continue its support of research and graduate educational developments in the basic medical sciences at the Faculty of Medical Sciences, in agriculture and related disciplines at Kasetsart, in humanities and social sciences at Thammasat, and in delivery of health care at Ramathibodi Hospital.

OTHER INSTITUTIONS

Limited exploratory activities have been carried out at three additional locations: the University of

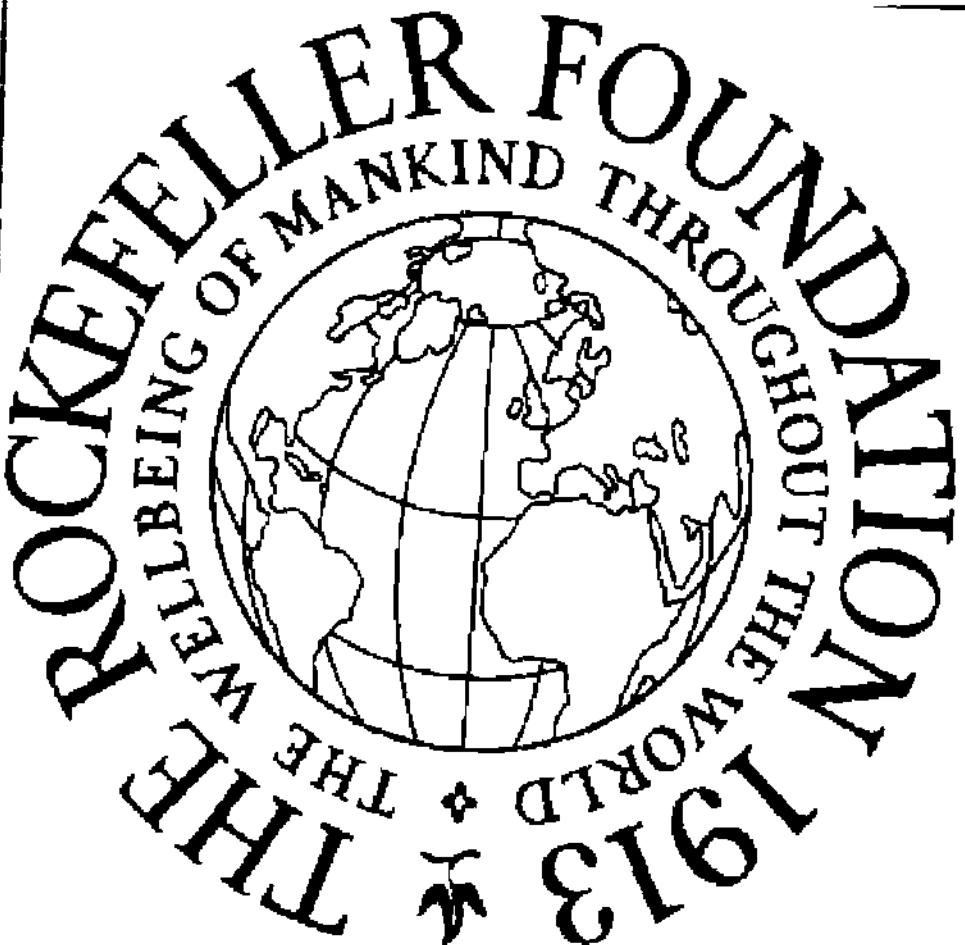
Khartoum, the Federal University or Minas Gerais, and a complex of institutions in Santiago, Chile.

The Foundation has worked for nearly two decades with the University of Chile and the Catholic University of Chile, and during this period centers have emerged in the humanities and social sciences, particularly economics and history, that are outstanding in Latin America in quality of research conducted, numbers and quality of scholars engaged, and numbers of students given graduate training.

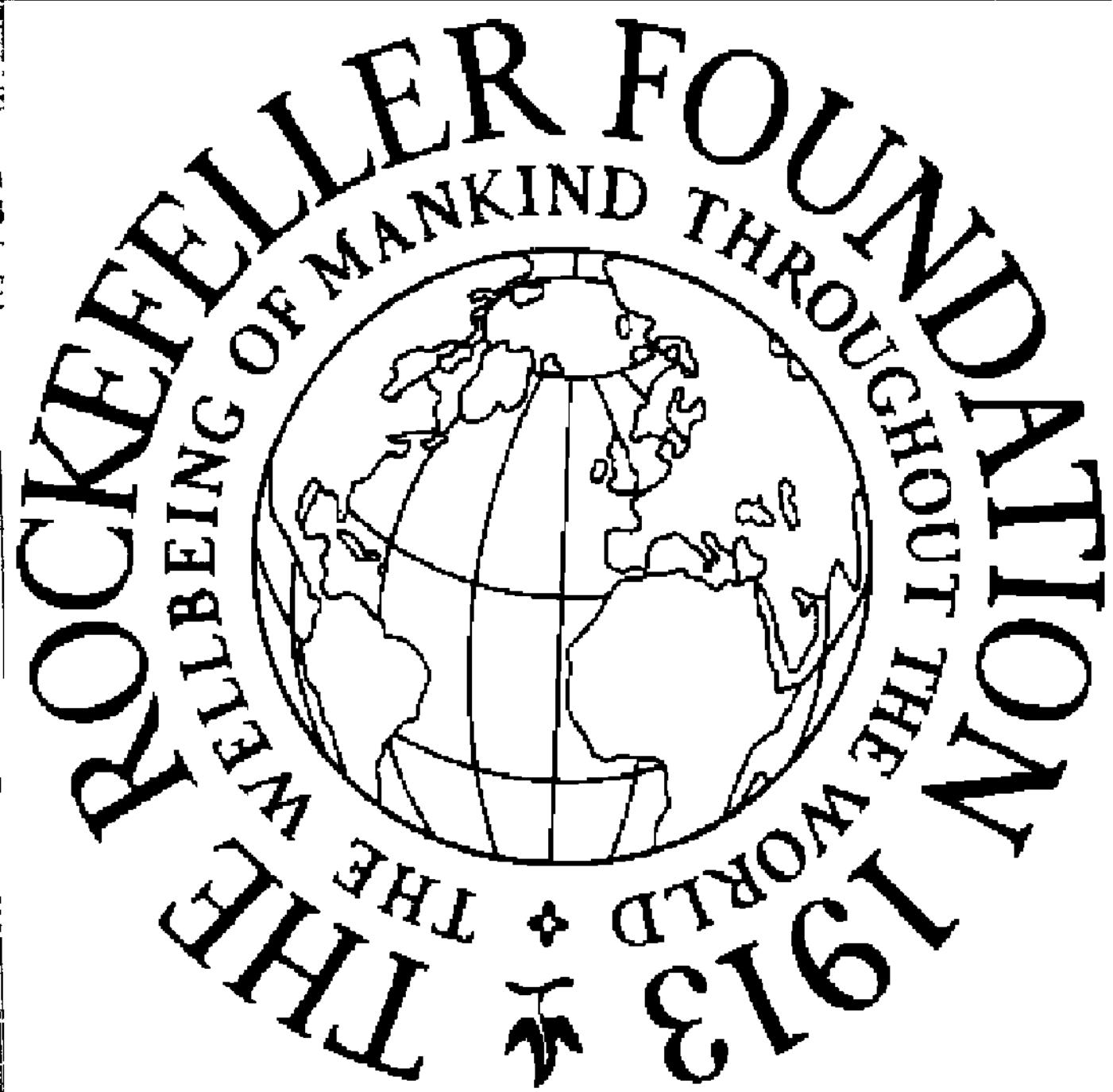
The two Universities play an important international role in Latin America in economics and history, providing visiting professors to other institutions and training economists from other countries. The Government of Chile calls on economists from both Universities for consultation, and to fill government posts. The Center of Research on American History, established with Foundation aid in 1960, emphasizes research on social change as part of the social and economic history of the colonial-

Thai research efforts to improve the basic food crops are centered at Kasetsart University. Two Foundation

specialists are playing key roles in the Thai Government's rice, corn, and sorghum improvement programs.



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contemporary period. The Center offers a Master's-degree program, which serves faculty members of other Latin American institutions as well as Chileans.

The Foundation, during the same period, also assisted Chile in research and training in agriculture, with very substantial results, culminating in establishment of the **Agricultural Research Institute** in 1964. Recent Foundation support has included continued assistance to economics and other social sciences and help for inter-institutional activities in agriculture and veterinary science.

As centers of excellence emerge at the universities that the Foundation is assisting, possibilities will be explored for developing networks of cooperating institutions, utilizing these centers as sources of visiting faculty and as graduate training centers for staff members of other universities in the region. Already

the basic medical science departments in Bangkok and the College of Agriculture and Faculty of Economics of the University of the Philippines are being used for advanced training of other Asians, with Foundation support.

Comprehensive assistance to one or two additional universities will be considered, especially as Foundation staff and resources are freed by developments at the institutions now being assisted. The Foundation will remain vigilant to the needs and opportunities for shifting emphasis and ultimate termination of the University Development Program at each institution. The timetable is different for each one, but the yardstick is the same—the creation of a strong, indigenous university with a critical mass of highly qualified scholars able to carry forward their own program to meet local, national, and regional needs.

A young economics instructor (left) works late in her combined office-classroom at Bangkok's Thammasat University. This institution, which formerly was comprised of part-time faculty and part-time students, has become

a full-time university offering graduate work. Below: The University of Khartoum, Sudan, was one of several institutions working with the Foundation to strengthen their faculties and curricula on an exploratory basis.



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1968 GRANTS

UNIVERSITY DEVELOPMENT

INTERNATIONAL

ROCKEFELLER FOUNDATION University Development Program Centers:

| | |
|--|---------------------------|
| University of Valle, Colombia | \$ 612,950 |
| Staff on assignment | \$ 419,930 |
| Project support | 193,020 |
| University of Ibadan, Nigeria | 294,530 |
| Staff on assignment | 271,280 |
| Project support | 23,250 |
| University of East Africa | 838,520 |
| Staff on assignment | 731,920 |
| Project support | 106,600 |
| Universities in Bangkok, Thailand | 1,719,680 |
| Staff on assignment | 1,439,380 |
| Project support | 280,300 |
| University of the Philippines | 267,160 |
| Staff on assignment | 201,960 |
| Project support | 65,200 |
| TOTAL—Appropriations made in 1968 | <u>\$3,732,840</u> |

CHILE

AGRICULTURAL RESEARCH INSTITUTE, Santiago: library development, equipment, research, and training; \$101,825;

CATHOLIC UNIVERSITY OF CHILE, Santiago: support of the program of the School of Economics and Business Administration; \$53,000;

SOCIEDAD CHILENA DE PLANIFICACIÓN Y DESARROLLO (PLANDES), Santiago: toward costs of a three-day conference on graduate training and research in the social sciences in Chile; \$2,900;

UNIVERSITY OF CHILE, Santiago:

Support for the program of the Graduate School of Economics and the Institute of Economics; \$60,000;

Support for the program of the Center of Research on American History; \$49,673;

Graduate studies program in the Center of Research on American History; \$25,000;

COLOMBIA

ROCKEFELLER FOUNDATION International Program in University Development: Colombian program; see International, above;

UNIVERSITY OF VALLE, Cali:

Rockefeller Foundation International Program in University Development; visiting faculty requested by the University of Valle; *see International, above*;

Dr. Jean-M. François Bucher, Georgetown University, Washington, D. C.; visiting professor, Department of Literature;

K. James McKenzie; to continue as research assistant in agricultural economics;

Dean H. Wilson, University of Michigan, Ann Arbor; visiting professor, Division of Engineering;

Support for the Division of Health Sciences; \$311,015;

General support of the University; \$100,000;

Toward establishing a graduate program in the School of Nursing; \$70,845;

Research, in the Division of Social Sciences and Economics, on production economics and farm management in the Cauca Valley, to be directed by Dr. Gerald I. Trant; \$50,000 through August, 1971;

Postgraduate training awards to enable non-Colombians to study at the University; \$45,000;

Improvement of student services; \$30,000;

Toward staff salaries in the Departments of History and Literature; \$22,888 through December, 1970;

Purchase of equipment for the Faculty of Architecture, and structural changes in its laboratories; \$17,500;

Cornell University, Ithaca, New York; to enable Dr. Douglas A. Lancaster to serve a year as visiting professor in the Biology Department; \$16,000;

Equipment and supplies for the Department of Physiological Sciences, Faculty of Medicine, for research in biochemistry under the direction of Dr. Alvaro Alegria; \$14,000;

Equipment and supplies for the Department of Physiological Sciences, Faculty of Medicine, for research in renal physiology under the direction of Dr. Mario Barac Nieto; \$12,725;

Equipment for teaching and research in the Division of Pharmacology, Department of Physiological Sciences, under the direction of Dr. Hector Gómez; \$12,320;

Appointment of Peter J. Murphy, Johns Hopkins University, to the Division of Engineering; \$8,500;

Toward the costs of collecting data on marketing of agricultural food products in Cali for a research project in the Division of Social Sciences and Economics; \$8,500;

Equipment for the Biology Department; \$8,131;

Toward the appointment of an archivist for the Faculty of Philosophy, Letters, and History; \$6,150 through December, 1970;

Michigan State University, East Lansing; to enable Ralph Cotterill to continue as research assistant in agricultural economics at the University of Valle; \$5,762;

To enable Dr. Eduardo Gaitán to pursue studies in endocrinology at Vanderbilt University, Nashville, Tennessee; *see*; \$5,500;

Toward costs of seminars on biochemistry, medicine, mathematics, and engineering; \$3,904;

To enable Professor Luciano Peña, Faculty of Sanitary Engineering, to study hydraulic engineering at the University of North Carolina and to participate in an engineering project designed for developing countries; \$3,000;

Miss Libia V. Cerezo and Miss Ceneida Montes S.; to participate in the nurse midwifery program at Down-state Medical Center, Brooklyn, New York, and to observe a similar program at University District Hospital, Caparra Heights, Puerto Rico; \$1,950;

Julio Aguirre-Quijano; to attend the American Library Association conference and a seminar on acquiring Latin American library materials, in Kansas, and to observe administration practices at libraries in the United States; \$1,925;

Support for a Writers-Students Laboratory in the Department of Philosophy; \$1,500;

Equipment for Central Administration; \$1,050;

José Mildred Castro O.; to take a course in linear algebra at Cornell University, Ithaca, New York; \$1,034;

Toward costs of an engineering seminar held in Silvia, Colombia; \$378;

Toward costs of a seminar on the objectives, utilization of resources, and external relations of the University; \$274;

KENYA

ROCKEFELLER FOUNDATION International Program in University Development: East African program; see *International, above*;

UNIVERSITY COLLEGE, Nairobi (University of East Africa—see also *Tanzania and Uganda*):

Rockefeller Foundation International Program in University Development; visiting faculty requested by the University College; see *International, above*;

Dr. Ernest Q. Campbell, Vanderbilt University, Nashville, Tennessee; visiting professor of sociology;

Dr. Peter A. Diamond, Massachusetts Institute of Technology, Cambridge; visiting senior research fellow, Social Science Division, Institute for Development Studies;

Dr. John R. Harris, Massachusetts Institute of Technology, Cambridge; research fellow, Social Science Division, Institute for Development Studies;

To enable Goran Hyden, University of Lund, Sweden, to serve as lecturer in development administration; 148,680 Kenyan shillings (about \$21,600) for a two-year period;

Toward costs of the research programs of the Cultural Division, Institute for Development Studies; \$15,500;

Toward costs of a postgraduate course leading to the B.Phil. degree in economics; \$13,875;

Support for the fascioliasis research project in the Faculty of Veterinary Science; \$13,650;

Research in the Faculty of Veterinary Science on pneumonia of cattle, sheep, and goats; \$9,000 for a three-year period;

Toward the appointment of Dr. Dharam Ghai to the newly created post of deputy director, Social Science Division, Institute for Development Studies; 54,120 Kenyan shillings (about \$7,850) through August, 1970;

Support of a pilot research project in the improvement of reading skills of first-year students; \$6,720;

Research in the basic sciences; 44,180 Kenyan shillings (about \$6,407);

Participation in the acquisition of the Marco Surveys archives; \$5,000;

Toward the acquisition of library materials for the Department of Sociology; \$5,000;

Books for the Department of Government; \$3,000;

State University of New York at Buffalo; to enable Joseph Maitha, prospective staff member at the University College to complete his study of the supply function for Kenyan coffee; \$2,325;

Dr. Robert Chambers, Glasgow University; to complete research on the Mwea agricultural scheme at the Institute for Development Studies, University College; \$1,320;

Michigan State University, East Lansing; to enable Frederick M. M. O. Okatcha, prospective faculty member at the University College, to complete research in educational psychology; \$1,100;

NIGERIA

ROCKEFELLER FOUNDATION International Program in University Development: Nigerian program; see *International, above*;

UNIVERSITY OF IBADAN:

Rockefeller Foundation International Program in University Development; visiting faculty requested by the University of Ibadan; see *International, above*;

Dr. Archibald Callaway; to continue as associate member, Nigerian Institute of Social and Economic Research;

Dr. Pierre L. van den Berghe; visiting professor, Department of Sociology, transferred from the University College, Nairobi, Kenya (University of East Africa);

Additional support for the rural health training and teaching center at Igbo-Ora; Nigerian £22,993 (about \$64,840);

Support of six medical training posts in pathology, chemical pathology, microbiology, and preventive and social medicine; £9,091 (about \$25,910);

Equipment and technical assistance for entomological studies of legumes in Nigeria; \$9,100 through December, 1970;

Toward the salary of the departmental head of agricultural economics, Faculty of Agriculture, during the 1967-68 and 1968-69 academic years; \$8,000;

E. W. Foss, Cornell University, Ithaca, New York; to serve as visiting professor of agricultural engineering for the 1968-69 academic year; \$5,700;

State University of New York at Buffalo; to enable Omonhiomwan Omoruyi, prospective faculty member at the University of Ibadan, to undertake research in Guyana on social communication and the plural society; \$3,500;

Dr. Gabriel E. Osuide; to study neuropharmacological techniques at the Brain Research Institute, University of California, Los Angeles; \$3,200;

D. R. Oduaran; to study and observe university administration in the United States; \$3,000;

Continued support for two research projects, "Supply and Price Fluctuations of Foodstuffs in Ibadan Markets" and "Farm Tenancy in Western Nigeria"; \$2,850;

Research and training program in the Department of Sociology, to be conducted by Dr. Pierre L. van den Berghe; \$2,000;

Support for Dr. Reuben K. Udo, Department of Geography, during his term as visiting scholar at Northwestern University, Evanston, Illinois; \$2,000;

State University of New York at Buffalo; to enable Gordon Idang, prospective faculty member at the University of Ibadan, to undertake research in Nigeria and the United Kingdom on Nigerian foreign policy and the renunciation of the Anglo-Nigerian Defense Agreement; \$1,800;

Miss Virginia Arnold, retired officer of The Rockefeller Foundation, Wilmington, Delaware; to visit the Department of Nursing to consult with Department members, and to participate in the inauguration ceremony for the new nursing school building; \$1,600;

PHILIPPINES

ROCKEFELLER FOUNDATION International Program in University Development: Philippine program; see *International, above*;

UNIVERSITY OF THE PHILIPPINES:

Los Baños

To continue the scholarship program for Southeast Asian students in the College of Agriculture; \$24,000;

Dr. Cledualdo B. Perez and Dr. Joseph C. Madamba; to present papers at the Second World Conference on Animal Production at College Park, Maryland; to observe beef cattle development programs at United States institutions; and to visit Rockefeller Foundation staff in Colombia to discuss possible cooperative research on beef cattle production in the tropics; \$4,120;

To enable Miss Delfina M. Torreta, College of Agriculture, to complete her graduate studies in the United States and return to the Philippines; \$2,000;

Manila

Dr. Potenciano R. Aragon; to visit centers of public health teaching and administration, comprehensive community medicine, and research in enteric bacteriology, in the United States, Colombia, Europe, and Asia; \$4,550;

Dr. Benjamin D. Cabrera; to visit entomology and parasitology teaching and research centers in the United States, England, India, and Singapore; \$4,150;

Dr. Santiago V. Guzman; to visit pulmonary physiology laboratories at the University of Florida, Gainesville, and the University of California, San Francisco; \$3,900;

Dr. Paulo C. Campos; to visit community medicine programs in the United States and Colombia; \$2,050;

Quezon City

Rockefeller Foundation International Program in University Development; visiting faculty requested by the University of the Philippines; see *International, above*;

Dr. Nobutaka Ike, Stanford University, California; visiting professor, Department of Political Science;

Dr. Herbert A. Krause; to continue as visiting professor, Department of English and Comparative Literature;

Dr. John H. Power, University of Wisconsin, Madison; visiting professor of economics;

Dr. Willis E. Sibley, Washington State University, Pullman; visiting professor of anthropology;

Dr. Dean A. Worcester; to continue as visiting professor, Department of Economics;

Toward the development of a rural comprehensive community health program; \$35,000;

Research equipment and supplies for the Department of Biochemistry, College of Medicine; \$30,000;

Research equipment and supplies for the Department of Anatomy, College of Medicine; \$15,000;

To enable Professor José Maceda to compose and to conduct research at Brazilian music centers; \$13,600 for a 17-month period;

To enable Dr. Amado A. Castro to undertake research on international trade at Harvard University and the University of Wisconsin and to visit centers of economic research in North America and Europe; \$10,900;

Support of Dr. Gerardo P. Sicat's research project on the growth and structure of Philippine manufacturing; \$10,000;

To enable Miss Milagros C. Guerrero, Department of History, to conduct research in the United States on the Commonwealth Government of the Philippines; \$7,400;

To enable the Department of Physiology, College of Medicine, to establish a graduate program; \$7,000 for a two-year period;

To enable Professor Concepción Dadusalza, Department of English, College of Arts and Sciences, to prepare a textbook and supportive materials for use in freshman English courses; \$6,200;

Professor Alfredo V. Lagmay; to visit psychology departments and research centers at institutions in the United States; \$4,800;

To enable Joel Eliseo Rocamora of its Institute of Asian Studies to conduct research in Indonesia; \$4,000;

Cornell University, Ithaca, New York; transportation for faculty members in the humanities and social sciences while on university development assignments with the University of the Philippines; \$3,600;

Professor Jose F. Asperilla; to observe the teaching of physics in the United States and Japan; \$3,210;
Mrs. Paz Y. Yap; to participate in the Educational Testing Service Eighth Annual Program in Test Construction for Foreign Scholars, held in Princeton, New Jersey; \$2,450;
To enable Dr. Jonas Salk, director, Salk Institute for Biological Studies, San Diego, California, to advise on developing the biosciences at the University; \$1,000;

TANZANIA

ROCKEFELLER FOUNDATION International Program in University Development: East African program; *see International, above*;

UNIVERSITY COLLEGE, Dar es Salaam (University of East Africa—*see also Kenya and Uganda*):

Rockefeller Foundation International Program in University Development; visiting faculty requested by the University College; *see International, above*;

Dr. David B. Abernethy, Stanford University, California; visiting lecturer, Department of Political Science;
Robert W. Kates; to continue as director, Bureau of Resource Assessment and Land Use Planning;

Ian Livingstone, Makerere University College, Kampala, Uganda (University of East Africa); director, Economic Research Bureau, for a two-year period;

Dr. R. Gerald Saylor, Western Michigan University, Kalamazoo; research fellow, Economic Research Bureau;
Support for the program of the Economic Research Bureau; 227,300 Tanzanian shillings (about \$32,915);

Support for research and teaching in geography by its Bureau of Resource Assessment and Land Use Planning; 220,000 Tanzanian shillings (about \$31,900);

Toward a program in management and administration; 77,260 Tanzanian shillings (about \$11,203);

To enable Dr. K. E. Svendsen to continue as visiting professor in the Economic Research Bureau; 74,691 Tanzanian shillings (about \$10,830);

Northwestern University, Evanston, Illinois; to enable Professor Leon N. Moses to participate in the economics research and teaching programs of the University College during the summer of 1968; \$8,700;

Columbia University, New York; to enable Dr. Immanuel Wallerstein to serve as visiting professor of sociology at the University College for the first term of the 1968-69 academic year; \$8,332;

To enable Bismarck U. Mwansasu, a prospective faculty member, to undertake field work in India on problems of local administration; \$5,400;

Geoffrey Ferster, Cornell University, Ithaca, New York: to enable him to accept an appointment as research fellow in the Bureau of Resource Assessment and Land Use Planning, University College; \$3,155 for a two-year period;

Leonard Berry, dean of the Faculty of Arts and Social Sciences; to visit American and Canadian universities to explore the development of cooperative programs in geography with the University of East Africa; \$1,800;

THAILAND

INSTITUTIONS IN BANGKOK:

Social Science Association of Thailand, Bangkok: publication of social science textbooks in Thai; \$10,000;
Miami University, Oxford, Ohio; to enable Dr. Paul B. Tresscott to continue his study of economic growth and the monetary system of Thailand and to assist in the Foundation's University Development Program in Bangkok during the summer of 1968; \$9,684;

Thammasat University

Rockefeller Foundation International Program in University Development; visiting faculty requested by Thammasat University; *see International, above;*

Dr. William Lee Baldwin, Dartmouth College, Hanover, New Hampshire; visiting professor, Faculty of Economics;

Dr. K. Laurence Chang, Case Western Reserve University, Cleveland, Ohio; visiting professor, Faculty of Economics;

Dr. Robert G. Layer, Southern Illinois University, Carbondale; to continue as visiting professor, Faculty of Economics;

Dr. Bevans D. Mabry; to continue as visiting professor, Faculty of Economics;

Dr. James L. Murphy, University of North Carolina, Chapel Hill; visiting professor, Faculty of Economics;

University of Medical Sciences

Rockefeller Foundation International Program in University Development; visiting faculty requested by the University of Medical Sciences; *see International, above;*

Dr. Nona Emery; research associate, Department of Physiology, Faculty of Medical Sciences;

Dr. John J. McMonigle, University of Washington, Seattle; research associate, Department of Pharmacology, Faculty of Medical Sciences;

Dr. Hideo Negoro, Yokohama City University School of Medicine, Japan; research associate, Department of Anatomy, Faculty of Medical Sciences;

Equipment, supplies, and research materials for the Faculty of Science, for the Departments of Physiology, Microbiology, Anatomy, Biochemistry, and Pathology, the multidisciplinary teaching laboratories, and the library; \$300,000;

Teaching, research, and library equipment for the Faculty of Medical Sciences; \$188,625;

Purchase of equipment and instruments for surgery training in the community medicine program at the Ramathibodi Faculty of Medicine; \$15,000;

Purchase of data-processing equipment for the Ramathibodi Faculty of Medicine; \$13,000;

Stipends for two doctoral students at the Faculty of Science; \$6,000 for a three-year period;

Dr. Rachit Euri, Ramathibodi Faculty of Medicine; to attend the Illinois Seminar on Medical Education, University of Illinois, and to visit university and research centers in the United States; \$4,075;

Stipends for honors-program students at the Faculty of Medical Sciences; \$4,000;

Dr. Kamchorn Manunapichu; to take courses in business management and administration in the United States and to observe administrative procedures at universities in the United States and England; \$3,510;

Dr. Natth Bhamarapravati, Ramathibodi Faculty of Medicine; to visit universities and research institutions in the United States, Canada, and Japan, and to attend the meetings, in Chicago, of the American Association of Pathologists and Bacteriologists and the International Academy of Pathology; \$2,900;

Stipends for students to participate in the Community Health Program at the Ramathibodi Faculty of Medicine; \$1,000;

ROCKEFELLER FOUNDATION International Program in University Development: Thai program; *see International, above;*

UGANDA

ROCKEFELLER FOUNDATION International Program in University Development: East African program; *see International, above;*

UNIVERSITY OF EAST AFRICA, Kampala (see also Kenya and Tanzania):

Bernard Onyango; to study university administration in the United States, the United Kingdom, and West Africa; \$6,100;

Support of the meetings of the Councils for Agricultural Education, Medical Education, and Veterinary Education, the Social Science Research Council, and other academic groups; \$5,000;

Philip Mbiti, Makerere University College, Kampala; to assist in organizing the current collaborative surveys being conducted by the Institute for Development Studies and the Ministry of Economic Planning and Development, Nairobi, Kenya, to identify six pilot areas for intensive development in rural Kenya; \$2,000;

MAKERERE UNIVERSITY COLLEGE, Kampala (University of East Africa):

Rockefeller Foundation International Program in University Development; visiting faculty requested by Makerere University College; see *International, above*;

Nelson M. Kasfir; to continue as visiting lecturer, Department of Political Science and Public Administration;

Faculty development and research in the Faculty of Agriculture; \$95,340;

Equipment and supplies for the Faculty of Agriculture; \$51,500;

Research, teaching, and graduate studies in political science; 303,000 Ugandan shillings (about \$42,420);

Support of teaching and research in the Department of Economics; \$34,169;

Toward the establishment of a graduate training program in the clinical sciences in the Department of Medicine, under the direction of Dr. William Parson; \$10,000 for a two-year period;

Support for the Master of Arts program in African studies; 36,864 Ugandan shillings (about \$5,345);

Dr. Calvin M. Kunin, University of Virginia, Charlottesville; travel to Africa to serve as visiting professor in the Department of Medicine; \$1,925;

Related Grants

INTERNATIONAL

TOWARD COSTS of a conference on community medicine in developing countries, held at the Villa Serbelloni Research and Conference Center, Bellagio, Italy; \$24,250;

CANADA

UNIVERSITY OF TORONTO: to enable scholars in the humanities and social sciences to accept assignments for teaching and research related to university development in Africa, Asia, and Latin America; \$280,000 through June, 1973;

COLOMBIA

UNIVERSITY OF THE ANDES, Bogotá; toward the costs of training and research in political science; \$20,090;

MEXICO

INTER-AMERICAN SCHOLARLY BOOK CENTER, Mexico City: toward its operating expenses; \$15,000;

NORWAY

CHRISTIAN MICHELSEN INSTITUTE, Bergen: to enable H. E. Dahl to conduct research on the economy of East Africa; \$5,750;

UNITED STATES

DUKE UNIVERSITY, Durham, North Carolina: to enable scholars in the humanities and social sciences to accept assignments for teaching and research related to university development in Africa, Asia, and Latin America; \$280,000 through June, 1973;

TEMPLE UNIVERSITY, Philadelphia, Pennsylvania: to enable Dr. Melvin Mednick to complete research on the economic, political, and social organization of two communities in Mindanao, Philippines; \$3,000;

UNIVERSITY OF MICHIGAN, Ann Arbor: to enable scholars in the humanities and social sciences to accept assignments in Africa, Asia, and Latin America; \$300,000 through June, 1974;

UNIVERSITY OF MINNESOTA, Minneapolis: to enable scholars in the humanities and social sciences to accept assignments in Africa, Asia, and Latin America; \$300,000 through June, 1974;

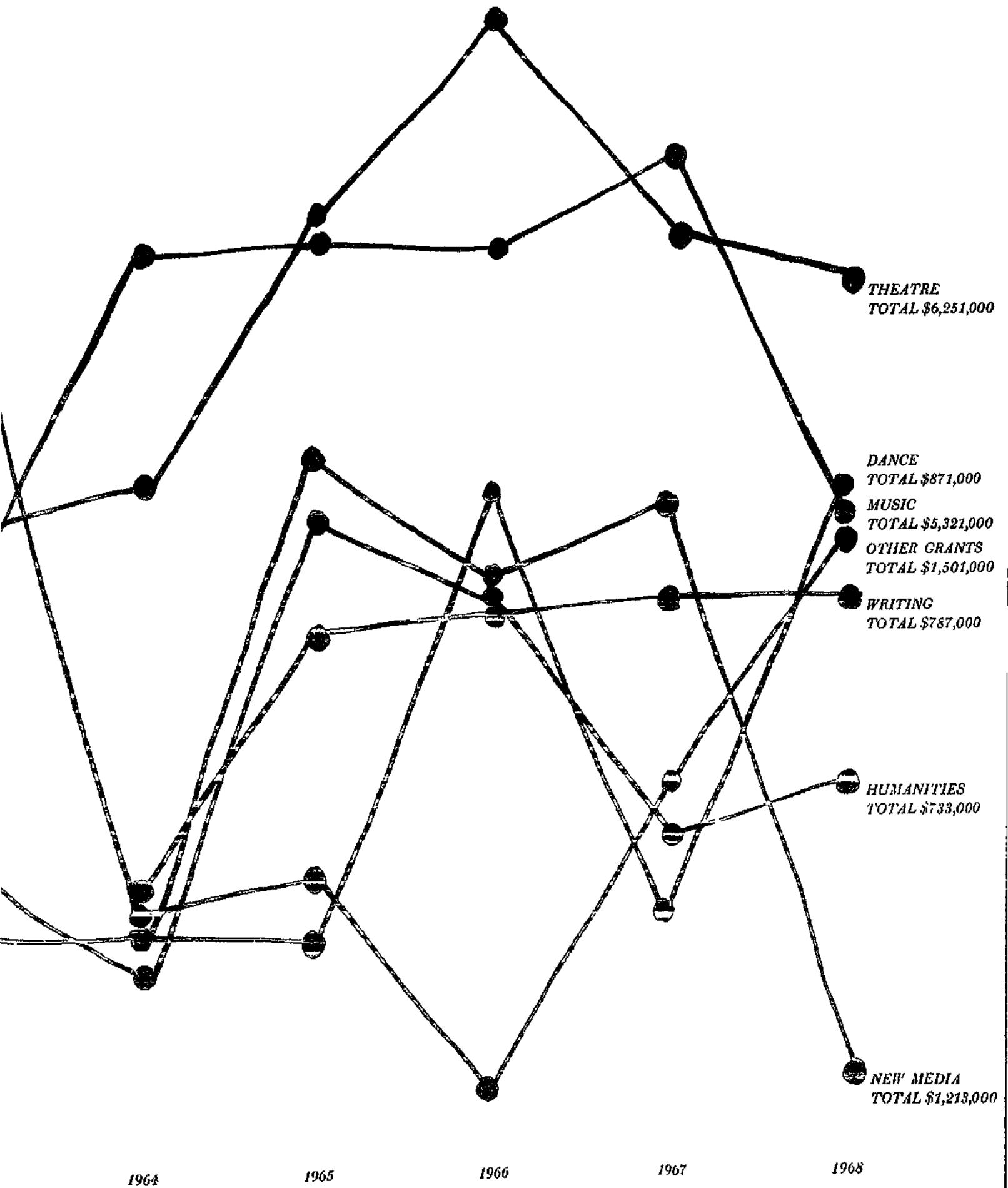
UNIVERSITY OF VIRGINIA, Charlottesville: to enable scholars in the humanities and social sciences to accept assignments in Africa, Asia, and Latin America; \$200,000 through June, 1974;

UNIVERSITY OF WISCONSIN, Madison: to enable scholars in the humanities and social sciences to accept assignments for teaching and research related to university development in Africa, Asia, and Latin America; \$280,000 through June, 1973.

CULTURAL DEVELOPMENT

14

"The new viewpoint looks at 'culture' not as a commodity but as a condition, that is, a situation where changing needs indicate social and artistic changes. In this sense, participatory democracy is related to participatory theatre and visual art; technology influences art forms; interculturalization affects arts and philosophy; and the civil rights movement leads to new political, economic, and artistic positions. The politicization of the arts represents a conviction of more and more people that the arts play a vital role in the establishment and debate of the most essential values of our society."



PROPORTIONS AND GRANTS IN CULTURAL DEVELOPMENT¹

The past five years have seen an almost unprecedented interest in American culture. While much of the turmoil of thinking, talking, and doing has taken place in the political and social realms, comparable vigor has been shown in the arts, which are emphasized in the Foundation's Cultural Development Program.

New dimensions and concepts are being formulated, tested, and tried in the arts. Previous assumptions and positions are being radically challenged if not, in fact, overthrown. "Relevance," "participation," "involvement," and "creativity" are slogan words. But their increasing use by young people today connotes a way of thinking that is both critical of the status quo and wishful and positive about the future.

The new viewpoint looks at "culture" not as a commodity but as a condition, that is, a situation where changing needs indicate social and artistic changes. In this sense, participatory democracy is related to participatory theatre and visual art; technology influences art forms; interculturization affects arts and philosophy; and the civil rights movement leads to new political, economic, and artistic positions. The politicization of the arts represents a conviction of more and more people that the arts play a vital role in the establishment and debate of the most essential values of our society.

Three dominant themes can be noted: a demand to have the arts made increasingly available; a demand for greater participation and involvement in all the arts; and a desire on the part of creative artists to experiment in forms, styles, and techniques.

The response to new ideas and new demands has been astonishing. The growth in number of elaborate cultural centers has been matched by the growth of neighborhood arts centers—many in ghetto areas—which have sprung up in churches, housing developments, schools, garages, and store fronts. Centralization of the performed arts in urban arts centers has been countered by the flow of film, theatre, dance, and music to suburban shopping plazas. The university has become one of the focal points in the elaborate structure of the arts. Through its often new facilities and its programming—more than 70 percent of all professional concerts are booked through university concert managements—the university has assumed a cultural role similar to that played by the ducal court in 18th-century Europe.

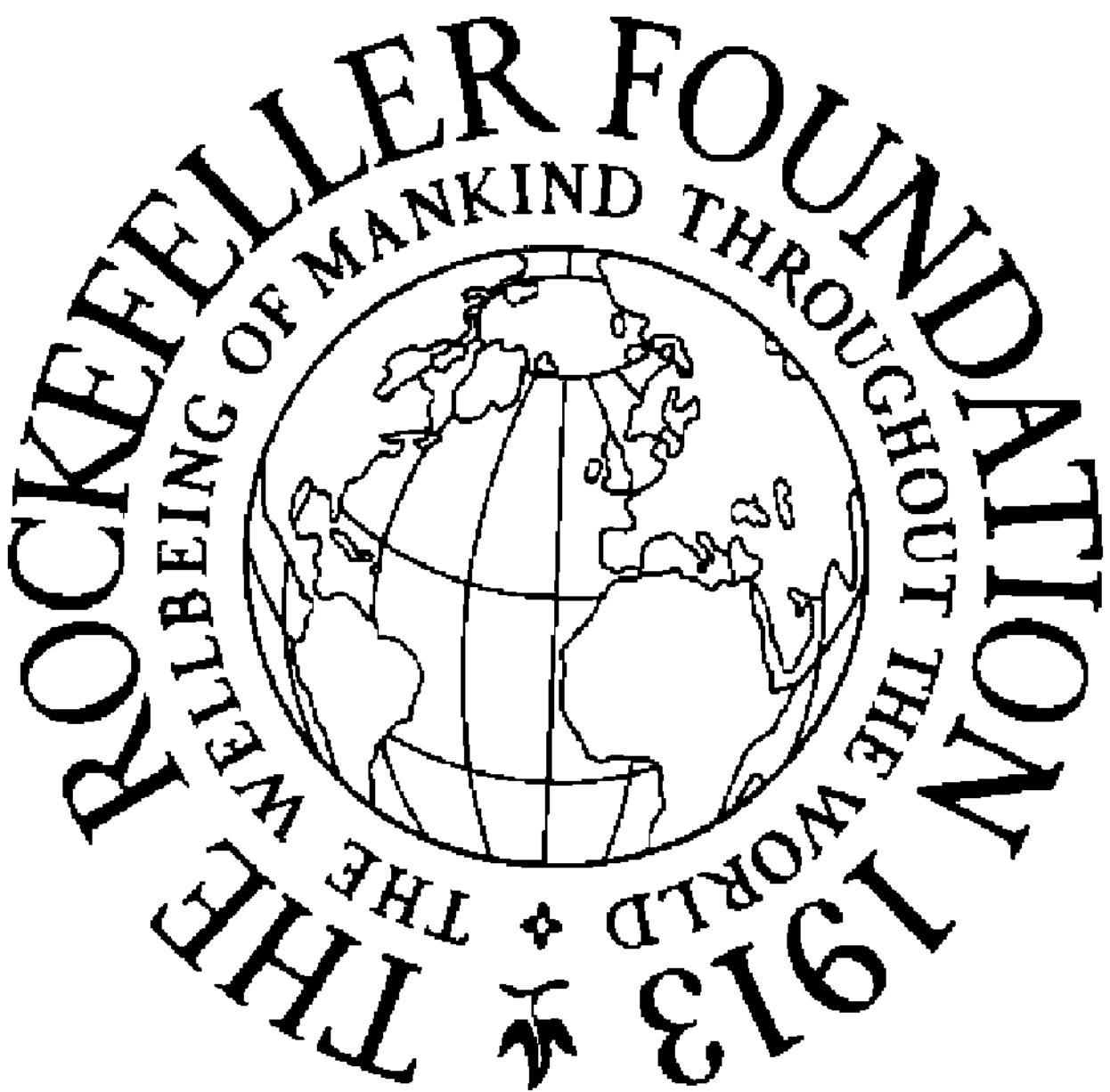
Activity in the arts has not developed equally in all parts of the country. A few areas, notably New York and Los Angeles, have a plethora of cultural

opportunities; others, such as the rural South, have almost none. Several surveys have looked at the arts from a social rather than an aesthetic viewpoint. The Rockefeller Brothers Fund report, *The Performing Arts: Problems and Prospects* (1965) was the first attempt to make a comprehensive survey of the state of the performed arts and the first to make concrete suggestions as to their future growth and development. The report pointed out that "in spite of tremendous growth and exciting purposes, the performing arts . . . are in trouble."

Much of the trouble is financial, a point illustrated in detail by the Twentieth Century Fund study on the economic dilemma of the performing arts. American creative and performing artists have been acknowledged as the finest in the world; paradoxically, while living in the world's most affluent society, many of them have had to subsidize their own creative work, living in near-poverty or working for a living at jobs that often are unrelated to their chosen fields.

Some economic assistance to the arts has come in the past few years from foundations, from the National Endowment for the Arts, from the Department of Health, Education, and Welfare through its Office of Education, and from state and municipal arts councils. In 1968 the **Business Committee for the Arts** was established, with partial aid from The Rockefeller Foundation, for the express purpose of rallying the business community to the realization that economic development goes hand in hand with cultural development. Some union leaders have also recognized the need to provide more cultural opportunities for union members.

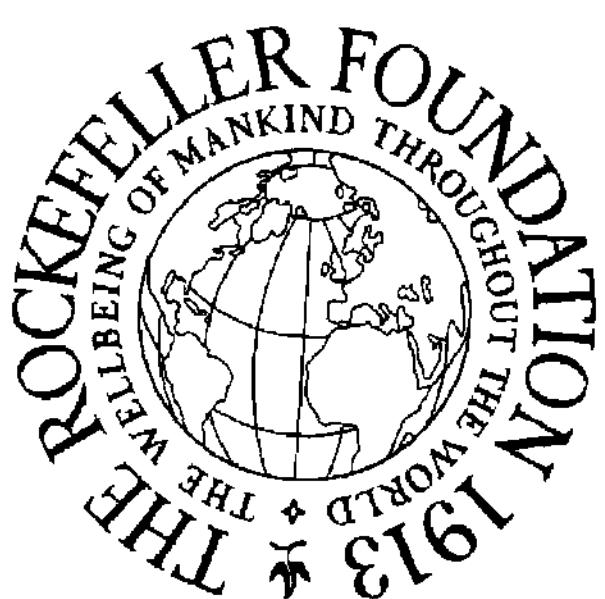
Many agencies have made it possible for new audiences, young and old, rich and poor, black and white, to participate in cultural events. **Young Audiences** has taken music into the elementary and secondary schools. Cultural centers like Lincoln Center have established elaborate programs with schools throughout their regions, bringing students to music, theatre, opera, and dance events at the centers or sending performers out to the schools. Symphony orchestras, under government and foundation sponsorship, have extended their touring and brought live music to many communities that had previously been denied such opportunities. Street theatres, music- and dance-mobiles, summer programs in the arts, and neighborhood cultural centers have given ghetto residents a greater opportunity to participate in the arts; the mass media, particularly television, have made theatre, music, and dance available to millions.



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Foundation grants have drawn creative artists into non-commercial television. William Allan is one of five Bay

Area artists who took up "residence" at San Francisco's Station KQED to work on experimental programming.



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The Congress of Strings offers summer performing opportunities on East and West Coasts for young musicians.

While this process of cultural democratization has been at work, creative artists have been formulating new styles, new techniques, and, with the collaboration of scientists, new arts media. Lines formerly separating the various arts have been blurred and even obliterated. Experiments combining diverse media, simultaneously stimulating the several senses, have, in a few years, emerged from the workshop to public popularity. For example, the theatrical dance works of Alwin Nikolais, Merce Cunningham, and Robert Joffrey—all of which employ dance, music, film, and visual and plastic arts—have exploited a new mixed-media art form. The demand on the part of young audiences for constantly new stimulation has led to “popular” musical forms, for example, that combine folk music, jazz, traditional and avant-garde techniques, electronic sounds, and rhythmic, instrumental, and melodic sounds of Indian, African, and Oriental music. Meanwhile, the voices of the newly emerging black artists are bringing new vitality to some of the older and more traditional art forms of theatre, dance, and creative writing.

It has been in this heady ferment of activity that the Foundation has explored ways in which selective assistance could be given to the arts and humanities. Some Foundation projects, such as the one involving symphony orchestras and universities, have run their course. Other programs are in sight of their culminating points. Finally, certain projects, such as the

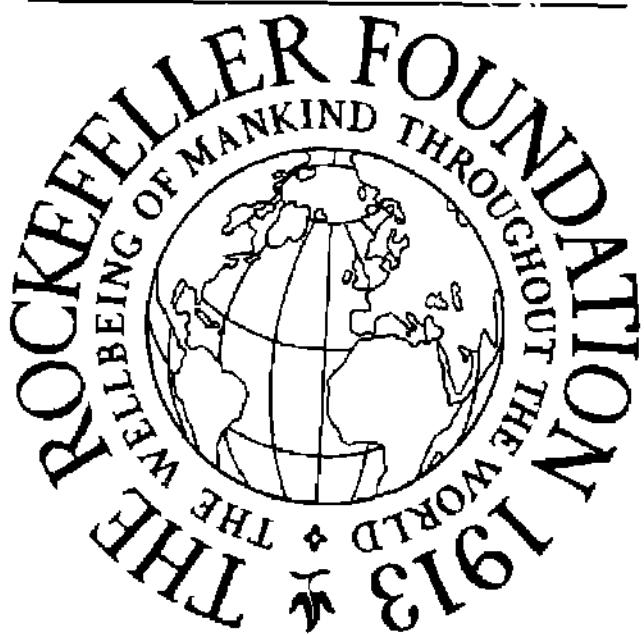
university-based performing groups, have suggested new paths for Foundation consideration.

MUSIC

Since the establishment of the Cultural Development Program in 1963, the Foundation has worked in three main areas with respect to music: the development of creators and performers, the dissemination of new American music, and the encouragement of critical and interpretive writings about music.

During the past four years, with Foundation support, 23 symphony orchestras have visited more than 60 campuses, holding open rehearsals of American music for the benefit of the students and faculties of approximately 130 colleges and universities. These orchestras read and performed music by 286 composers, many of whom were previously unknown and many of whom had never had their music performed by a full symphony orchestra before.

Attendance at the rehearsals and concerts was not limited to university music majors but was open to anyone interested. In several cases, local school boards cooperated by arranging for high school students to attend the rehearsals and performances. Many of the concerts were broadcast locally, and many were taped for broadcast overseas by the Voice of America. At least one orchestra, the Buffalo Philharmonic, has made this special contemporary music series part of its regular season, and it now spends a



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Conductor William Steinberg is among the outstanding musicians who have taken an interest in the Congress.

month touring campuses in New York State under joint sponsorship of the orchestra, the New York State Council on the Arts, and units of the State University of New York.

Several other orchestras are continuing a form of the program in affiliation with universities, some of which are contemplating full or partial sponsorship of orchestras. The explicit goal of the program was the lengthening of the seasons of selected American orchestras at a time when a financial squeeze was forcing orchestras to find year-round employment for their musicians. Measurable results of this program are to be seen in the lengthened seasons now in effect in all of the participating orchestras. The St. Louis Symphony Orchestra has added seven weeks to its season, the New Orleans and Buffalo orchestras, six each.

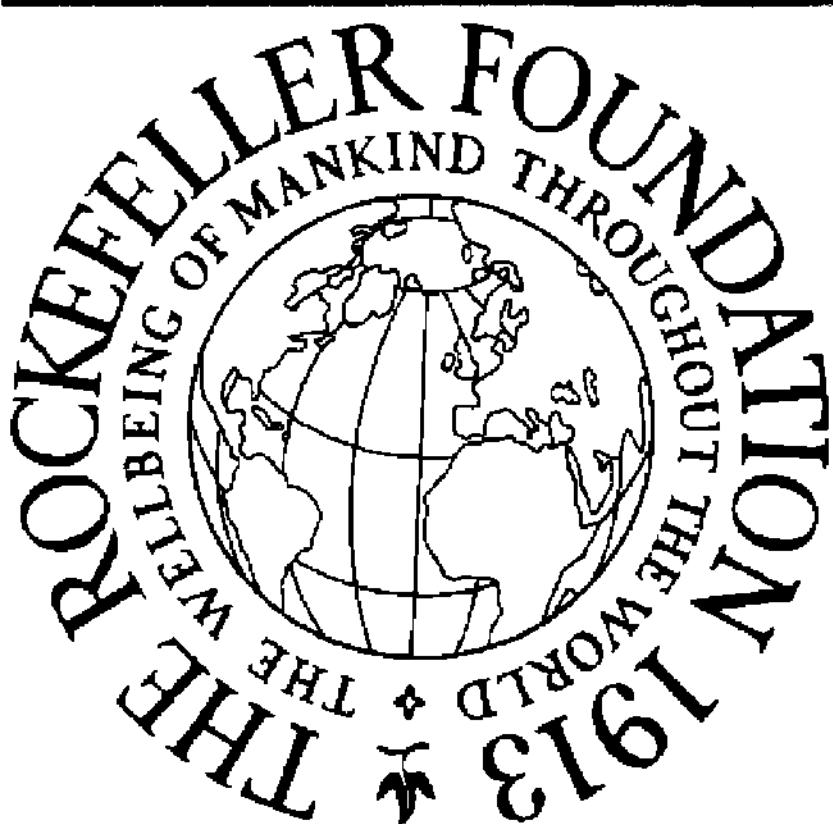
Less measurable, but perhaps more important in long-term results, has been the effect of the program on composers. Many have again turned their attention to the symphonic ensemble with renewed hope of having their music played. A number of hitherto unknown younger composers have been discovered as a result of the program, and their works are gradually making their way into orchestral repertoires. Of particular interest was the joint project of the **Atlanta Symphony Orchestra** and **Spelman College**. Of the 15 composers whose works were read and performed, eight were Negroes, and of this

group only one had ever had a composition performed by a major American orchestra. The works of four of the hitherto unknown Negro composers—T. J. Anderson, Frederick C. Tillis, George Walker, and Oily Wilson—were subsequently played by the Baltimore and Minneapolis orchestras, and at least one is scheduled to be repeated by the Atlanta Symphony Orchestra in its subscription series.

This series of grants, now terminated, for the performance of new American music has made a valid demonstration to orchestra conductors and to audiences that there are many composers capable of injecting new vitality into the traditional orchestral repertoire.

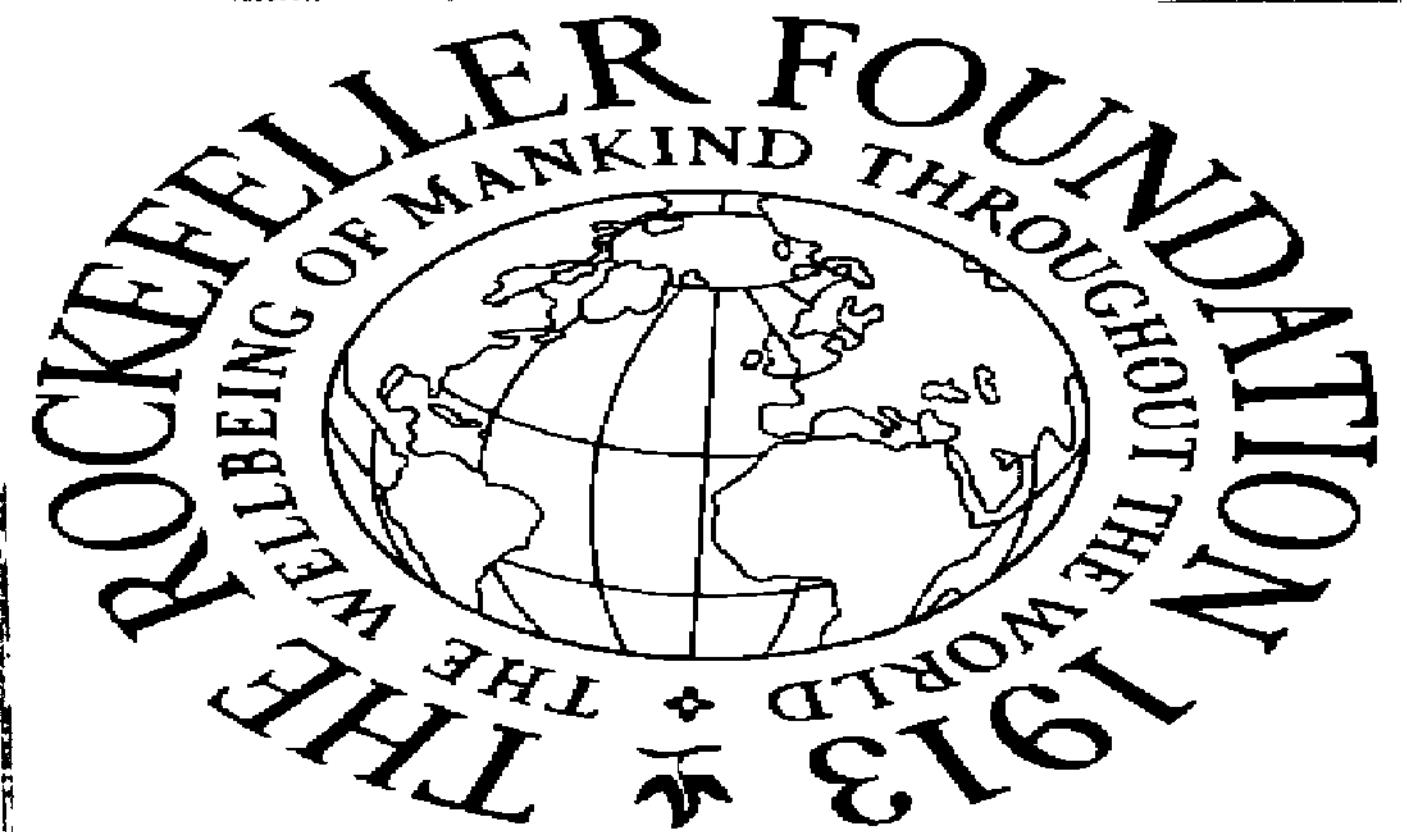
In another attempt to bring the composer into a closer relationship with the symphony orchestra, a program was developed which has placed selected composers of demonstrated talent and promise in-residence with major orchestras for periods of one year each. Prior to the program, no United States orchestra had a composer as part of its organization, unless the conductor happened to be a composer as well, like Leonard Bernstein (New York Philharmonic) or Lukas Foss (Buffalo Philharmonic). Ten composers have been placed with six orchestras over the last three years.

Under the plan, the composer is recommended by the orchestra conductor. He attends rehearsals and concerts and acts as an ex-officio consultant and ad-



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In a light-filled room at the University of Chicago (above), the Contemporary Chamber Players rehearse new music. Composer-conductor Lukas Foss (below) has brought artistic excitement and vitality to Buffalo.



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Photograph Excised Here

Oberlin's Teachers' Performance Institute (above) encourages high school music teachers to return to their

instruments. Below: Composer and conductor exchange views during a rehearsal of the Seattle Orchestra.



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Direct grants to 20 playwrights have done much to stimulate America's new theatre. Terrence McNally, Israel

Horovitz, and Leonard Melfi are young playwrights who joined forces to create "Morning, Noon, and Night."

viser, or as a musical apprentice to the conductor, depending on his experience. The conductor is under no obligation to perform the composer's music, nor is the composer obliged to write for the orchestra. Several commissions and performances of works by the resident composers have resulted from the program, however.

This program seems to have been of major consequence to the composers involved; it has stimulated them to write again for the orchestra and has set them in a place of prominence rarely attained by serious composers today. During the 1968-69 season, composers will be in-residence with the New York Philharmonic, the Cleveland Orchestra, the Dallas Symphony Orchestra, the Atlanta Symphony Orchestra, and the Washington National Symphony. Under the latest grant, made last fall, the Negro composer John Carter was appointed to a residency with the National Symphony.

While the great orchestras of the country wrestle with the problem of bringing their repertoires up to date and balancing their budgets, small musical groups that concentrate on performing new music have been developing at many colleges and universities. To foster this growing movement, a series of

grants has been made by the Foundation since 1964 to help set up creative music centers that bring together young creative and performing artists; benefiting from such grants have been the Universities of Chicago, Iowa, Pennsylvania, and Washington, the State University of New York at Buffalo, Rutgers-the State University of New Jersey, the University Circle consortium in Cleveland, and Grinnell, Mills, Portland State, and Sarah Lawrence Colleges. These groups, which concentrate on the performance of new music, without neglecting the traditional repertoire, have done much to stimulate the composition of music for small instrumental groups and have performed a valuable service in bringing student audiences, over a wide region, into contact with some of the music of their own generation.

The structure of these creative music centers differs from one locality to another. They have in common outstanding creative and performing leadership, but beyond that they show great diversity. In some cases all the performers have faculty or associate faculty standing; in others, the nucleus is a group of professionals, augmented by advanced graduate students; in at least one case, the core of the



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Ellen Stewart, founder of the LaMama Experimental Theatre Club, has been particularly successful in recog-

nizing gifted but unproduced playwrights and in staging their work with imagination, both in the U.S. and abroad.

group consists of faculty members, with local professionals brought in as necessary. At times the contemporary music groups cooperate with artists of different disciplines, bringing together composers, writers, choreographers, film makers, and visual artists, to produce new art forms. Some groups perform programs that attempt to link the music of today with the music of the past. Others are concerned with keeping their audiences in touch with all that is newsworthy in the field of music. For example, the Aeolian Chamber Players, based at Sarah Lawrence College, presented a historic concert of music by young avant-garde Soviet composers; this was the first New York-area performance of music by Soviet composers whose works had been proscribed in their own country.

While all these programs were keyed primarily to the composer and the performer, they also constituted a major breakthrough in the dissemination of new music to audiences hitherto almost completely unaware of what was happening in the field of serious American instrumental music. Many of the concerts given by the symphony orchestras and the smaller performing groups were taped and, in a few instances, released as recordings.

The Foundation has given assistance to two recording projects: to the American Symphony Orchestra toward costs of preparation of Charles Ives' Fourth Symphony and to the Utah Symphony Orchestra for the preparation of "Amériques" by Edgard Varèse. The Foundation has commissioned a survey of the whole field of recording in an attempt to discover its problems and needs and to propose possible solutions.

At a time when the demand for skilled performers and teachers of music outruns the supply, The Rockefeller Foundation has assisted a few projects that give evidence of serving as models in the area of training. A small grant allowed Williams College to bring to its faculty a distinguished musician to conduct the local symphony orchestra, teach at the College, and inaugurate a string program for the area at the regional high school. The Foundation also cooperated with the American Federation of Musicians in establishing East and West Coast branches of the Congress of Strings, one at the Saratoga Performing Arts Center, in New York State, and the other at the University of Southern California.

In the summer of 1966, 100 instrumentalists in their junior year of high school came to the campus



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The American Place Theatre, housed in a New York church, has drawn established writers into the theatre.

of the University of Minnesota, where they rehearsed alongside the professional members of the Minneapolis Symphony Orchestra. This experience allowed the young musicians to take back to their schools throughout the state a sense of the high standards and the discipline necessary for the making of fine music. The success of this program has led to similar efforts in other cities.

Grants for training performers have also been given in support of the Apprentice Program for Singers of the Santa Fe Opera Company in New Mexico; the scholarship program for performers, sponsored by the Berkshire Music Center in Tanglewood, Massachusetts; and the Juilliard School of Music's program to provide postgraduate training for opera singers; this last effort is aimed at altering the situation that finds young American singers forced to get their professional training in European opera houses.

An important link in the creative chain is that forged by teachers. It is an unfortunate fact that until recently there has been little inducement for any music teacher to continue his growth as a musician. In an attempt to remedy this situation, the Foundation has supported several programs that may well serve as models in this field. A grant to Oberlin College enabled its Conservatory of Music to insti-

tute a summer performance workshop for teachers. Here, in an intensive four-week program, an average of 200 public school music teachers from 35 states work in their own specialized fields and participate in four performing groups directed by distinguished professional conductors. Related programs, on a more modest scale, have been supported at the Aspen Music Festival in Colorado, the Florida International Festival in Daytona Beach, and the University of Minnesota. A grant to the Society for Strings, of New York, allows a number of violin teachers to work each summer under the supervision of the outstanding pedagogue Ivan Galamian, at the Meadowmount School of Music in Westport, New York.

In an effort to influence the teaching standards of musicians whose careers are aimed primarily at performance, the Foundation assisted Temple University and the Settlement Music School of Philadelphia to arrange a cooperative program of teaching fellowships; under this grant, University graduate students who are performance majors will be placed as teaching fellows in a newly opened branch of the Settlement Music School in the ghetto area of North Philadelphia adjacent to the University. It is expected that the program will not only provide important training for the young performer-



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The Free Southern Theater, based in New Orleans, trains its own ensemble. It has taken new and old plays, each particularly adapted to its audience, to Southern rural communities where no plays have been seen before.

teachers, but also substantially increase the opportunities for talented ghetto youngsters to be identified and encouraged.

A grant to the North Carolina School of the Arts, in Winston-Salem, allowed the School to bring to its faculty a group of outstanding professional musicians, who, in addition to instructing students, form a group called the Piedmont Chamber Players, to perform throughout the Southeast region of the United States.

Concern with the state of music criticism in this country led to the establishment of a program at the University of Southern California for the training of music critics. This program, in which a mature student spends a year of intensive study at the University, followed by a year of apprenticeship to a senior music critic of a major newspaper, has proven most successful. To date, 25 students have participated, and graduates of the program are now employed as critics on such newspapers as *The New York Times*, the *Houston Post*, the *San Francisco Chronicle*, the *Los Angeles Herald Examiner*, the *Seattle Post-Intelligencer*, *The Plain Dealer* of Cleveland, the *Akron Beacon-Journal*, *The Christian Science Monitor*, the *Chicago Sun-Times*, and the *Chicago's American*.

Although the Foundation does not have a program

of individual grants as such in the field of music, occasional grants for creative work have been given to composers of outstanding potential or achievement. Recent recipients have been Luciano Berio, Michael Colgrass, Mario Davidovsky, Douglas Moore, Fredric E. Myrow, David Reck, and Roger Reynolds.

THEATRE AND DANCE

In theatre, the Foundation has worked primarily in three areas: the encouragement and support of playwrights and the dissemination of their works; the broad training of performers; and the development of audiences for theatre in general and new plays in particular. In addition, one of the main objectives of this part of the Cultural Development Program has been to help break down some of the barriers that have existed between academic and professional theatre.

In theatre, as in music, the creative person is the pivotal figure who gives direction, vision, and new impetus to the art. Neither the composer nor the playwright, however, can exist in a vacuum. Each must have his works tested in the arena of public opinion, for his own growth. Each must be heard so that what he has to say about society can contribute to society's understanding of itself. Because the



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New voices in new plays for new audiences is a characteristic of the American theatre today. Playwright Ed

Bullins, himself the recipient of a grant, stands in front of Harlem's community-oriented New Lafayette Theatre.

playwright has been the center of new vitality in American theatre, he has also been the center of Foundation attention in theatre. This attention has taken two forms: a program of individual grants to playwrights and a program to encourage production of new plays.

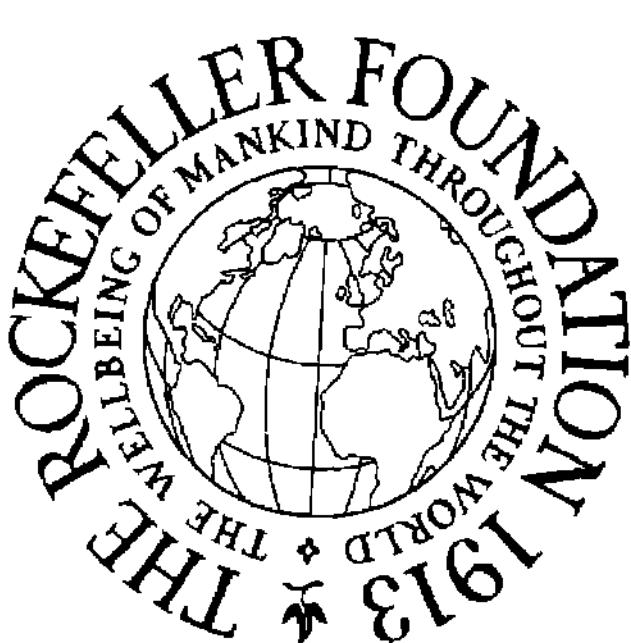
The program of individual grants to playwrights was designed to be small, flexible, experimental, and selective. Advice solicited informally from consultants resulted in awards being given to 20 carefully chosen, chiefly younger playwrights, many of whom are part of the nucleus that has revolutionized the theatre in form as well as content in the past few years. Although the experiment is young, the results have been exceedingly gratifying. Not only have the recipients written important works during the period of their grants, but their plays have been produced in Europe as well as the United States. Their works are published in anthologies, and they are now produced in theatres both on and off Broadway.

It has been said that playwrights tend to appear when there are suitable or expanding opportunities for the production of their work. Aware of the fact that Broadway, with its economic pressures, provides

few opportunities for playwrights to learn their craft, the Foundation has searched for situations where creative and performing artists could gather to work together with maximum freedom.

It was to give encouragement and support to playwrights that grants were made to groups covering the theatrical spectrum from Off-Off-Broadway's **Cafe LaMama** to the experimental groups that operate at the **Mark Taper Forum** in Los Angeles and the **Forum** theatre at Lincoln Center, and from the **University of Minnesota's Office of Advanced Drama Research (OADR)** to the **American Place Theatre**, whose home is St. Clement's Church on New York's West Side. At these places the playwright has been able to participate in and see the development of his play as it is brought to production with an appropriate cast and sympathetic director. Furthermore, audiences, particularly those professionally concerned with theatre, have had a chance to keep in touch with newly emerging creative and performing talent.

To date, these professional and university theatre companies have mounted well over 100 productions of new plays, plus an equal number of workshop pro-



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An experimental theatre group functions within the regular company of Los Angeles' Mark Taper Forum.

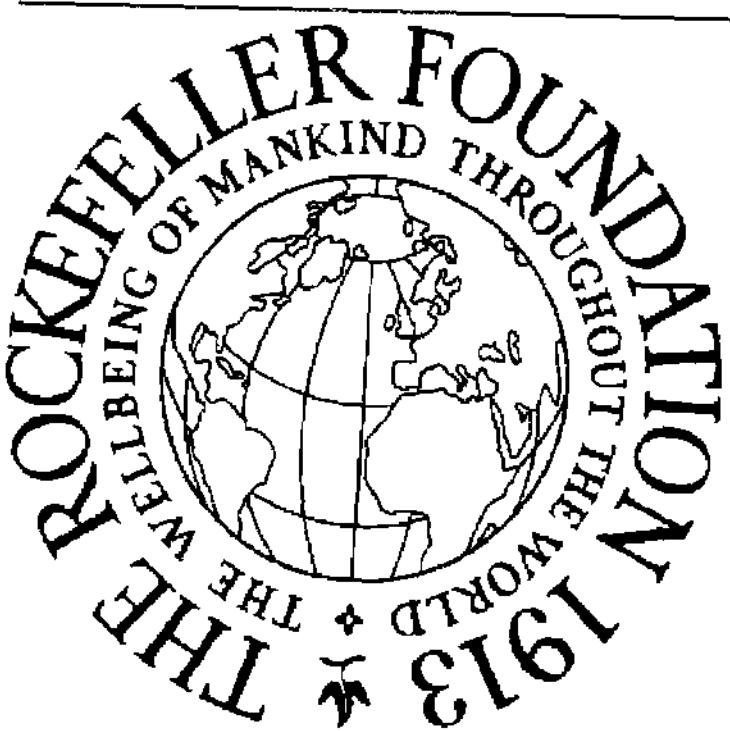
ductions. Many of the new plays, after having been developed and performed with an experienced cast, have been published, some by commercial publishing houses, and those developed by the OADR, in a four-volume *Playwrights for Tomorrow* series. Publication of play scripts, plus an exchange of ideas and talents among theatres involved in this program, has made the plays available to a wider audience. Broadway itself has become an important part of the network, picking up for commercial production plays developed at university and regional theatres.

All indications point to the development of an emerging, multi-source American national theatre. This theatre is a product of the cultural ferment of the 1960's, toward which the Foundation's Program in Cultural Development has made significant and often pioneering contributions.

The secondary thrust of the Foundation's activity in theatre has been in the area of training programs. Grants for this purpose fall into two general categories: support for advanced training of established actors, directors, and others; and support for expansion of existing university training programs in theatre, or for the establishment of new ones.

The first several years of the Foundation's Program in Cultural Development coincided with the mushrooming of regional professional repertory companies. In many cases, the American actor who had been trained in a naturalistic school of theatre found that he had certain limitations when he was asked to cope with the wider range of literature produced by the repertory companies. Responding to requests, the Foundation awarded grants for advanced work in the purely technical areas of the craft of acting—voice and movement—to a few of the top professional repertory companies in the United States. As the American actor has grown more accustomed to disciplining his voice and his body, the urgent need for such on-the-job training programs has lessened, and the Foundation does not contemplate any further grants in this area.

In addition to the advanced training of theatre professionals, the Foundation has supported new imaginative and comprehensive programs for training student actors in such institutions as New York University and Yale University. Smaller grants have also been made, principally to institutions in the Far West, Rocky Mountain, and Midwest areas for the



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Regular and outstanding performances are no longer limited to the two coasts. The Santa Fe Opera Company

is one of the several critically acclaimed regional organizations being assisted by The Rockefeller Foundation.

purpose of creating closer rapport between professional actors and universities.

Since most of these programs have been in operation for a comparatively brief period, it is somewhat difficult to evaluate results; several, however, are worth mentioning. The grant to Yale University has enabled its Drama Department under Dean Robert Brustein to develop training in theatre arts through professional productions of new and experimental plays as well as the classics. The concept of a university-based professional theatre company, whose members teach as well as perform, is relatively new. Yale's program is designed to expose the students and the community to both radical experimentation and traditional craft. In its brief career, the Yale School of Drama has attracted considerable critical attention, particularly for the premieres of plays by Robert Lowell and Joseph Heller. The New York University program emphasizes a conservatory type of training for young actors, actresses, and playwrights. Even though the New York University program is but a few years old, its graduates are already in demand in the professional world of theatre.

The growth of resident theatre companies, the increasing professionalization of university theatre departments, and a developing interest in drama in

high schools have all pointed up the need for many more qualified teachers in theatre. In order to make a start toward increasing the supply of good teachers, the Foundation made a grant for a program to train teachers of voice in theatre, directed by Miss Kristin Linklater, an authority in the field. Graduates of Miss Linklater's intensive course are now working as coaches and teachers at the Tyrone Guthrie Theatre, the Arena Stage, and other outstanding professional theatre companies and university theatre departments.

As one part of the cooperative program inaugurated by Wesleyan University and the Eugene O'Neill Memorial Theater Foundation, a summer program for secondary school teachers of drama has been established. Ten teachers are selected annually to participate in a five-week program that involves all phases of theatre production, including the O'Neill Foundation's Playwrights Conference.

A healthy theatre requires expanded audiences that include all strata of society. In supporting the development of theatre audiences, the Foundation has placed particular emphasis on involving the young and the non-affluent. In 1966 a grant to *Theater in the Street*, of New York, brought theatre into the midst of people who would not otherwise be exposed to it. This program and others like it

have gained favor and subsequently received support from other private as well as public sources. Thus, Rockefeller Foundation grants to the **Pittsburgh Playhouse** for its Vanguard Projects Division, to the **Trinity Square Playhouse** in Providence for free performances in Rhode Island high schools, and to the **New York Shakespeare Festival** in New York, have had a multiple artistic, financial, and social impact.

Leaders of the black and Puerto Rican communities now prefer another method of achieving the same artistic purposes plus the additional one of permitting the release of their indigenous talents and the portrayal of their identifiable cultures. The Foundation believes that significant developments may emerge from the establishment of neighborhood cultural centers, including workshops and theatres. The new playwrights and creative writers, composers, choreographers, and film makers from these milieus seem ready to enrich the cultural life of all Americans through their vitality and commitment.

Belief in the validity of these propositions has led to Foundation support for black theatre in black neighborhoods — such as the New Orleans-based **Free Southern Theater** and the New Lafayette Theatre and Workshop in Harlem—and to an

exploratory grant to the **Arts and Education Council of Greater St. Louis** for the purpose of establishing community art centers in predominantly Negro neighborhoods in St. Louis and East St. Louis, under the direction of the distinguished dancer Miss Katherine Dunham. What the future of racially oriented theatre in this country may be is problematical. Such grants, nevertheless, have the virtue of meeting immediate crisis needs; they expand American theatre audiences and channel some of the energies of the black ghettos into creative and social acts. In this sense the Foundation Program in Cultural Development does not merely purvey the arts but opens the way for the mining of a rich new vein of creative expression.

A significant potential force for the development of new audiences for drama is television. With this potential in mind, the Foundation has given assistance to several of the most imaginative local producing centers in educational television—**KQED** in San Francisco, **WGBH** in Boston, and **WNDT** in New York—to allow them to experiment in techniques and programming. A recent grant to **National Educational Television** will allow it to produce a series of programs emphasizing the growth of American regional theatre companies and the growing

The University of Utah's Repertory Dance Theatre is the only dance ensemble in residence at a univer-

sity. It regularly tours its region to bring dance performances to audiences in large and small communities.



Photograph Excised Here

importance of such companies in developing works by the new playwrights.

Related to theatre, particularly in its new forms, are the two 20th-century art forms that have been most influenced by creative Americans: dance and film. Of all the arts, film attracts the most young people. Recognizing the importance of film, the Foundation has made a series of exploratory grants to creative film makers, like Stanley VanDerBeek, and to scholars for critical and historical writing on film. The potential of film as an art form and as a didactic tool looms ever larger on the educational scene. Experiments with film making in the elementary and secondary schools have illustrated how it can provide new approaches in the teaching of the humanities and how the gap between the contemporary arts and education in the arts can be bridged; these developments indicate the importance of film for the future of American cultural development.

Dance has always been a most important part of theatrical experience, whether it is emphasized, as in some of the Royal Shakespeare Company's productions, or used as an ingredient of character delineation. On its own, dance in the United States has developed ever-larger audiences, both for classical ballet and American theatre dance. American choreographers, starting with Isadora Duncan and continuing through Martha Graham, Doris Humphrey, Merce Cunningham, José Limón, Jerome Robbins, and Alwin Nikolais, have given new forms, new styles, new techniques, and even new scope to the art of dance. The influence of Agnes DeMille has changed both the form and substance of the Broadway musical. American, or "modern" dance, as it is sometimes called, is an indigenous art form whose impact is felt not just in the United States but throughout the world. Because of the importance of dance in the contemporary cultural scene, the Foundation has made available a limited number of grants to creative choreographers and dance companies.

The largest grants in this field went to the University of Utah, for the purpose of establishing a university-based dance repertory theatre that would have an impact that was regional as well as national. The Utah dance repertory program grew out of an exceptionally good graduate and undergraduate training program. Both the University and the Foundation felt that the establishment of a resident dance company would provide a model for other universities, in showing how a university-sponsored professional company could serve educational and cultural purposes for the state and region, as well as promote

an interaction with the University's already strong program in dance. Now that this pioneering project has been in operation for two years, the Foundation has been able to gauge its success; such influential critics as Clive Barnes of *The New York Times* and Walter Terry of *The Saturday Review* have also commented on its high quality and its significance for the development of dance elsewhere in the United States. The company has developed its own repertoire consisting of new works composed by members of the group as well as already established works by such major figures in the world of dance as Anna Sokolow, John Butler, and José Limón. The company has an intensive performance schedule, largely in the Rocky Mountain and West Coast regions, especially the colleges and schools. The artistic success of the Utah experiment is a strong argument in favor of the concept of establishing high-level professional performing companies sponsored by universities for the greater cultural good of an entire region.

The critic's role touches every aspect of an art. Ideally, he serves as guide and teacher for the audience and acts as a conscience to those professionally engaged in the art. Although no training program in theatre criticism has been established, a series of grants enabled theatre critics Richard Gilman, Harold Clurman, Henry Hewes, and Martin Gottfried to travel to professional theatre centers throughout the United States and write about what they found. By doing so, they have done much to unify American theatre and at the same time encourage its decentralization, so that the word "theatre" is no longer synonymous with "Broadway."

LITERATURE PROGRAM

Since its start in 1965, the Rockefeller Foundation's program in imaginative writing and literary scholarship has considered approximately 600 nominated candidates, of whom 79 received awards. Rigorous procedures adopted in these annual awards required monthly meetings of an expert advisory committee of changing membership, serving anonymously. Committee members read the published works and manuscripts of writers nominated annually by well over 100 scholars, editors, and writers in every part of the country. The field of potential candidates was reduced through intensive discussions; applications subsequently were invited from a small percentage of those nominated. Less than half of those who applied were finally recommended for assistance.

The amount and duration of grants varied according to individual needs. This flexibility is also evident in the range of purposes of the awards—from enabling established writers to work on novels and poetry and to travel overseas, to assisting more closely supervised activities for younger writers, literary scholars, and essayists. The quantity of publications is the only measurable result of the program, though not its single purpose. Judged by this criterion, the program has been successful: it has enabled such leading writers as Ralph Ellison, Wright Morris, and Philip Roth to continue and complete novels; poets W. S. Merwin and William Meredith to continue their work; Eudora Welty and Richard Taylor to complete books of short stories; Kenneth Burke and the late Josephine Herbst to write scholarly works. The program has also aided in the emergence of a new generation of writers in the

various forms. Among the grantees have been the novelists Frank Conroy, Wilfrid Sheed, John Yount, Cormac McCarthy, Mark Smith, William Gass, John Barth, Ronald Milner; the poets Mark Strand, Galway Kinnell, Philip Booth, Jean Valentine, Louise Hertz; and scholars and essayists such as Dan Wakefield and Harvey Gross. Among the grantees there have been subsequent winners of the National Book Award for Poetry and for Fiction.

FUTURE TRENDS

It is apparent from this description of the Foundation's Program in Cultural Development that universities have played a major role in its success.

This is hardly surprising: colleges and universities have become principal patrons of the arts even as their campuses have become arenas where competing social, political, and educational philosophies

Poet Jean Valentine is one of 79 exceptionally gifted writers who during the past four years have received

grants allowing them to devote full time to their work. Awards are recommended by an advisory committee.



Photograph Excised Here

A grant to the Educational Broadcasting Corporation—New York City's noncommercial television channel—supported the production of several plays, including "A Winter's Tale" (below). The rehearsals as well

as finished performances were televised, giving audiences an unusual behind-the-scenes view of the staging of a great play and insight into the disciplines of directing and acting. Two other stations received grants.



Photograph Excised Here

are contested. No longer ivy-covered retreats from the world, institutions of higher learning reflect all the tension, uncertainties, and potentials in American life. The universities are at the center of events, whether the subject be music or social unrest. They are principal centers of cultural and social activity. Academic leaders are beginning to recognize that the arts are an intrinsic force within the liberal arts curriculum, creating values of relevance not only to the academy but also to the communities in which these institutions exist.

While the debate about the proper role of the university in social change waxes strong, it is a fact that in the United States the relationship between a university and its community and region has been long established in the sciences, where the combination of creative research, teaching, and practical application has been proven both feasible and valuable. Similar relationships between the university and its region have been in the process of developing in the arts, humanities, and social sciences. Such Foundation-assisted programs as those in music at the State University of New York at Buffalo and the Universities of Chicago and Iowa, in dance at the University of Utah, and in theatre at Yale University, have proven that the professional creative and performing artist and the educator can be brought together in the arts to the benefit of artists, faculty, students, general audiences, and, most of all, the art form itself.

Because of the success of such beginnings, the Foundation will concentrate chiefly, although not exclusively, on assisting similar institutions to develop programs that contribute to the enrichment of the quality of life in their regions as well as to the advancement of the arts and humanities themselves. While each center will be expected to develop its own form, as well as its own specific aims and objectives, it will be encouraged to think of itself as a resource center in these disciplines for a whole region.

Such centers have more than a professional role to play in the university and the community. The life style of the creative person increasingly serves as a model for students seeking an education for the purpose of living rather than preparing for a career. The quest for a humane center of personal existence has caused scientists to become aesthetes, and artists to become technicians. History now concentrates on cultural development rather than military chronicles; literature, philosophy, and religion find a common ground in Kierkegaard and Camus; wholly new subjects, such as Afro-American history, emerge as

important disciplines. The reaction against dehumanizing tendencies in modern life now challenges the universities to find a way to give the arts, along with the humanities, a place of increased prominence on the campus.

The concepts and ideas shaped at such centers will undoubtedly influence the thinking of other creators, performers, and educators by redefining in terms of new aesthetics our society's needs, hopes, and goals. While the centers would be concerned with experimentation and innovation, it is important that they provide links to the past, particularly in the field of American cultural heritage. Many of the problems in American culture arise from the lack of knowledge of America's cultural continuity in art forms as well as in its social attitudes and institutions. It would be hoped that one or more centers would develop institutes in American studies, where performers and scholars would concentrate on the history and interpretation of American culture.

Learned journals, convention speeches, even popular magazines and conventional television debates, emphasize the lamentable aridity of the humanistic disciplines. They have lapsed into fruitless footnoting and extraneous exercises. The flight from the traditional humanities, especially by the ablest young minds, is well documented. This represents a flight from a concern with values, including a willingness to take responsibility for a stand on issues, that is characteristic of the society as a whole. A slow but definite reaction is setting in, though the scholars and others who traditionally would have identified themselves with the humanities now find their outlets through the arts and pioneering areas of the social sciences. Rockefeller Foundation officers concerned with the Cultural Development Program believe that it is through an interaction with the arts that the humanities disciplines and their exponents can be enlivened to the point of contending with issues and values of relevance not only to students and scholars in academies but also to the general community of which they are a part.

In a period of rapid changes in patterns of living, it is particularly important to maintain flexibility in a program devoted to cultural development. Therefore, while the Foundation focuses its attention on the establishment of a limited number of university-based regional arts and humanities resource centers, it will continue to respond to the needs of those unique and outstanding individuals, agencies, and institutions whose importance transcends the locale of their endeavors.

1968 GRANTS

AIDING OUR CULTURAL DEVELOPMENT

UNITED STATES

Ross ALEXANDER, playwright, New York: to devote full time to writing; \$2,000;

AMERICAN COUNCIL OF LEARNED SOCIETIES, New York: support for its program; \$500,000;

AMERICAN HISTORICAL ASSOCIATION, Washington, D. C.: toward the costs of a demonstration project on the value of feature films in historical teaching and research; \$8,500;

AMERICAN PUPPET ARTS COUNCIL, New York: support for creative experimentation by the Bil Baird Theater; \$17,200;

ARTS AND EDUCATION COUNCIL OF GREATER St. LOUIS, Missouri: toward the costs of an experimental program of cultural enrichment in the inner-city areas of St. Louis and East St. Louis, Illinois; \$100,000 for an 18-month period;

ASSOCIATED COUNCILS OF THE ARTS, New York: support for a research project on the relationship of government to the arts; \$11,000;

ATLANTA ARTS ALLIANCE, Georgia: to enable Donald MacInnis to serve as composer-in-residence with the Atlanta Symphony Orchestra for the 1968-69 season; \$10,400;

BALLET THEATRE FOUNDATION, New York: support for a program for the development of young choreographers and their works; \$24,000 for a three-year period;

BOSTON SYMPHONY ORCHESTRA, Massachusetts: toward the costs of the fellowship and scholarship program of the Berkshire Music Center, Tanglewood; \$125,000 through August, 1971;

BRANDEIS UNIVERSITY, Waltham, Massachusetts: to enable John Bizakis to continue his work in the Department of Theatre Arts; \$2,000;

GENE BRUCK, music critic and recording expert, New York: to complete a study of problems involved in the making and distribution of recordings of modern American music; \$3,600;

BUSINESS COMMITTEE FOR THE ARTS, New York: toward the establishment of an organization that would encourage support of the visual and performing arts by all segments of the business community; \$200,000 for a four-year period;

CARNEGIE-MELLON UNIVERSITY, Pittsburgh, Pennsylvania: summer internships, in cooperation with the Stratford Festival Company of Canada, for three acting students in the Department of Drama; \$2,640;

CENTER THEATRE GROUP OF LOS ANGELES, California: toward the costs of the Playwright-Directors Development Program of the Mark Taper Forum; \$200,000 through June, 1971;

CONNECTICUT COLLEGE, New London: to enable José Limón to develop new choreography; \$12,000 for a two-year period;

DALLAS SYMPHONY ORCHESTRA, Texas: to enable Donald Erb to serve as composer-in-residence for the 1968-69 season; \$10,000;

DANCE THEATRE FOUNDATION, New York: to enable Alvin Ailey to develop new choreography; \$7,500;

OWEN DODSON, Howard University, Washington, D. C.: to observe styles in dramatic art in Europe; \$3,900;

DOUGLASS HOUSE FOUNDATION, Los Angeles, California: support of the program of the Watts Writers Workshop; \$25,000;

ELMA LEWIS SCHOOL OF FINE ARTS, Roxbury, Massachusetts: to develop its dance curriculum; \$25,000;

PAUL FOSTER, playwright, New York: to devote full time to writing; \$4,500;

GOUCHER COLLEGE, Baltimore, Maryland: support of the six-week Institute in the History of the Performing Arts in America; \$15,000;

GRINNELL COLLEGE, Iowa: support for a cooperative educational program with the Milwaukee Repertory Theatre, Wisconsin; \$15,000;

WILLIAM F. GRISHAM, Evanston, Illinois: to write a history of the early motion picture industry in Chicago; \$15,000;

JOHN GUARE, playwright, New York: to devote full time to writing; \$5,000;

ISRAEL HOROVITZ, playwright, New York: to devote full time to writing; \$12,000;

LYLE KESSLER, playwright, New York: to visit European theatre centers and to spend a period of residence at the Villa Serbelloni; \$2,180;

CLAUDE MCNEAL, playwright, New Haven, Connecticut: to devote full time to writing; \$12,000;

PROFESSOR JERRE MANGIONE, University of Pennsylvania, Philadelphia: to do research and write a book on the WPA Federal Writers' Project (1935-39); \$12,200;

MARTHA GRAHAM FOUNDATION FOR CONTEMPORARY DANCE, New York: toward the costs of filming representative major dance works choreographed by Martha Graham; \$25,000;

MURRAY MEDNICK, playwright, New York: to devote full time to writing; \$6,000;

LEONARD MELFI, playwright, New York: to devote full time to writing; \$4,500;

MOBILIZATION FOR YOUTH, New York: support for its cultural arts program during the period April 15 through August 31; \$18,000;

MUSIC ASSOCIATES OF ASPEN, Colorado: to enable 36 teachers to participate in a summer training program at the Aspen Music School; \$14,940;

MUSICAL ARTS ASSOCIATION, Cleveland, Ohio: to enable José Serebrier to serve as composer-in-residence with the Cleveland Orchestra for the 1968-69 season; \$7,750;

NATIONAL EDUCATIONAL TELEVISION AND RADIO CENTER, New York: toward the costs of producing a series of programs on regional theatre in the United States; \$200,000 for a two-year period;

NATIONAL MUSIC COUNCIL, New York: to enable the works of composer Harry Partch to be performed at the Whitney Museum during the International Congress of the International Music Council; \$14,540;

NATIONAL SYMPHONY ORCHESTRA ASSOCIATION of Washington, D. C.: to enable John Carter to serve as composer-in-residence with the Washington National Symphony for the 1968-69 season; \$7,650;

NEW LAFAYETTE THEATRE AND WORKSHOP, New York: toward its operating expenses; \$150,000 for a two-year period;

NEW SCHOOL FOR SOCIAL RESEARCH, New York: to enable Uwe Johnson, novelist, to devote full time to writing; \$7,000;

NEW YORK SHAKESPEARE FESTIVAL: toward starting a program for new playwrights and directors, at the experimental theatre of the New York Shakespeare Festival, under the direction of Joseph Papp; \$25,000;

PAPER BAG PLAYERS, New York: to devote an uninterrupted period of time to the creation and rehearsal of new works, and to give experimental performances of these works in schools in disadvantaged areas of the city; \$14,000;

PETER PHILLIPS, composer, New York: to complete an experimental educational film based on an orchestral work to be used by the Seattle Symphony Orchestra in conjunction with its children's concerts; \$2,500;

PHILHARMONIC-SYMPHONY SOCIETY OF NEW YORK: to enable Fredric E. Myrow to serve as composer-in-residence with the New York Philharmonic for the 1968-69 season; \$7,500;

REPERTORY THEATER OF LINCOLN CENTER, New York: toward the costs of a new play and training program and the development of a permanent repertory company at the Forum theatre; \$300,000 for a four-year period;

RONALD B. RIBMAN, playwright, New York: to devote full time to writing; \$4,800;

GORDON ROGOFF, theatre critic: travel to Europe to observe major theatre centers; \$4,450;

SOCIETY FOR STRINGS, New York: toward costs of a summer program for string teachers at the Meadowmount School of Music, Westport, New York; \$22,770 for a three-year period;

JON SWAN, playwright, New Milford, Connecticut: to devote full time to writing; \$12,500;

TEMPLE UNIVERSITY, Philadelphia, Pennsylvania: for use by its College of Music toward the costs of establishing a program of teaching fellowships, in cooperation with the Settlement Music School of Philadelphia; \$81,000 for a three-year period;

UNION THEOLOGICAL SEMINARY, New York: to enable Dr. Tom F. Driver to plan a training program in theatre criticism; \$2,250;

UNIVERSITY OF COLORADO, Boulder: to enable the Merce Cunningham Dance Company to develop new choreography and conduct a workshop for dance students and teachers in the Denver-Boulder area during a four-week residence; \$20,000;

UNIVERSITY OF MICHIGAN, Ann Arbor: to establish a performing group for contemporary music connected with the Composition Department of the School of Music; \$23,000;

UNIVERSITY OF SOUTH FLORIDA, Tampa: to enable the Alwin Nikolais Dance Company to develop new choreography and to conduct a workshop for students from the southeast United States during four weeks of residence at the University; \$15,000;

UNIVERSITY OF UTAH, Salt Lake City: continuation of its Repertory Dance Theatre; \$270,000 through June, 1972;

UNIVERSITY OF WISCONSIN, Milwaukee: to enable the Dance Theater Workshop to develop new choreography and conduct a workshop for students in the Milwaukee area during a four-week residence at the University; \$8,370;

VANDERBILT UNIVERSITY, Nashville, Tennessee: to develop a community-wide plan of action in support of the arts in the greater Nashville area; \$25,000.

University—Symphony Orchestra Program

The following universities or symphony orchestras received grants enabling the orchestras to lengthen their 1967-68 seasons, usually spending the extra time on university campuses performing works primarily by young, less-known American composers:

DALLAS SYMPHONY ORCHESTRA, Texas: in association with the University of Texas, Austin; North Texas State University, Denton; and Southern Methodist University, Dallas; \$12,000;

GOUCHER COLLEGE, Baltimore, Maryland: Baltimore Symphony Orchestra; \$19,500;

MINNESOTA ORCHESTRAL ASSOCIATION: Minneapolis Symphony Orchestra in association with colleges and universities in the states of Minnesota and Wisconsin; \$23,812;

UNIVERSITY OF COLORADO, Boulder: Denver Symphony Orchestra; \$20,000.

Creative Writing and Literary Scholarship Program

In support of creative writing and literary scholarship, a total of \$169,900 was appropriated. The following individual awards were made, in many cases administered by a college or university:

ALISON LURIE BISHOP, Ithaca, New York;

THOMAS CLARK, Venice, California;

ROBERT COOVER (University of Iowa, Iowa City);

JAMES M. DABBS, Mayesville, South Carolina;

BETTE SOTONOV HOWLAND, Chicago, Illinois;

DAVID IGNATOW (Vassar College, Poughkeepsie, New York);

WILLIAM MELVIN KELLEY, Paris, France;

JOHN LOGAN (State University of New York at Buffalo);

JOHN MACDONALD, New York;

J. DAVID MADDEN (Louisiana State University, Baton Rouge);

WILLIAM MEREDITH (Connecticut College, New London);

WILLIAM S. MERWIN, New York;

DENEEN PECKINPAH, Fresno, California;

WILLIAM PIT ROOT (Michigan State University, East Lansing);

MARK STRAND, New York;

DAN WAKEFIELD, Venice, California;

WALTER PATTERSON WATTERS, JR. (Southern Regional Council, Atlanta, Georgia);

THOMAS WILLIAMS (University of New Hampshire, Durham).

EQUAL OPPORTUNITY FOR ALL

"Forty-five million young people, almost one-fourth of the nation's population, attend America's public schools at a total cost of more than \$32 billion per year. Conditions of education for black children are definitely inferior to those for white. Black schools have fewer books and poorer laboratories; less than one-third of their teachers are accredited, as compared with 100 percent accreditation in white schools. The needs for improved ghetto education loom as great in 1968 as they ever have; the question that remains unanswered is how improvement is to be brought about.

"Partly, the answer may be found in increased funding. Yet funds for New York City schools, for example, have more than doubled in the past ten years, with an enrollment increase of only one-fifth in school population. Despite this additional money, one out of every three children is still behind the national norms in math and reading. Some of our most thoughtful leaders have raised their voices against the belief that larger expenditures are enough, that more funding in itself is the answer. We need answers to a whole cluster of problems if we are to find a model of improved education attuned to the needs and aims of people."

Grants in Education were made in the main to improve the flow of minority-group students into higher education. The Foundation's *New Thrust* is aimed principally at ghetto problems. Grants in Other Areas are generally designed to advance interracial understanding and reduce discrimination, and Grants in Aid were used primarily to support the training or work of exceptional individuals and to assist miscellaneous experimental programs.

GRANTS IN
\$1,081,400

OTHER AREAS
\$5,111,100

NEW THRUST
\$8,581,500

EDUCATION
\$21,418,000

*PROPRIATIONS AND GRANTS IN AID
SEPTEMBER, 1963 - DECEMBER, 1968
TOTAL \$31,521,000*

Needs for help toward equal opportunity are so vast and pressing that when The Rockefeller Foundation undertook an equal opportunity program in 1963, it faced a crucial decision. To avoid the risk of dissipating funds without significant effect, it seemed essential to select a specific objective to enable the Foundation to generate multiplying and enduring beneficial results.

The decision was made to begin by helping talented persons from minority groups to become fully qualified participants in the mainstream of American life. The soundest way to accomplish this seemed to be to help open the doors of good universities to minority-group candidates. During the first three years of the Equal Opportunity Program, therefore, the Foundation gave primary attention to finding ways to improve higher educational opportunities for disadvantaged minorities and to stimulate changes that would make equal opportunity an accepted and permanent aspect of our educational system.

With considerable progress being made in this area, the Foundation began to give increasing attention to efforts more directly and immediately related to the massive problems of urban ghettos and the black poor. Today the Foundation is substantially involved in the improvement of urban slum schools and the training of competent leaders for ghetto areas.

HIGHER EDUCATION

At the outset a series of grants was made to help a number of colleges recruit students from minority groups and provide special financial and academic assistance. These grants had four chief objectives. The first was to start breaking down the barriers that retarded integration in higher education. For this purpose, it was important to select institutions with a leadership position in American education. The second goal was to learn what problems would arise and how they could best be resolved. To accomplish this, it was necessary to find institutions with staffs that were more than ordinarily interested and able. The third objective was to create and spread new academic goals among minority-group high school students and their teachers by making admission to a first-class college a genuine and visible possibility. This required selection of institutions that were prepared to invest substantial time and effort in working with high schools that had been sending few graduates to college. And the fourth objective was to start an accelerated flow of able and well-educated minority-group graduates from

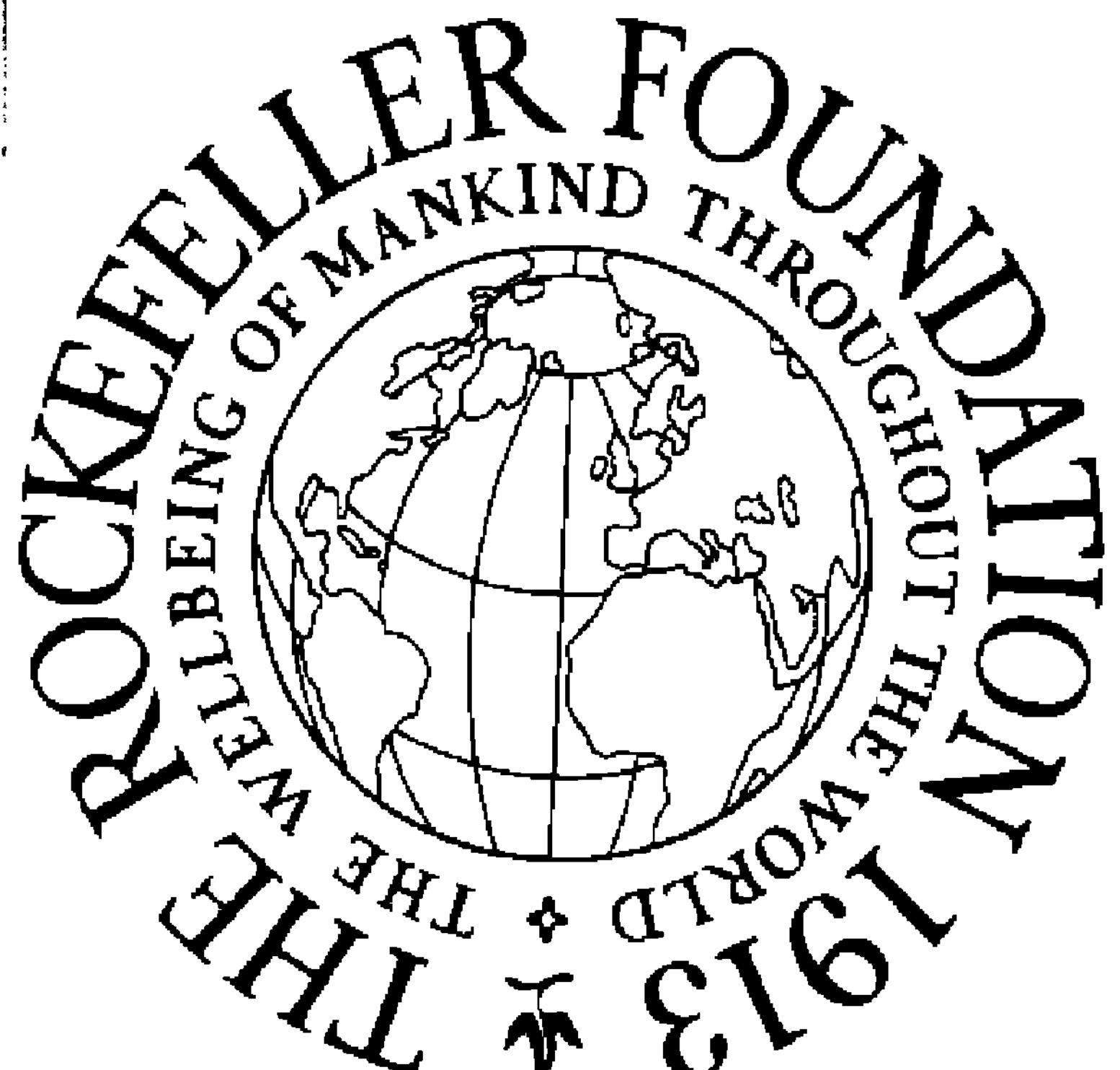
leading colleges into leading graduate and professional schools. To achieve this, it was necessary to select colleges whose graduates normally go on to advanced training in the stronger universities.

The first of these grants were made to four respected private universities in the South (**Duke, Emory, Tulane, and Vanderbilt**) and to seven strong liberal arts colleges in the North and West (**Antioch, Carleton, Grinnell, Oberlin, Occidental, Reed, and Swarthmore**). Similar grants were made to two more institutions that were ready to set examples in the South: a state-supported land-grant college and a church-related liberal arts institution (**Virginia Polytechnic Institute and Mercer University**).

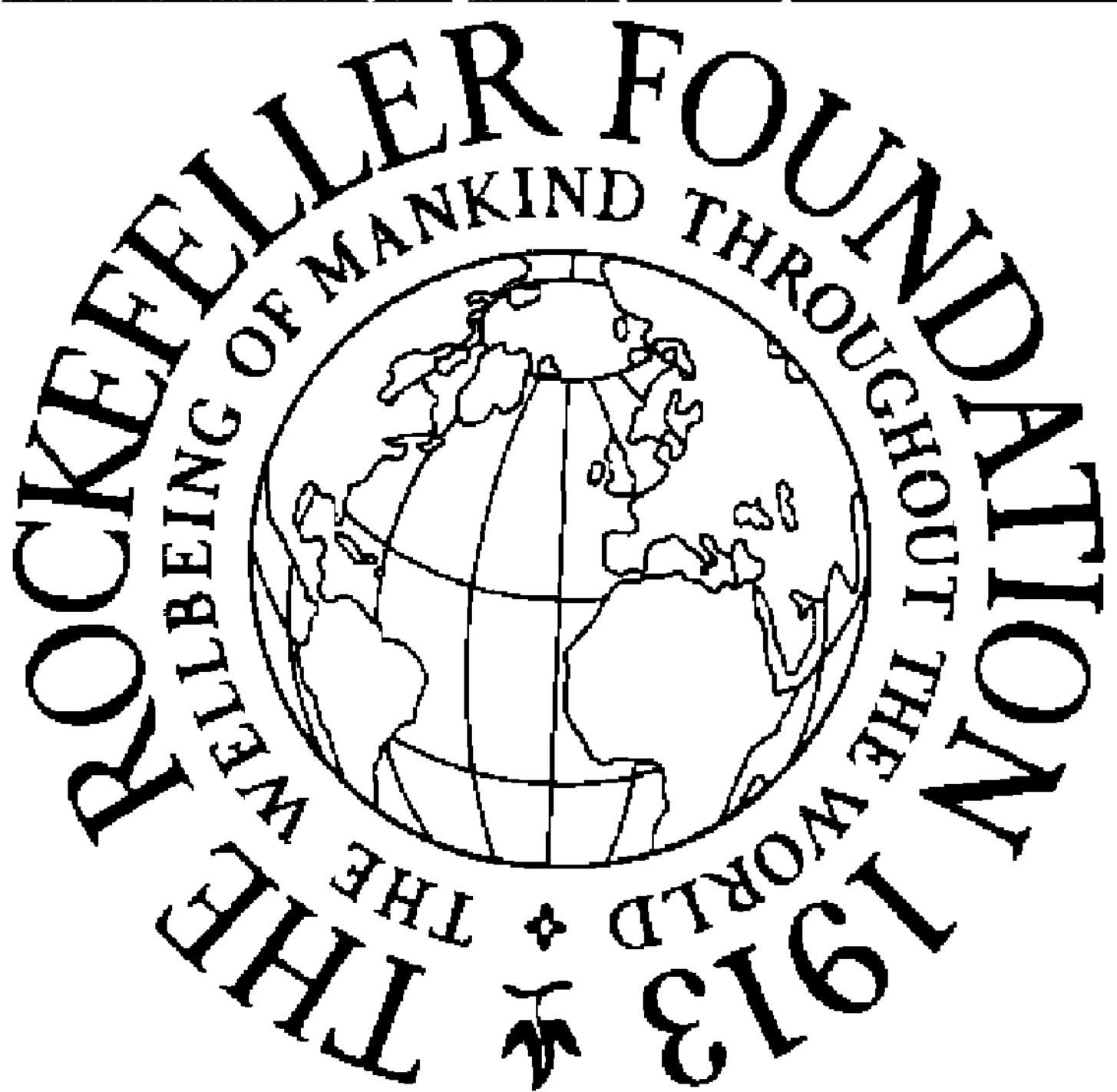
Grants were made to help start or enlarge generally similar programs at several other institutions (**Bowdoin, Brooklyn, and the Claremont Colleges; Cornell University, and the University of California at Los Angeles**). These few were chosen from among a rapidly growing number of applicants, with special aims in view: for example, giving attention to Puerto Rican and Mexican-American students and encouraging the development of suitable programs in public institutions located in metropolitan centers.

In all, 31 grants totaling \$7.6 million were made to 18 institutions, providing support for some 1,300 disadvantaged college students, mostly Negroes. Actually, a substantially larger number of students will benefit directly from these grants, because the terms of all the grants stipulated that the recipient institutions would enlarge and continue the programs to the fullest extent possible through allocation of their own resources, utilization of government support programs, and raising of additional funds from other sources. Virtually all of the institutions have exceeded the enrollments originally projected.

The reports from the institutions indicate that the number of acceptable applications from minority-group students is increasing markedly. Dropouts and academic losses are averaging lower among these students than among students as a whole. Their average academic performance to date has varied from a little above to a little below the institutional average, with some indications of improvement over time. Reports on the first graduates are not yet complete, but there are scattered indications that respectable proportions of the first recruits—who enrolled in September, 1964—graduated last June and have enrolled at good graduate or professional schools or taken good jobs.



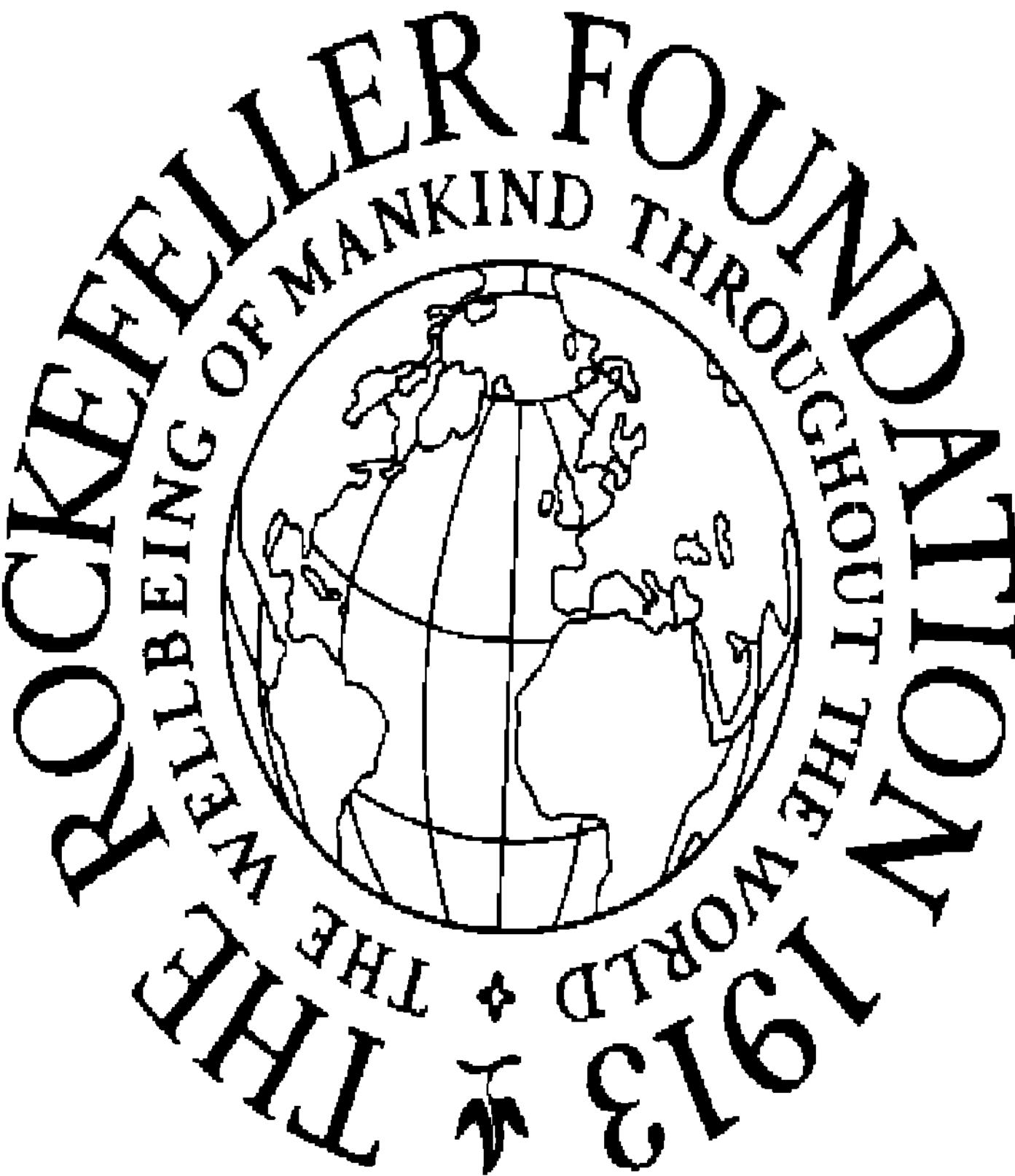
Photograph Excised Here



Photograph Excised Here



Vanderbilt University, in Nashville, is one of four outstanding institutions in the South that in 1964 undertook active recruitment and assistance programs for black students, with aid from The Rockefeller Foundation.



Photograph Excised Here

Perhaps most important are the following facts:

Most of these institutions now consider the recruitment and enrollment of substantial numbers of minority-group students to be an essential and permanent part of their programs; they are facing seriously the extraordinary financial burdens that this imposes.

A large and growing number of other colleges and universities in all sections of the country have started similar programs or are indicating that they would like to do so.

The Federal Government has initiated substantial programs of financial aid for college students from low-income families, and some states have added modest programs of their own. College and university fund raisers are beginning to press business firms and private donors for contributions toward the college costs of disadvantaged students. However, the funds that are currently available from all these sources fall far short of the rapidly growing needs, especially of students at the higher-cost, top-quality private institutions.

BETTER PREPARATION FOR COLLEGE

The Foundation also has supported a number of experimental projects designed to demonstrate the possibilities of quickly increasing the number of minority-group high school graduates aiming for college and prepared to succeed there. Recognizing that the necessary transformations of the country's elementary and secondary school systems—changes that are essential for any fundamental and permanent achievement of equal educational opportunity—would be slow and difficult, the Foundation looked for special temporary projects that might yield useful quick returns while at the same time helping in some measure to move forward the massive public education system.

Grants were made to Princeton University, Dartmouth and Oberlin Colleges, and the Hotchkiss School for trial programs that provided broadly similar approaches to the now familiar summer intervention programs. These are designed to identify promising secondary school pupils in

A transitional year at Yale for high school graduates from depressed areas seeks to bridge the gap between

the students' inadequate academic preparation and their evident potential for success in a good college.



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minority or disadvantaged neighborhoods and start them successfully on the path to college.

Three of the four trial programs that the Foundation's grants helped to start were for boys only, and all were aimed primarily, although not exclusively, at Negroes. Similar programs were subsequently started, for girls at **Connecticut** and **Mount Holyoke Colleges**, and primarily for American Indian and Mexican-American students at **Western Washington State College**.

The remarkable response of the students to these programs, as revealed by their performance during the summer and subsequently in their home schools, the growing interest of the high school teachers and advisers, the rising number of applicants, and the dedication of staff members all bore witness to the usefulness of these trials. The Foundation made second grants, and in some cases third, to all of these institutions to enlarge and extend their programs; in every case the recipient had additional support from government programs, other private sources, or both. Grants were also made to help start or strengthen special summer programs at **Hunter College High School**, **Knoxville College**, **Phillips Exeter** and **Western Reserve Academies**, and **Yale University**. In all, 22 such grants, totaling \$2,441,775 have been made to 13 institutions to assure programs that would enroll at least 2,200 disadvantaged secondary school students in summer and follow-up projects of unusual merit. This enrollment is, in fact, being exceeded quite substantially.

Very quickly, the Office of Economic Opportunity became interested in the possibilities of these summer intervention programs. During the summer of 1965, O.E.O. supported pilot projects at some 18 institutions, and the next year launched its Upward Bound Program on a nationwide scale. Most of the programs that the Foundation helped to start are now receiving important support from this source. This year O.E.O. is providing over \$27 million for support of 277 projects enrolling 24,606 students.

Two other experimental programs were undertaken to test ways to improve the preparation of disadvantaged students for success in selective colleges. An interested group of staff and faculty members at **Yale University**, with teachers recruited from preparatory schools, are engaged in a three-year trial of a transitional-year program for high school graduates judged to have high potential for success in first-rank colleges, provided they overcome the handicaps of deprived backgrounds and inadequate high school preparation.

The **Associated Colleges of the Midwest**, ten good liberal arts colleges which are recruiting and giving special assistance to minority-group and disadvantaged students, are cooperatively trying out a transitional-year program a little different in character. Applicants who appear to have good potential for college work but a high likelihood of failure because of inadequate preparation, are admitted conditionally to these colleges and entered in the special transitional-year program that is conducted at one or two of the campuses each year. Each student is given special counseling and tutoring and such make-up college preparatory courses as he needs. At the same time he takes at least one college course in the first semester and participates as a regular student in all aspects of college life. In the second semester he continues as much preparatory work as necessary and moves into as many college courses as he is prepared to undertake. In the second year, if he has been successful, he returns to the college that originally admitted him, and receives full credit for the college-level courses he took during his transitional year.

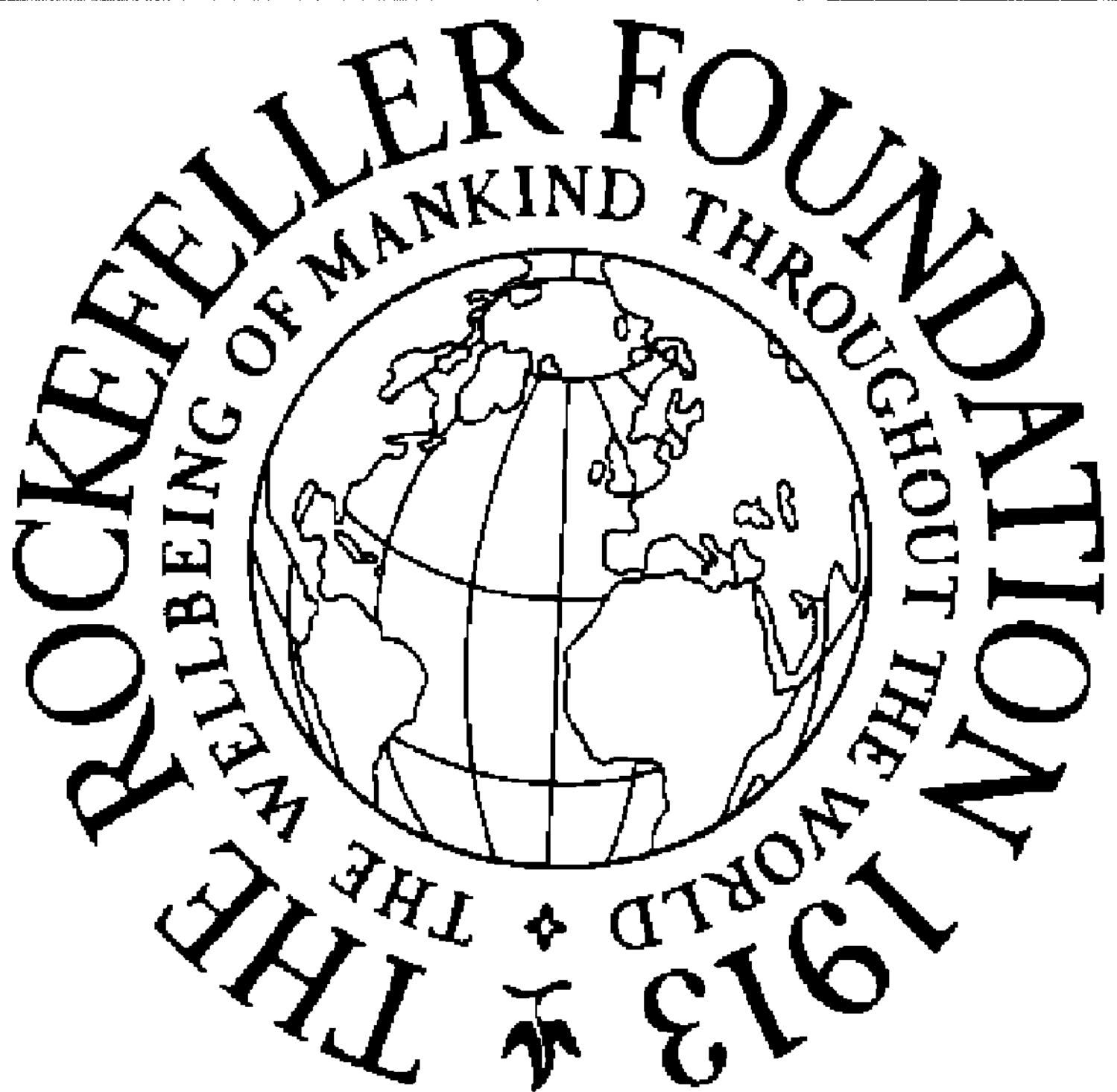
A broadly similar experimental program is attempting, with Foundation support, to test the possibility that a transitional year after college at one of the country's strongest liberal arts schools will give outstanding graduates of Negro colleges a better chance to gain admission, and compete successfully, in first-rank graduate and professional schools. The dean of **Haverford College** resigned his post to give full-time direction to the program, in which several institutions are cooperating.

The Foundation this year aided the launching of one more program aimed at the long-range development of outstanding black leaders. The **Woodrow Wilson National Fellowship Foundation** was enabled by a Rockefeller Foundation grant, made this spring, to initiate a program of fellowship awards for returning Negro veterans who are college graduates and are interested in continuing their education at graduate or professional schools. A second grant, made in December, brought Rockefeller Foundation support for these fellowships to \$550,000.

In all, these four programs have received seven grants totaling nearly \$1.7 million.

PREDOMINANTLY NEGRO COLLEGES

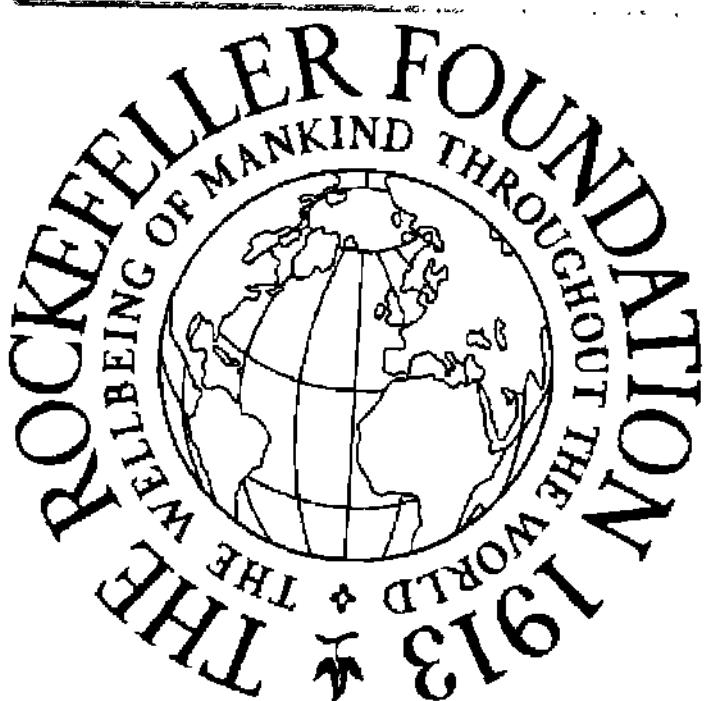
For several generations these colleges provided virtually the only opportunity for college education open to Negroes in America. During this long period



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The counseling program of Philadelphia's Neighborhood Guild was aimed at keeping young people in school.

It contacted dropouts to get them back on the track to careers suited to their interests and capabilities.

they produced nearly all of the educated black leaders in the country. How long the productivity of aiding these institutions will outweigh the promise of competing opportunities is difficult to predict. The following considerations, however, are among those that support the Foundation's present practice:

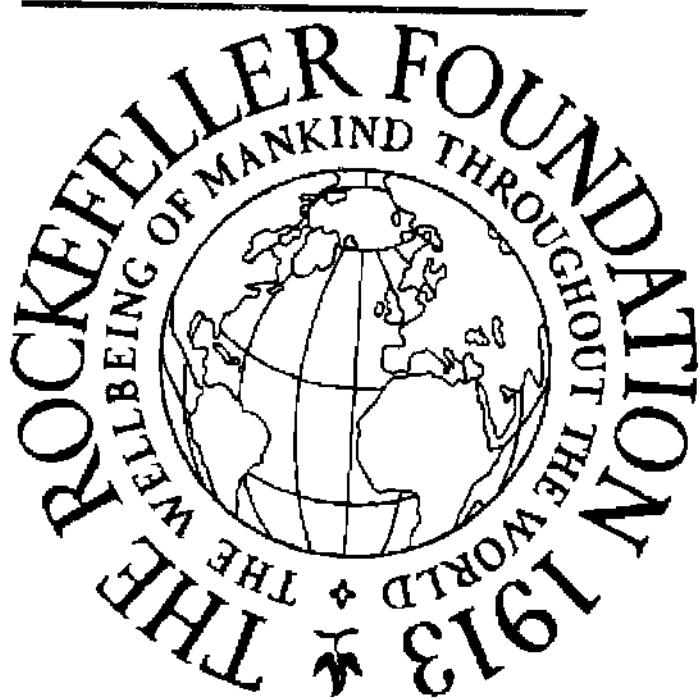
Despite the progress of desegregation in higher education in the United States (more than a quarter of the Negroes who are attending college in the Southern and border states, and probably more than half of the black college students in the country as a whole, are in predominantly white institutions), the majority of black high school graduates in the South will continue for some time to find their opportunities for higher education mainly in predominantly Negro institutions. Among other considerations is the fact that most Negro family incomes in the South do not permit travel to distant colleges or attendance at any but the least expensive institutions. Moreover, most graduates of predominantly Negro high schools cannot qualify for admission to selective colleges. Although these situations are changing, many of the future leaders of black communities in the Southern states will get their higher education in predominantly Negro colleges in the area.

A high proportion of the students in the Negro colleges prepare for careers in public school

teaching in the South. Strengthening the colleges should contribute to better public school teaching and thus to better high school preparation for college—and so, in turn, to still better colleges and better-trained public school teachers.

The Foundation has now appropriated a total of nearly \$8.3 million to strengthen predominantly Negro colleges, including an outright grant of \$1 million to the United Negro College Fund. Of this total, \$4.9 million was directed to continuing efforts to help three selected institutions demonstrate ways to move toward excellence and thereby set standards and patterns for other Negro colleges.

The institutions are the Atlanta University Center, Fisk University, in Nashville, and Lincoln University, in Pennsylvania. The Atlanta University Center, a confederation of six independent institutions on nearly contiguous campuses, is the largest of the private, predominantly Negro centers of higher education in the South. Its present strength and promise are due in part to the approximately \$20 million of past support that has gone into the complex from the Rockefeller family, the General Education Board, and other Rockefeller boards. Present Foundation support is contributing to strengthening faculty, improving library facilities and services, and developing greater unity of effort in planning and operations. The organizational structure of the Cen-



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Project "Catch Up" at Western Washington State College involves primarily American Indian and Mexican-

American youngsters in a challenging and rewarding summer of raising their ambitions and their self-esteem.

ter was strengthened by the formation of a Center-wide corporation. The executive secretary of the corporation, employed with Foundation aid, is devoting full time to working with the presidents, deans, and faculties of the six institutions on long-term joint planning and program development.

Fisk University is an academic leader among the Negro liberal arts colleges, and the Foundation is working closely with its president and faculty in a cooperative effort to move it farther forward. The University, with Foundation help, initiated a vigorous faculty recruiting and educational improvement program in several key departments. The cooperative program has helped to develop a nucleus of new, well-trained faculty members who are strengthening academic standards in the college. An up-to-date student recruiting and assistance program is being initiated and will be directed especially at male students from low-income families. A critically needed new library and modern faculty housing are being constructed with partial help from the Foundation. The Ford Foundation is providing important help to improve the administrative, business management, and fund-raising staff and operations at the University.

Lincoln University has excellent leadership and is making special efforts to reach and educate promising young men from the urban Negro slums

along the Eastern Seaboard from Washington to Boston. The Foundation is supporting a modern student recruiting and assistance program for this purpose, as well as a related prefreshman and freshman-year educational reinforcement program.

OTHER SUPPORT

Five annual contributions were made to the Southern Regional Council from 1961 to 1965, and in 1966 a new appropriation was made by the Foundation to provide support to the Council for five more years. A 1965 grant helped to enlarge the capability of the Capahosie Conference Center in Virginia, at which national black leaders conduct many informal discussions and strategic, off-the-record conferences with white leaders on problems of race relations and programs for improvement. A small grant to the University of California, Berkeley, supported a national conference and subsequent publication on patterns of American prejudice. And a grant was made to the N.A.A.C.P. Legal Defense and Educational Fund to help it develop a nonlitigating Community Service Division and expand its program of education and counseling in small towns and rural communities in the South.

An exploratory grant was made to the National Urban League in 1964 to try out in ten cities

methods of bringing more educated, well-established Negroes into responsible positions on boards of public and private civic, welfare, and social organizations and commissions in their cities. The program was notably successful, but it promptly identified the need for responsible local leadership in the organizations and neighborhoods of the Negro poor, and for more effective and representative black voices in major decision-making agencies at the city, state, and national levels. The Urban League's Leadership Development Program shifted its emphasis to these objectives, and a second grant was made toward the costs of extending and expanding the program. Foundation support for this program totals \$1,050,000.

A grant to the Friends Neighborhood Guild in Philadelphia enabled it to undertake a trial program in cooperation with the public schools. The objective was to show what can be accomplished, through adequate counseling in the junior and senior high schools, to keep young people on the path toward college or vocational and technical training, and toward useful careers. A second grant supported an expansion designed to try out ways of reaching dropouts who are unresponsive to any of the established agencies (schools, churches, community houses) and must be approached in their own neighborhoods by experienced street workers. The three-year trial was so encouraging that the program is continuing under the school board's budget, with supplementary support from local and governmental sources.

A grant to the Higher Education Opportunities Committee in Detroit is providing partial support for a counseling program in the inner-city junior and senior high schools in that city. The public schools and Wayne State University are cooperating with the Committee in this effort, which is linked to a college scholarship program for graduates of the inner-city high schools. It is hoped that the school system will be able to take over the intensified counseling in these ghetto schools.

In New York City, the Bank Street College of Education has organized a Division of Field Action, which is working closely with a group of elementary schools in Harlem, with the aid of a 1965 grant from the Foundation. The Division of Field Action is working also on better training of school administrators and on problems of school reorganization for greater effectiveness in the city's slum areas.

In 1966, the Foundation provided funds to

Washington University in St. Louis to help its University College (the night school) try out a work-study career development program for poverty-level graduates of inner-city high schools. The University College staff has enlisted the participation of a significant number of industrial and business firms in the area and the cooperation of the counselors in the inner-city high schools. Bright students who are not headed for college are selected for the program and assured employment after high school graduation in a job that fits their aptitudes and interests. The employing firms, through career development programs, make provision for these new employees to study part time in job-related courses at the University College. The program provides for 90 annual awards during the three-year trial period.

The Foundation is supporting another plan to develop employment and career opportunities for Negroes at a higher level, through a grant to **Economic Opportunity Program, Inc.**, the Community Action Program agency of Dade County (Miami), Florida. Under this grant, a Management Internship Program is helping local business concerns, government departments, and social agencies to employ and train black college graduates in managerial and supervisory positions that provide opportunities for advancement.

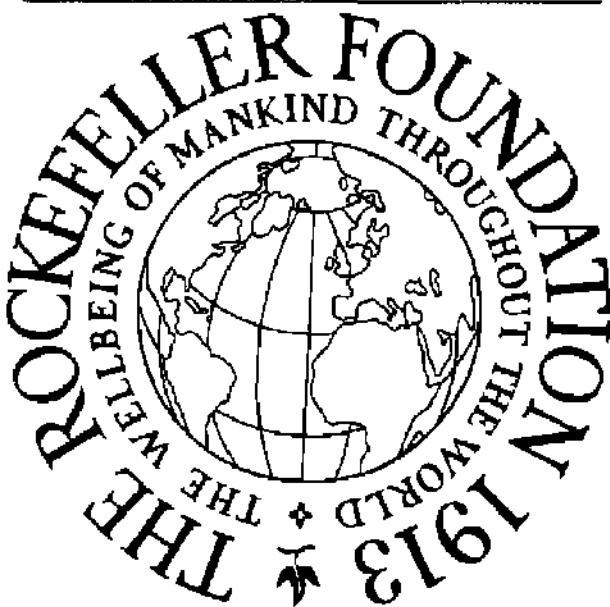
Two other grants, one to **Boston University** and one to **Houston Baptist College**, are supporting special programs to help disadvantaged high school graduates get a start in careers in trained or practical nursing and related technical and paramedical positions.

These eight exploratory grants, aimed primarily at trying to improve slum schools and to expand employment and career opportunities for slum youth, totaled nearly \$1.6 million.

THE CURRENT THRUST

By 1967 the Foundation's Equal Opportunity Program had substantially shifted from the support of experimental projects in higher education to more direct involvement with the problems of the urban ghetto. This shift in direction was formalized by the trustees, who directed the Foundation to place primary emphasis on:

Improvement of elementary and secondary schools in major urban slum areas, with special attention to schools serving the social, educational, and related needs of the students, parents, and others in the neighborhood;



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In St. Louis, a work-study career program is conducted jointly by Washington University and business and industrial organizations in the greater St. Louis area.

Development and training of responsible and competent leadership in minority groups, particularly in urban ghettos;

A study of the nature and causes of the development and perpetuation of urban ghettos, and of the means required for their elimination as areas of involuntary residence.

GHETTO SCHOOLS

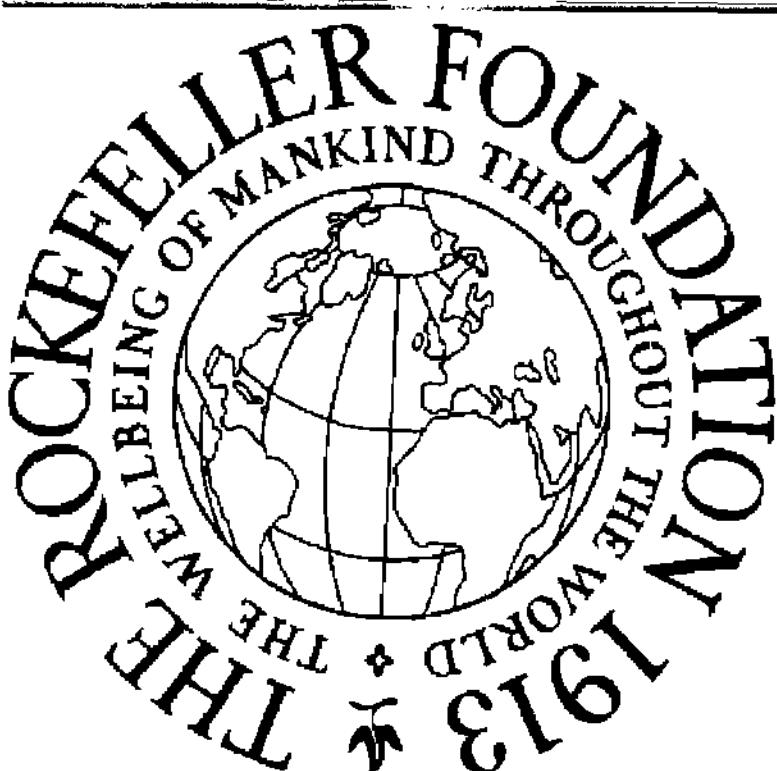
Forty-five million young people, almost one-fourth of the nation's population, attend America's public schools at a total cost of more than \$32 billion per year. Conditions of education for black children are definitely inferior to those for white. Black schools have fewer books and poorer laboratories; less than one-third of their teachers are accredited, as compared with 100 percent accreditation in white schools. The needs for improved ghetto education loom as great in 1968 as they ever have; the question that remains unanswered is how improvement is to be brought about.

Partly, the answer may be found in increased funding. Yet funds for New York City schools, for example, have more than doubled in the past ten years, with an enrollment increase of only one-fifth in school population. Despite this additional money, one out of every three children is still behind the

national norms in math and reading. Some of our most thoughtful leaders have raised their voices against the belief that larger expenditures are enough, that more funding in itself is the answer. We need answers to a whole cluster of problems if we are to find a model of improved education attuned to the needs and aims of people.

Educators in Washington and throughout the country are searching for better forms of ghetto education. Harold Howe, the outgoing U. S. Commissioner of Education, writes: "Somehow we have got to find a way to make . . . schools in the central city pertinent to the needs of . . . people, to make them schools which . . . address themselves to where these people are in their learning, attitudes, feelings about themselves, and readjust the school to picking up the youngster where he is and carrying him forward to a better employment opportunity. Schools by themselves offer no solution to this problem of the central city. Only schools in alliance with other elements in the community can solve that."

The task seems to consist in finding and then helping to develop as models ghetto schools that seek an increased role for the community while searching for improved forms of public education. In the words of the late Senator Robert F. Kennedy: "There seem to be two elements here. One is having the commu-



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A start on meaningful jobs is the aim of the Internship Project sponsored by the Community Action Program agency of Dade County (Miami), Florida. Local busi-

nesses, government departments, and social agencies are training black college graduates in supervisory positions that provide opportunities for advancement.

nity more actively involved. The other is getting the tools through which the schools can be improved. To argue that you're going to improve the education of the child just by turning the school over to the local community doesn't really meet the problem unless at the same time you're going to improve the system itself. The great danger is that we may dismiss the second by concentrating on the first, that we may think we can satisfy our own conscience merely by appropriating large sums of money."

The search, then, for relevant models for community-centered schools is the central issue. The Rockefeller Foundation has joined others in looking for ways to help institutions that aim both to increase participation and improve learning. Those community-centered schools chosen for assistance exemplify this quest.

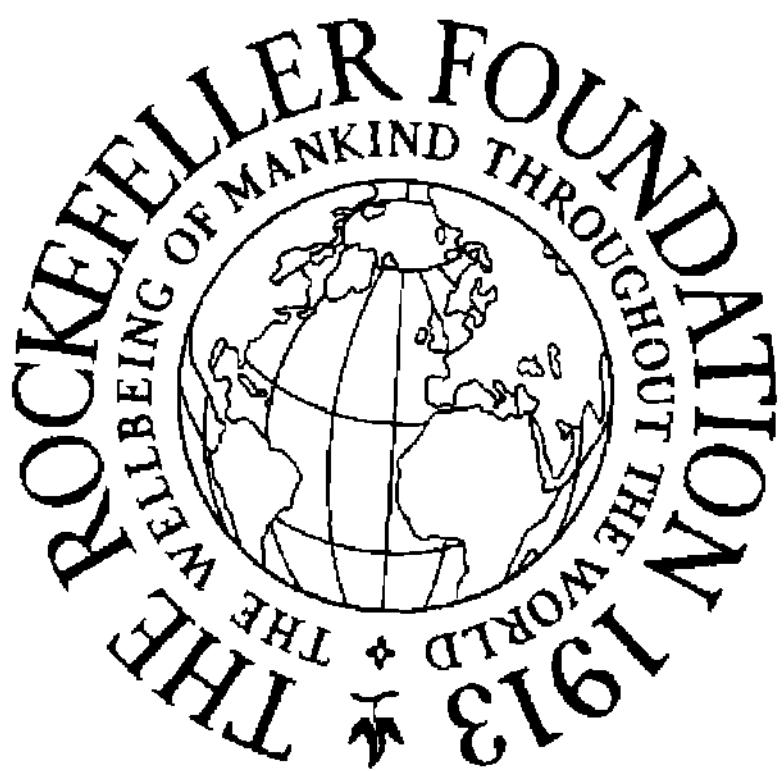
Grants totaling over \$1.5 million are assisting experimental programs to improve public schools in major urban ghetto areas. Three grants were made this year to California State College in Los Angeles for school and community programs in slum areas. Two were in support of cooperative programs with Alain LeRoy Locke High School,

to demonstrate how a college can help a public high school in a Negro slum to improve the education of ghetto children, and to develop a community relations program in the High School. A parallel grant is enabling the college to set up a field office in each of two major slum areas, one Negro and the other Mexican-American.

A grant to the Minneapolis Public Schools Special District No. 1 is providing part of the cost of expanding the District's community-school centers program, with special emphasis on North High School, which will occupy a new building being constructed in a low-income area.

A grant to the Cleveland Public Schools is enabling three schools in the Glenville area to initiate a number of community-oriented activities that make extended-day use of the school facilities and that involve fathers of the students more closely with the work of the schools.

The School District of Philadelphia received a grant toward the costs of innovative school-community programs, including the establishment of an experimental "mini-school" in the predominantly Negro Mantua-Powelson area. The intimate atmos-



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A grant to Houston Baptist College helps Negro and other disadvantaged high school graduates to attend a newly instituted degree program in nursing and re-

lated technical and premedical careers. This is one example of matching service needs to hopes of rewarding employment on the part of the disadvantaged.

sphere of these schools and the child-centered emphasis of their programs are expected to reinforce the related programs of outreach being planned to involve the pupils' families and the community.

A similar grant will enable St. Louis to move ahead with its imaginative program of community schools both in the low-income Banneker district and in other districts.

Another grant of this type is helping the Gary, Indiana, School Board to involve the residents of a slum area in planning a school-community program, financed by funds from the city and the Federal Government.

Last in this group is a grant to the New York Urban League to enable its Street Academy Program to cooperate with four problem-area high schools in Manhattan. The program hopes to demonstrate what a staff of street workers, working in and around the high schools with students and their families, can accomplish toward three goals: to reduce disruption and improve academic performance in these strife-threatened schools; to induce potential dropouts to stay in school and work seriously for college admission or post-high school

vocational or technical training; to help dropouts develop constructive goals and disciplined habits, repair academic handicaps, and get back into high school or into useful employment or job training.

GHETTO LEADERSHIP

Closely related to these projects in urban education is a grant made to the Berkeley Unified School District to offer teachers and other school personnel in-service training in a program designed to help them handle the problems of multiracial education with deeper understanding, based on knowledge of minority-group history and culture.

Several grants were designed to contribute to the development of black leadership in urban ghetto areas. A grant to Harvard University is matching funds raised from faculty members and students, residents of metropolitan Boston, and other sources to enable the Graduate School of Education to recruit and train minority-group members for supervisory positions in elementary and secondary schools in urban ghettos.

A grant to the New England Community Development Corporation is contributing to a



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program to develop business leadership within the black community. Its affiliate C.I.R.C.L.E. Associates (Centralized Investments to Revitalize Community Living Effectively) is undertaking the development of indigenous business enterprises in Roxbury, Boston's major black ghetto.

The Industrial Areas Foundation in Chicago, under the leadership of Saul Alinsky, has received partial support for its new Training Institute, which will develop community organizers in both ghetto and middle-class communities. Assistance has also gone to the Ecumenical Institute, in Chicago, for its training program for potential leaders in slum neighborhoods. This training program is conducted as a part of the slum reclamation program that this dedicated group is conducting in a Chicago neighborhood it calls Fifth City.

The National Association for the Advancement of Colored People, one of the largest and most impressive organizations concerned with the Negro's struggle for civil rights in the United States, has over the years been a major agency for the recruitment and development of Negro leaders in local communities and on the national scene. Support from the Foundation will enable the N.A.A.C.P. to initiate a systematic development and training program for some 27,000 N.A.A.C.P. officers and committee chairmen. This support will also enable this organization to undertake a ghetto leadership program designed to recruit and train indigenous residents to assume leadership roles in their neighborhoods and in community organizations working on local problems; N.A.A.C.P. Youth Group Programs will likewise be strengthened.

Considerable assistance has been given to the National Urban League for its national and local leadership development programs, and for efforts by various local

branches to reach the poor of the ghettos. At left: A street worker from the New York Urban League's Street Academy program listens to a high school dropout.



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GHETTO STUDIES

Two important in-depth studies, of ghettos and of poverty, were launched this year with Foundation aid totaling \$625,000. Supported by a Foundation grant to the **Metropolitan Applied Research Center** in New York City, Dr. Kenneth Clark is directing a group of scholars and investigators in an intensive study of urban ghettos—their characteristics and causes, and the possible remedies for their ills.

A grant to the **University of Chicago** is supporting the initiation there of a continuing program of research on the causes and effects of poverty as revealed in the characteristics and behavior of individuals and social groups in Chicago's slum areas.

In addition to grants made specifically within the three major priority areas—school-community centers, leadership development, and ghetto studies—several related projects were supported. An outright grant of \$100,000 was made to the **Urban Coalition**, headquartered in Washington, D. C., to

ward support of national and local programs designed to break the vicious cycle of the ghetto.

ADDITIONAL SUPPORT

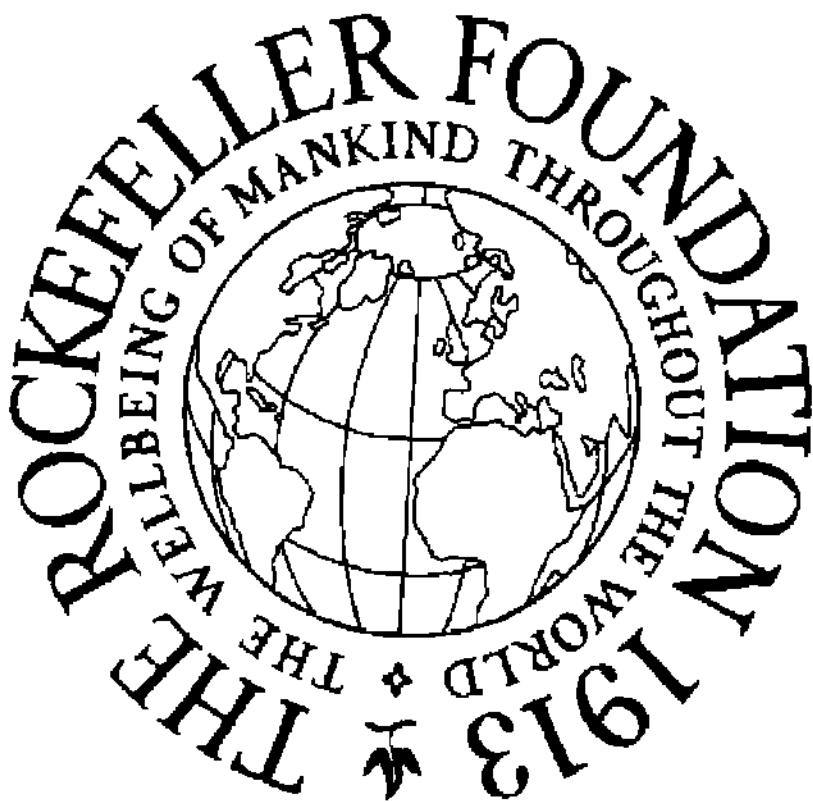
The **Bedford-Stuyvesant Restoration Corporation** and the related **Bedford-Stuyvesant Development and Service Corporation** received assistance for their joint program and operating budget and for a block renovation program in the Bedford-Stuyvesant section of Brooklyn.

Another special grant is enabling the **Harlem Commonwealth Council**, with consultation and assistance from an alumni organization of the Consumer Credit Management Program of the Columbia University Graduate School of Business, to establish and operate a **Community Service Loan Corporation** in Harlem, whose object is to strengthen local businesses.

Action groups whose programs directly attack slum problems also received support. The **Washington, D. C., Urban League** was helped to expand its staff for more intensive work on central problems of the Negro slums of Washington. Its

The Foundation helped the Washington, D. C., Urban League to expand its staff to work on fundamental problems of the Negro slums in Washington, one of the most depressed areas in America. Below: League

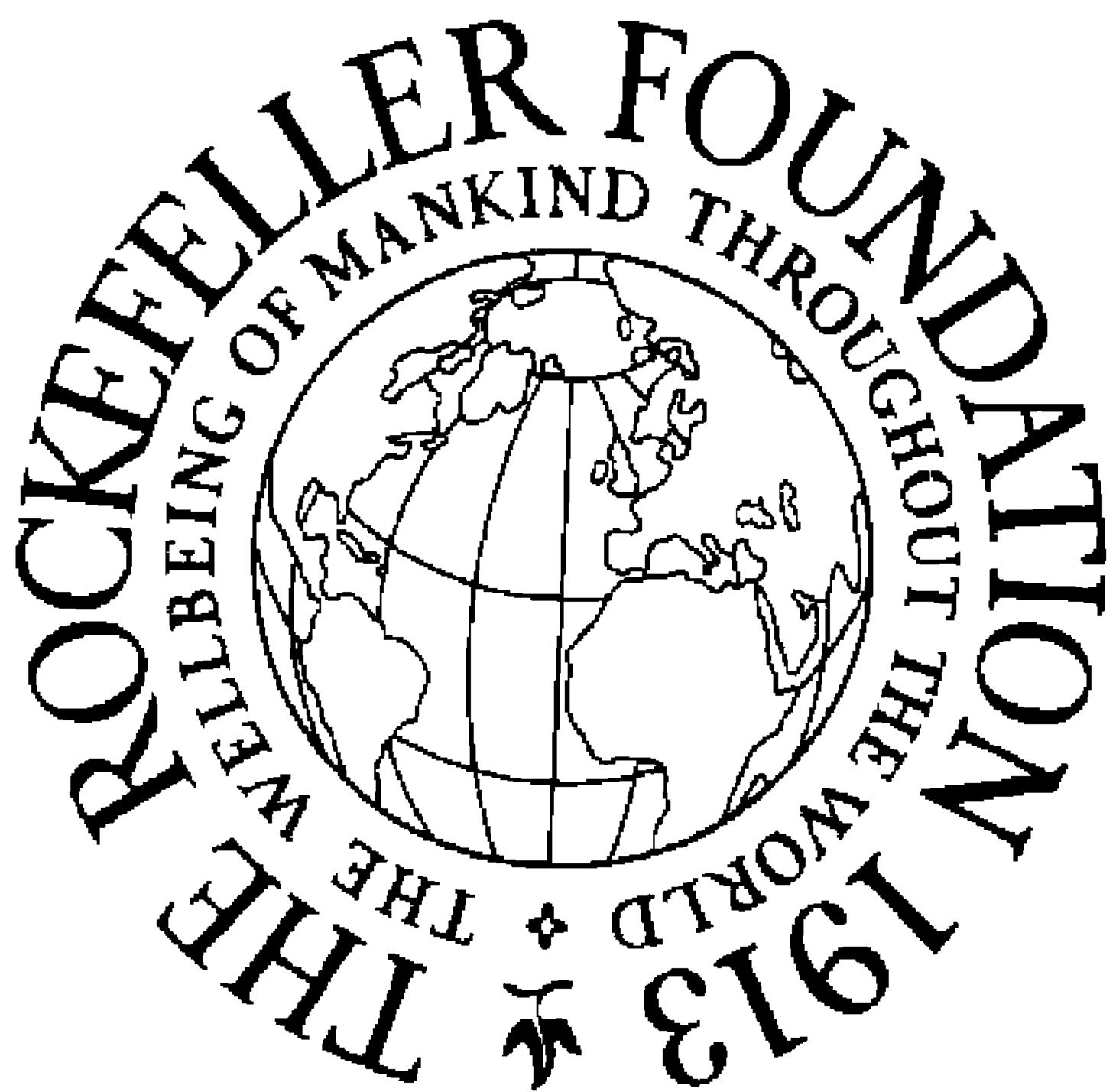
officials visit Washington's first housing project erected on an urban renewal site. Right: Veterans returning from active duty are given advice and assistance toward getting employment or receiving additional training.



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A grant to the V.M.C.A. of Metropolitan Chicago supports leadership training for its staff members and for

personnel from other agencies that work with youth groups in slum areas. The leaders of a former West



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Side gang, the Conservative Vice Lords, have been collaborating with Y staff members and others on ways in which young people can organize to fulfill their own hopes and improve life in a ghetto neighborhood.



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program encompasses leadership training and an attack on problems of public school education, housing, and job training and employment.

The Greater Cleveland Associated Foundation was assisted with a program, in cooperation with Case Western Reserve University, to identify and train Negro executives.

A grant to the Chicago Urban League helped it to establish a branch office and set up a vigorous program in the especially depressed and turbulent black ghetto on Chicago's West Side. Another grant, to the Young Men's Christian Association of Metropolitan Chicago, underwrote a leadership training program for its staff members, and those of other agencies, who are working with groups and organizations in the slum areas. A second small grant to the Y.M.C.A. supported cooperation with the leaders of a reformed youth gang on the West Side, the Conservative Vice Lords, to plan constructive programs for the organization.

Four other grants of a trial nature were made during the first quarter of this year. One to the Twin City Area Educational Television Cor-

poration, in St. Paul, is providing support for one year for an innovative Negro discussion program, "Black Voices," that may lead to more TV programming of this sort and to useful public discussion of important issues among Negroes and between Negroes and whites.

The second of these grants is enabling the Columbia University Graduate School of Journalism to train Negro and other reporters and journalism students in a program designed to improve the standard of reporting and commentary relating to the urban racial crisis.

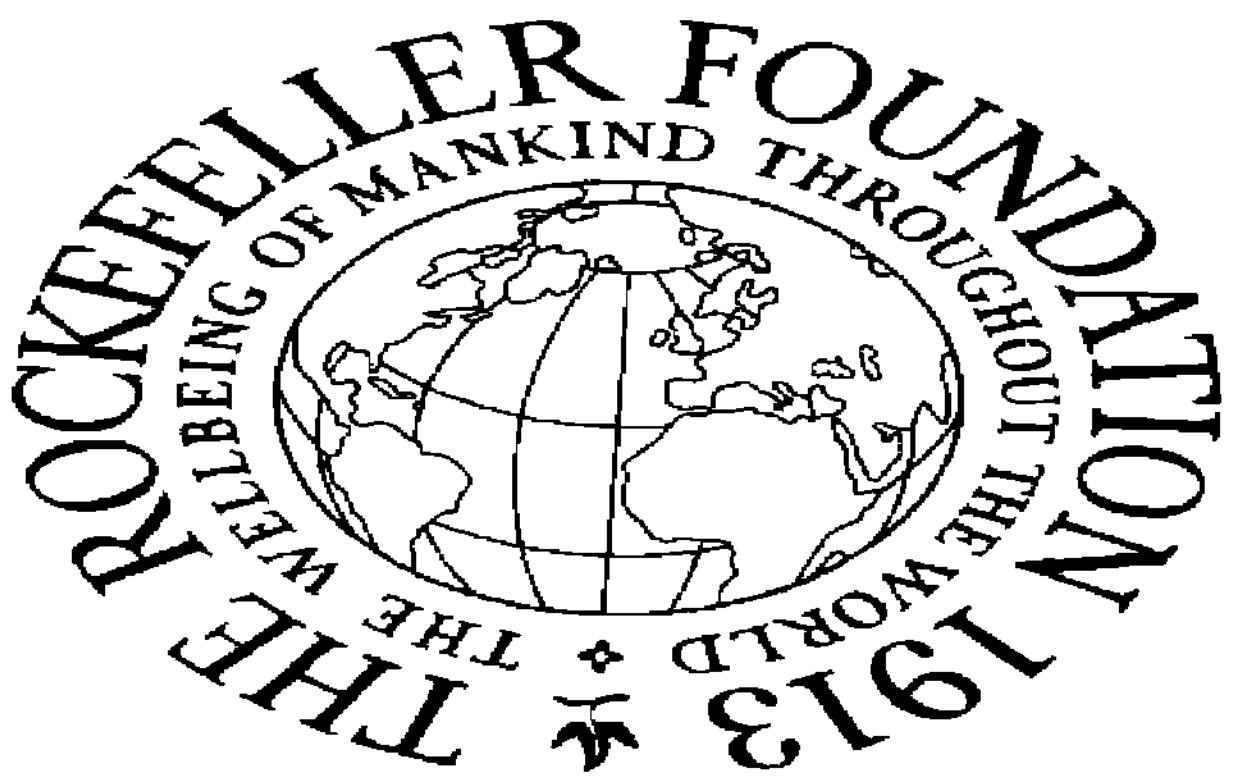
The other two grants, to Harvard and Yeshiva Universities, are helping their Medical Schools to devote more attention to developing better community health and medical care programs in the Boston-Cambridge and New York City areas where they are located.

Although major emphasis will continue to be given to ghetto and other urban problems, the Foundation is exploring the problems of depressed rural areas and the potentialities of stimulating and assisting significant programs of improvement.



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A grant to Minneapolis Public Schools Special District No. 1 provides part of the cost of expanding its community-school centers program. Left: The basement of Bryant Junior High School became a continuous art studio last summer. Right: Minneapolis' famous Walker Art Center mounted an exhibition of the school's art activities. Bryant's students, at work below, find themselves in a mural photograph at the Center (above).



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1968 GRANTS

TOWARD EQUAL OPPORTUNITY FOR ALL

UNITED STATES

ALCORN AGRICULTURAL AND MECHANICAL COLLEGE, Lorman, Mississippi: support of a study to determine its possible role in the economic and cultural development of rural Mississippi; \$24,500;

ATLANTA UNIVERSITY CENTER CORPORATION, Georgia:

Toward the cost of collecting, cataloging, and preserving for scholarly use the papers of the late Dr. Martin Luther King, Jr., and other civil rights leaders; \$25,000;

Smith College, Northampton, Massachusetts; to enable Dr. Kenneth H. McCartney to serve as visiting professor of economics at the Atlanta University Center for the 1968-69 academic year; \$21,100;

To enable Benno D. Frank to serve as visiting professor of music and drama during the 1968-69 academic year; \$17,120;

BEDFORD-STUYVESANT RESTORATION CORPORATION, New York: toward the costs of its block renovation program; \$250,000;

BEDFORD-STUYVESANT RESTORATION CORPORATION and BEDFORD-STUYVESANT DEVELOPMENT AND SERVICE CORPORATION, New York: toward their joint program and operating budget; \$100,000;

BERKELEY UNIFIED SCHOOL DISTRICT, California: support for a program of in-service training on problems of multiracial education; \$200,000 through February, 1971;

BOARD OF EDUCATION OF THE CITY OF St. Louis, Missouri: toward costs of developing community schools and of initiating personal development programs and related programs in selected ghetto schools in the St. Louis area; \$350,000 through 1971;

BOARD OF EDUCATION OF THE DISTRICT OF COLUMBIA: support of the summer 1968 Urban Studies Course, conducted by the Washington Integrated Secondary Education Project; \$9,100;

BOSTON COLLEGE, Massachusetts: toward establishment of a program to train persons from deprived backgrounds for health careers; \$14,998;

BROOKLYN COLLEGE of the City University of New York: to enable Dr. J. Scott Kennedy to study African theatre programs in East and West Africa; \$4,000;

CALIFORNIA STATE COLLEGE AT LOS ANGELES:

Toward the costs of a cooperative program with Alain LeRoy Locke High School; \$165,000 through June, 1971;

Support for its Community Relations Office; \$135,000 through June, 1971;

Support for instructional, guidance, and administrative programs at Alain LeRoy Locke High School; \$119,270;

Support for the planning and design of a child development and day care center at Alain LeRoy Locke High School; \$25,000 through December, 1970;

Toward a program of the Greater Los Angeles Consortium to meet the diverse needs of education for urban living; \$25,000;

CARLETON COLLEGE, Northfield, Minnesota: toward the costs of a program for the discovery of talented Negro and other minority-group students and the improvement of their undergraduate education; \$275,000 through June, 1976;

CHICAGO URBAN LEAGUE, Illinois:

Toward the costs of enlarging its staff and intensifying its operations on Chicago's West Side; \$325,000 through December, 1972;

Toward costs of a conference, "The Principal in the New World—His Role as an Educational Leader," held in April for Chicago school principals; \$15,000;

Toward the cost of renovating space for its West Side branch office; \$10,000;

Toward costs of a program of seminars for the Afro-American Patrolmen's Association; \$5,700;

CITIZENS' CRUSADE AGAINST POVERTY, Washington, D. C.: support for the Citizens' Advocate Center for a three-month period; \$15,000;

CLEVELAND PUBLIC SCHOOLS, Ohio: to enable three schools in the Glenville area to undertake community-centered activities; \$250,000 for a three-year period;

COLUMBIA UNIVERSITY, New York:

Toward the costs of a special program in the Graduate School of Journalism designed to improve the standard of reporting and commentary relating to the urban racial crisis in the United States; \$300,000 through June, 1972;

Toward costs of a one-week training program for Urban League staff members in the organization and operation of health services; \$10,100;

To enable Ronald H. Coleman to continue his studies, primarily in mathematics, in the School of General Studies; \$3,580;

COMMUNITY CONSOLIDATED SCHOOL DISTRICT No. 65, Cook County, Evanston, Illinois: toward the costs of an evaluation study of its school integration program; \$150,000 through June, 1971;

CONNECTICUT COLLEGE, New London: toward the costs of its experimental summer school program for talented high school students from disadvantaged environments; \$75,000 through December, 1971;

CORNELL UNIVERSITY, Ithaca, New York:

Support of a summer intensive training program in economics, under the direction of Dr. Thomas Sowell, for advanced undergraduate students from predominantly Negro colleges and universities; \$20,650;

Support for a study aimed toward reducing both the labor shortage and unemployment among Negroes in central New York State; \$15,000;

EARLHAM COLLEGE, Richmond, Indiana: to continue a prefreshman and freshman year reinforcement program for selected students; \$15,000;

ECUMENICAL INSTITUTE, Chicago, Illinois: support for its Fifth City "Academy for Urban Leadership Training"; \$150,000 for a two-year period;

EDUCATION DEVELOPMENT CENTER, Newton, Massachusetts: toward the cost of a summer institute on the teaching of beginning reading, for teachers of the Model School Division, District of Columbia Public Schools; \$15,000;

FISK UNIVERSITY, Nashville, Tennessee:

Toward the construction of its new library; \$350,000;

Toward costs of construction and renovation of faculty houses and offices; \$160,000;

Faculty appointments; \$150,000;

GARY COMMUNITY SCHOOL CORPORATION, Indiana: toward costs of planning a school-community program in the Pulaski area; \$15,000;

GREATER CLEVELAND ASSOCIATED FOUNDATION, Ohio: support of a program, in cooperation with Case Western Reserve University, to identify and train Negro executives; and support of a survey of priorities in the Hough district, the major Negro ghetto in Cleveland; \$37,500;

HARLEM COMMONWEALTH COUNCIL, New York: toward the costs of establishing the Community Service Loan Corporation; \$50,000 for a four-year period;

HARVARD UNIVERSITY, Cambridge, Massachusetts:

Toward the costs of programs in community health to be conducted by the Center for Community Health and Medical Care of its Medical School and its School of Public Health; \$600,000 through April, 1971;

Toward a program in the Graduate School of Education for the recruitment and training of minority-group students for positions of leadership in education; \$35,000, payable in units of \$5,000 or more, upon receipt of evidence that matching funds have been secured from other sources for the same purpose;

HAVERFORD COLLEGE, Pennsylvania:

Toward costs of a program of post-baccalaureate fellowships and related summer institutes for selected college graduates who plan careers in college teaching; \$225,000 through June, 1972;

Period of internship training for a prospective Negro college administrator; \$25,000 for a three-year period;

HOTCHKISS SCHOOL, Lakeville, Connecticut: toward the cost of completing the follow-up phase of an experimental summer school program for talented disadvantaged high school students; \$35,000 through June, 1970;

HOUSTON BAPTIST COLLEGE, Texas: scholarship assistance for nursing candidates in the School of Nursing; \$100,000 through June, 1970;

INDUSTRIAL AREAS FOUNDATION, Chicago, Illinois: toward the costs of its Training Institute for community organizers; \$225,000 through June, 1972;

JACOB B. JOHNSON, New York: to continue his graduate studies in public administration at New York University; \$1,500 for a three-year period;

KARAMU FOUNDATION, Cleveland, Ohio: to enable Mr. and Mrs. Russell Jelliffe to undertake assignments as consultants to community development projects; \$10,000 for a two-year period;

MERCER UNIVERSITY, Macon, Georgia: toward its financial aid program for students from economically and culturally disadvantaged families; \$200,000 through June, 1976;

METROPOLITAN APPLIED RESEARCH CENTER, New York: study of the ghetto, under the direction of Dr. Kenneth B. Clark; \$350,000 through December, 1970;

MINNEAPOLIS PUBLIC SCHOOLS SPECIAL SCHOOL DISTRICT No. 1, Minnesota: toward the costs of expanding its community-school centers program, with special emphasis on North High School; \$46,200 for a two-year period;

MOREHOUSE COLLEGE, Atlanta, Georgia: to enable Dr. Benjamin E. Mays, president emeritus, to continue the preparation of a social history of race relations in the South; \$17,000;

MOUNT HOLYOKE COLLEGE, South Hadley, Massachusetts: toward the costs of an experimental summer school program for talented high school students from disadvantaged environments; \$50,000;

NAACP SPECIAL CONTRIBUTION FUND, New York: support for the NAACP's Leadership Development Program; \$500,000 for a four-year period beginning January 1, 1969;

NATIONAL URBAN LEAGUE, New York: toward development of its "New Thrust" program headquartered in Washington, D. C., under the direction of Sterling Tucker; \$300,000 for a two-year period;

NEW ENGLAND COMMUNITY DEVELOPMENT CORPORATION, Roxbury, Massachusetts: to enable its corporate affiliate, CIRCLE (Centralized Investments to Revitalize Community Living Effectively) Associates to initiate and facilitate local ownership of businesses in Roxbury and other ghetto areas; \$30,000;

NEW YORK UNIVERSITY: to enable Henry M. Smalls, assistant principal, Washington Junior High School, Mount Vernon, New York, to complete graduate work in school administration in the School of Education; \$10,500;

NEW YORK URBAN LEAGUE: toward a program to provide street workers for problem-area high schools; \$200,000;

HENRY S. RESNIK, New York: to complete research and writing of a study of innovations in the Philadelphia public schools; \$6,500;

SCHOOL DISTRICT OF PHILADELPHIA, Pennsylvania: toward costs of innovative school-community programs; \$150,000 for a three-year period;

TWIN CITY AREA EDUCATIONAL TELEVISION CORPORATION, St. Paul, Minnesota: support for its discussion program "Black Voices"; \$75,000 for a two-year period;

UNIVERSITY OF ARIZONA, Tucson: to enable Dr. Harlan I. Padfield to undertake a research project, "New Personnel Systems and the Culture of Poverty"; \$13,328;

UNIVERSITY OF CHICAGO, Illinois: toward costs of a research program on the human side of poverty; \$275,000 for a four-year period beginning January 1, 1969;

UNIVERSITY OF MIAMI, Coral Gables, Florida: support for a program to provide advanced education for disadvantaged students of the area; \$24,900 for a two-year period;

UNIVERSITY OF NOTRE DAME, Indiana: to enable the Neighborhood Study Help Program, South Bend, to continue its educational work with underprivileged and underachieving elementary and junior high school children; \$25,000;

UNIVERSITY OF WISCONSIN, Madison: summer laboratory school for elementary school pupils from culturally diverse backgrounds; \$24,500;

URBAN COALITION, Washington, D. C.:

Toward support of its national and local programs; \$100,000;

Toward costs of a three-day national meeting for youth leaders, supplemented by a series of small regional conferences; \$15,000;

VIRGINIA POLYTECHNIC INSTITUTE, Blacksburg: toward its financial aid program for students from economically and culturally disadvantaged families; \$250,000 through June, 1976;

WATTS LABOR COMMUNITY ACTION COMMITTEE, Los Angeles, California: support for its economic opportunities programs for Watts residents; \$25,000;

WESLEYAN UNIVERSITY, Middletown, Connecticut: support for a prefreshman and freshman year reinforcement program for selected students; \$15,000;

WOODROW WILSON NATIONAL FELLOWSHIP FOUNDATION, Princeton, New Jersey: support for a special graduate fellowship program for returning Negro veterans; \$200,000 through June, 1970; \$350,000 through June, 1971;

YOUNG MEN'S CHRISTIAN ASSOCIATION OF METROPOLITAN CHICAGO, Illinois:

Toward the costs of a program to develop a group of specialists in organization training and community development to serve as leadership trainers; \$45,000;

To cooperate with the Conservative Vice Lords and other community organizations in bringing employment opportunities to ghetto youth by establishing an employment center and arranging for training; \$15,000;

YALE UNIVERSITY, New Haven, Connecticut: additional support for the three-year trial of a transitional-year program for talented but disadvantaged high school graduates, under the direction of Charles E. McCarthy, Jr., director of the Cooperative Program for Educational Opportunity; \$100,000;

YESHIVA UNIVERSITY, New York: toward the costs of programs in community health to be conducted by the Department of Preventive Medicine and Community Health of its Albert Einstein College of Medicine; \$600,000 through April, 1971.

ALLIED INTERESTS

If The Rockefeller Foundation has been effective in working toward very difficult goals, it is in large part because of the coordination and concentration of its professional and financial resources within its adopted program. Occasionally, however, the Foundation departs from this rule to assist undertakings of unusual importance that are not related, or only indirectly related, to its main areas of interest. Over the past five years grants have been made in support of arbovirology; rural health and nutrition in developing countries; investigation of environmental pollution; aid to institutions of higher learning abroad, including library development; and strengthening of medical education. Support has gone also to a continuing program of genetics research in Brazil; to scholarly research in political science, international relations and diplomacy, economic and financial questions, and national security and strategic studies; and for international conferences on questions of public health, economic development, education, and university development.

Some of these programs, such as those of the overseas arbovirus research laboratories and the rural health centers, have reached a stage where they can be carried on by local scientists and integrated with indigenous institutions. Others, such as scholarly studies on national and international affairs, have been discontinued as other support has become more readily available.

ARBOVIROLOGY

During the past five years the worldwide arbovirus research program has been transferred to appropriate universities and government-sponsored laboratories. In the process, Rockefeller Foundation staff members have been concentrated in the newly developed Yale Arbovirus Research Unit now financed by a long-term, outright grant to Yale University from the Foundation, and by United States Government and international resources. It serves as the major center to backstop international research and training programs in arbovirology. Staff and financial support at the Belém laboratories will cease at the end of 1970, when the Special Public Health Service Foundation (FSESP) of the Brazilian Government will assume full responsibility for the program. The centers at the University of Valle in Colombia and at the Uni-

versity of Ibadan in Nigeria are being merged into the Universities. The program in Colombia is now integrated into a cooperative program involving the University of Valle, the Colombian Institute of Agriculture (ICA), the International Center of Tropical Agriculture (CIAT), and the Faculty of Veterinary Medicine of the National University.

RURAL HEALTH CENTERS

Rural health centers developed cooperatively by Foundation medical personnel in Candelaria, Colombia; Igbo Ora, Nigeria; Kasangati, Uganda; and Ballabhgarh, India, are affiliated with, respectively, the University of Valle, the University of Ibadan, the University of East Africa, and the All India Institute of Medical Sciences. The centers in Colombia, Nigeria, and Uganda, as well as university-affiliated centers in the Philippines and Thailand, are receiving support under the Foundation's University Development Program.

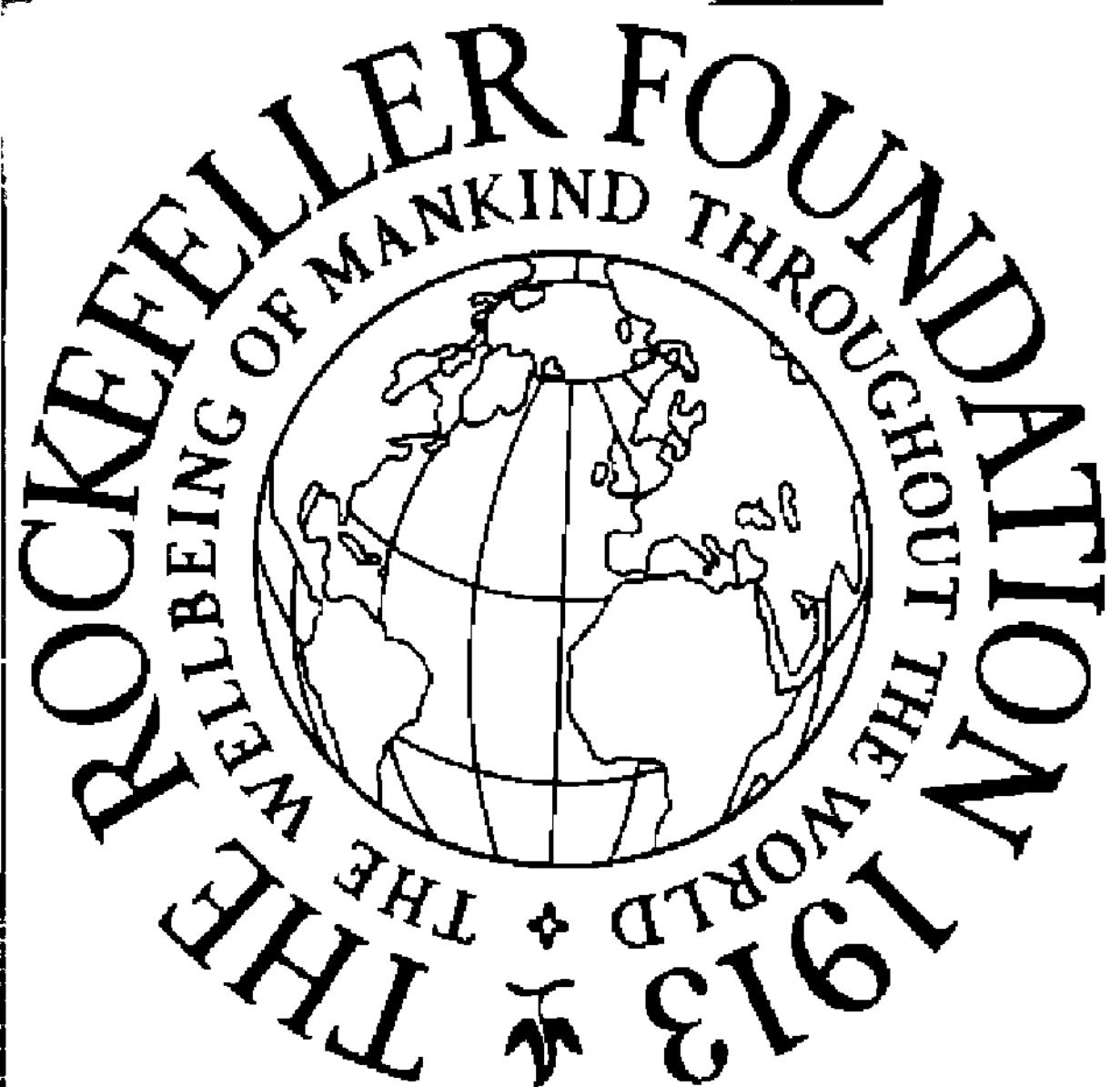
ENVIRONMENTAL SCIENCES

Support for studies of environmental pollution has included a grant to the National Academy of Sciences for preliminary studies dealing with water and air pollution, solid wastes, and noise; a grant to the Philadelphia Science Academy for studies of freshwater ecology, with special emphasis on the effect of river contaminants on biological balance; and a grant to Williams College, in Massachusetts, to design a broad research and action program in its Center for Environmental Studies.

AID TO UNIVERSITIES ABROAD

While the Foundation believes that the most effective way to assist higher education in the developing countries is to concentrate on a limited number of pace-setting institutions, it continues to make grants for special projects and to support selected departments in other institutions abroad. Over the past five years, assistance has been given for basic sciences, medical sciences, political science and economics, and library science at various colleges and universities abroad.

The list of institutions receiving aid includes: the University of Buenos Aires and the University of Cuyo, in Argentina; the University of Chile, the Catholic University of Chile, and the University of



Photograph Excised Here

In Nigeria, Dr. Otis R. Causey removes a tick from a Fulani steer for subsequent laboratory examination.

Foundation arbovirus laboratories are now being integrated with United States and overseas institutions.

Concepción, Chile; the University of the Andes, Xavier University, and the National University of Colombia, all in Bogotá; the University of Ghana; the University of San Carlos, in Guatemala; the All India Institute of Medical Sciences, in New Delhi; the University of Delhi; the Seth Gordhandas Sunderdas Medical College, in Bombay; the University of the West Indies; Kyoto University, in Japan; Cuttington College and Divinity School, in Liberia; the Colegio de México and the National University of Mexico; the University College of Rhodesia and Nyasaland; the University of Ankara, in Turkey; and Lovanium University, in the Congo.

This year the American University of Beirut, in Lebanon, received a \$2-million grant, to be matched on a semiannual basis over a six-year period, for strengthening its academic programs, particularly at the graduate level.

Library development and library studies have been aided at several institutions, notably the University of Antioquia, in Medellin, Colombia, and grants have permitted the preparation and distribution of bibliographical aids, both general and specialized. Archives studies and surveys have also been supported.

To help standardize and correlate medical education and practice, to facilitate the development of regional training centers in specialized fields of medicine, and to foster professional exchanges, the Foundation has supported the work of associations of medical schools, in the United States, India, and Latin America.

INTERNATIONAL UNDERSTANDING

The Foundation has maintained a strong interest in international relations, not only through a program of support (now terminated) to individual scholarly projects of both contemporary and historical significance, but also through grants to institutions training future leaders, diplomats, and foreign service officers, mainly from developing countries. Johns Hopkins University was enabled to offer a series of seminars on contemporary political and economic problems for Washington-based staff of foreign embassies; the Harvard Law School is providing graduate training for African lawyers preparing for top-level government and university posts in their home countries. A grant to the University of Sussex, England, is supporting teaching and research at its Institute for the Study of International Organisations, for young staff members of the Foreign Office and officials from other governments

within the British Commonwealth, particularly from Asia and Africa. In 1964 funds were made available to the United Nations for a building to house its Training and Research Institute, which is devoted to study of the U.N.'s activities and to training for its staff. A grant to the Carnegie Endowment for International Peace is underwriting fellowships for training of young foreign service officers from new nations—the French-speaking fellows at the Graduate Institute of International Studies in Geneva, Switzerland, and the English-speaking fellows at Columbia University's School of International Affairs, in New York.

Research in international relations and international law was the object of grants to the Brookings Institution, in Washington, D. C., to Columbia University, to the Hague Academy of International Law, and to other institutions.

International exchanges of students are facilitated by a grant to the Institute of International Education of New York, which counsels American students who wish to study abroad and foreign students coming to United States colleges and universities. Concern with the migration of talent out of developing countries—the "brain drain" phenomenon—led the Foundation to support a study being made by Education and World Affairs, New York, to define underlying reasons for this trend and to suggest ways of reversing it.

Other grants related to education have supported international meetings of university officials and educators and travel of scholars and administrators to observe universities abroad.

OTHER INSTITUTIONS

An outright grant of \$1 million was made to the National Academy of Sciences to permit it more flexibility in exploring new fields of science and technology, unrestricted by limiting contracts.

The Council on Foundations was aided this year in its program to act as a clearinghouse for information and as a source of advice and guidance for the many small foundations in this country, as well as to be of general service to the field of organized philanthropy.

The Foundation will continue to seek out unusual opportunities of special merit, particularly those that may reinforce aspects of its five major areas of interest, or that may contribute to the central purpose of its programs—to serve the well-being of mankind throughout the world.

1968 GRANTS

ALLIED INTERESTS

*MNS: Medical and Natural Sciences; AS: Agricultural Sciences;
HSS: Humanities and Social Sciences; IP: Inter-Program*

INTERNATIONAL

ROCKEFELLER FOUNDATION International Program in Virus Research:

| | |
|--|-------------------------------|
| Yale Arbovirus Research Unit | \$175,850 |
| Belém, Brazil | 127,450 |
| Staff on assignment | \$ 59,000 |
| Project support | 68,450 |
| Berkeley, California | 56,500 |
| Staff on assignment | 17,000 |
| Project support | 39,500 |
| TOTAL—Appropriations made in 1968 | <u>\$359,800 (MNS)</u> |

ROCKEFELLER FOUNDATION International Centers

| | |
|---|------------------------------|
| Chilean Program Center, Santiago | 93,400 |
| Staff on assignment | 44,000 |
| Project support | 49,400 |
| Villa Serbelloni Research and Conference Center | 278,900 |
| Staff on assignment | 24,900 |
| Project support | 254,000 |
| TOTAL—Appropriations made in 1968 | <u>\$372,300 (IP)</u> |

INTERNATIONAL PROGRAM publications

| | |
|--|------------------|
| ROCKEFELLER FOUNDATION unallocated contingency reserve for International Programs | <u>\$350,000</u> |
|--|------------------|

INTERNATIONAL CONFERENCE on the university's response to contemporary student needs, held at the Villa Serbelloni Research and Conference Center, Bellagio, Italy; \$15,000; (HSS)

INTERNATIONAL COUNCIL ON ARCHIVES, Paris, France: preliminary study of the archival situation in the independent countries of tropical Africa; \$15,000; (IP)

ARGENTINA

TORCUATO DI TELLA INSTITUTE, Buenos Aires: toward the costs of studies, by the Committee on Latin American Data Archives of the Latin American Social Science Council, aimed at development and modernization of social science data archives in Latin America; \$15,000 through April, 1970; (HSS)

BRAZIL

AMELIA ANDRADE, Belém Virus Laboratory; to study advanced research techniques at the Yale Arbovirus Research Unit, New Haven, Connecticut; \$2,625; (MNS)

BRAZILIAN SOCIETY OF GENETICS, São Paulo: development of research and training in genetics in Brazil; \$9,050; (MNS)

ROCKEFELLER FOUNDATION International Program in Virus Research: Belém Virus Laboratory; *see International, above*;

UNIVERSITY OF PARANA, Curitiba:

Support of the Laboratory of Human Genetics; \$2,800; (MNS)

To enable Dr. Newton Freire-Maia, Laboratory of Human Genetics, to present a paper at the 12th International Congress of Genetics, held in Tokyo; \$1,775; (MNS)

UNIVERSITY OF RIO GRANDE DO SUL, Pôrto Alegre:

Research equipment and supplies for the Laboratory of Animal Genetics; \$6,000; (MNS)

Expenses of the Laboratory of Molecular Genetics; \$3,300; (MNS)

Toward costs of aflatoxin studies in Brazil under the direction of Dr. Jorge Boshell; \$2,500; (MNS)

CHILE

ROCKEFELLER FOUNDATION International Program Center: Chilean Program Center, Santiago; *see International, above*;

COLOMBIA

CLARA LESMES, University of Valle, Cali: to visit virus laboratories in the United States and Panama; \$2,300; (MNS)

PAN AMERICAN FEDERATION OF ASSOCIATIONS OF MEDICAL SCHOOLS, Bogotá, Colombia: for use by the Pan American Fund for Education in Medicine and the Health Sciences toward the costs of developing regional centers in Latin America for advanced research and training in medicine and the biomedical sciences; \$250,000 as an outright grant, upon receipt of evidence that the Federation has secured from Latin American governments an amount equal to \$100,000 for the same purpose; (MNS)

INDIA

INDIAN COUNCIL OF MEDICAL RESEARCH, New Delhi: equipment and supplies for the Virus Research Centre, Poona; \$15,000; (MNS)

ISRAEL

HEBREW UNIVERSITY OF JERUSALEM: travel expenses of participants in a conference on tradition and change, held at the Villa Serbelloni Research and Conference Center, Bellagio, Italy; \$8,300; (HSS)

ITALY

VILLA SERBELLONI, Bellagio: Research and Conference Center of The Rockefeller Foundation; *see International, above*;

LEBANON

AMERICAN UNIVERSITY OF BEIRUT: .

Toward strengthening its academic program, primarily at the graduate level; \$2,000,000 for a six-year period beginning January 1, 1969, payable in outright installments not more frequently than semiannually, upon receipt of evidence that matching contributions have been received from sources outside the United States and Europe; (IP)

Books and equipment for a neuropathology laboratory to be established in the Faculty of Medicine under the direction of Dr. Jean J. Rebeiz; \$8,600; (MNS)

LIBERIA

CUTTINGTON COLLEGE AND DIVINITY SCHOOL, Suacoco: development of its program in economics and business administration; \$820; (HSS)

NIGERIA

UNIVERSITY OF IBADAN:

Toward costs of the arbovirus research program in the Faculty of Medicine; \$35,000; (MNS)

Field operations under the direction of Dr. Ottis R. Causey in connection with the arbovirus research program at the University; \$2,500; (MNS)

Edward H. O'Connor; to obtain training in laboratory procedures at the Yale Arbovirus Research Unit, New Haven, Connecticut; \$1,550; (MNS)

PERU

UNIVERSITY OF SAN MARCOS, Lima: equipment and supplies for an arbovirus research program under the direction of Dr. José Madalenoitia and Dr. William Flores, Faculty of Medicine; \$5,000; (MNS)

PHILIPPINES

PRESS FOUNDATION OF ASIA, Manila: toward the costs of establishing its secretariat and program; \$25,000; (HSS)

SWITZERLAND

GRADUATE INSTITUTE OF INTERNATIONAL STUDIES, Geneva:

Toward the costs of a conference on the future of international relations theory, held at the Villa Serbelloni Research and Conference Center, Bellagio, Italy; \$12,000; (HSS)

Dr. Harish Kapur; to continue, in India, his research on Soviet policy toward the Third World; \$2,400; (HSS)

UNITED KINGDOM

HERBERT GEORGE NICHOLAS, New College, Oxford, England: to observe the 1968 United States presidential campaign and elections while continuing his study of American political institutions; \$3,165; (HSS)

UNITED STATES

ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA, Pennsylvania: toward costs of initiating an expanded program of research in freshwater ecology; \$250,000 for a five-year period beginning not later than January 1, 1969; (MNS)

AMERICAN PUBLIC HEALTH ASSOCIATION, New York: toward the costs of a conference on the Association's functions, organization, and relationships, to be held in April, 1969; \$10,000; (MNS)

ASSOCIATION OF AMERICAN UNIVERSITIES: expenses of a conference with the Committee of Vice-Chancellors and Principals of the British Universities to be held in April, 1969, in Williamsburg, Virginia; \$25,000; (IP)

COLUMBIA UNIVERSITY:

Continuation, under the auspices of the School of Engineering and Applied Science, of studies connected with a survey of environmental pollution by the New York City Council on Science and Technology; \$25,000; (MNS)

For use by the Southern Asian Institute to enable Dr. James Guyot to complete research on the connections between economic policy and politics in Burma and Malaysia; \$15,000 for an 18-month period; (HSS)

COUNCIL ON FOUNDATIONS, New York: toward support of its program; \$100,000; (IP)

GEORGE C. MARSHALL RESEARCH FOUNDATION, Arlington, Virginia: toward its operating costs; \$25,000; (HSS)

DR. KLAUS KNORR, Princeton University, New Jersey: research in Japan, India, and the Soviet Union on changing conceptions of the uses of military power; \$3,200; (HSS)

PROFESSOR MARSHALL W. MOUNT, Finch College, New York: to visit Africa to update his manuscript on African contemporary art there; \$3,545; (HSS)

NATIONAL ACADEMY OF SCIENCES, Washington, D. C.:

Toward exploratory studies in environmental science; \$40,000; (IP)

Toward support of a full-time staff and basic operating expenses of the Board on Medicine; \$25,000; (MNS)

NORTHWESTERN UNIVERSITY, Evanston, Illinois: toward costs of a Conference on Patterns of Peaceful Living in the Middle East; \$10,000; (HSS)

DR. RONALD H. PINE, Smithsonian Institution, Washington, D. C.: to visit Belém, Brazil, to make a faunal survey of the mammals from the Guamá Ecological Research Area (APEG) and the Amapá and Tírios areas; \$2,525; (MNS)

PREPARATION of the memoirs of Miss Flora M. Rhind, a retired officer of The Rockefeller Foundation, by the Oral History Research Office, Columbia University; \$13,000; (IP)

ROCKEFELLER FOUNDATION International Program in Virus Research: virus studies in Berkeley, California; see *International, above*;

DR. HUGH H. SMITH, retired officer of The Rockefeller Foundation, Tucson, Arizona: to work on his book on public health, at the Villa Serbelloni Research and Conference Center, Bellagio, Italy; \$2,600; (MNS)

STANFORD UNIVERSITY, California: to enable Dr. Benton F. Massell, Food Research Institute, to complete his study on expenditure in rural Uganda; \$4,931; (HSS)

TOWARD THE COSTS of preparation, publication, and distribution of a Rockefeller Foundation fellowship and scholarship directory and a history of the fellowship and scholarship program of the Foundation; \$30,000 for a two-year period; (IP)

UNIVERSITY OF CALIFORNIA, Davis: for use by its Institute of Governmental Affairs to enable a group of Asian and United States scholars to develop a research design for a comparative study, "Perceptions of Asian Administration"; \$15,000 for an 18-month period; (HSS)

UNIVERSITY OF MICHIGAN, Ann Arbor: to enable Dr. Henry L. Bretton to undertake research on government and economics in tropical Africa; \$10,000 for a 30-month period beginning in July; (HSS)

UNIVERSITY OF MINNESOTA, Minneapolis: toward the appointment of Dr. David E. Schafer as research associate in the Medical School's Department of Physiology; \$2,667; (MNS)

UNIVERSITY OF TEXAS, Austin: to enable Professor Stanley R. Ross to update his documentary history of 20th-century Mexico; \$3,250; (HSS)

UNIVERSITY OF WISCONSIN, Milwaukee: to enable Dr. Harold L. Nieburg, Department of Political Science, to prepare a book-length study on political violence; \$8,600; (HSS)

WAYNE STATE UNIVERSITY, Detroit, Michigan: to enable Dr. Maurice Waters to conduct research in England for his study of foreign policies of newly independent Caribbean states; \$1,500; (HSS)

YALE UNIVERSITY, New Haven, Connecticut:

Yale Arbovirus Research Unit; see *International, above*;

To enable Dr. Pierre Ardois of the Faculty of Medicine, University of Paris, France, to continue collaborative research at the Yale Arbovirus Research Unit; \$10,000. (MNS)

STUDY AWARDS

STUDY AWARDS

The Rockefeller Foundation's study awards are integrated with its main areas of interest. Through its fellowships and scholarships, the Foundation seeks to train personnel and to advance knowledge in the medical and natural sciences, the agricultural sciences, the humanities and social sciences, and the arts, with the aim of bringing highly trained human resources to bear on the basic problems which limit man's well-being. Awards are

made on an international basis to outstanding men and women who have shown promise of making important contributions to their fields of study in their native countries.

During 1968 a total of 575 persons held Foundation fellowships and scholarships; 441 awards that began in previous years continued active in 1968 and 134 new awards became active during the year. Their distribution by program is as follows:

| | STUDY AWARDS FROM PREVIOUS YEARS CONTINUED INTO 1968 | NEW AWARDS IN 1968 | NUMBER OF AWARDS ACTIVE IN 1968 |
|--------------------------------|---|-----------------------------|--|
| Agricultural Sciences | 180 | 62 | 242 |
| Medical and Natural Sciences | 117 | 25 | 142 |
| Humanities and Social Sciences | 144 | 47 | 191 |
| | <hr/> | <hr/> | <hr/> |
| | 441 | 134 | 575 |

In addition to the fellowships and scholarships awarded and administered by The Rockefeller Foundation, several organizations have awarded similar fellowships with funds contributed in 1968

and previous years by the Foundation. The following organizations administered a total of 61 fellowships that were provided for by Foundation funds during 1968:

| | |
|---------------------------------|-------|
| Population Council | |
| Demographic | 15 |
| Medical | 3 |
| Technical Assistance | 8 |
| Social Science Research Council | 35 |
| | <hr/> |
| | 61 |

Rockefeller Foundation fellows and scholars in 1968 came from 33 countries:

| | PREVIOUS AWARDS | NEW AWARDS | | PREVIOUS AWARDS | NEW AWARDS | | PREVIOUS AWARDS | NEW AWARDS |
|----------------------------|-----------------|------------|-------------|-----------------|------------|-------------------------------------|-----------------|------------|
| Argentina | 2 | | India | 21 | 8 | Taiwan (National Republic of China) | 3 | 1 |
| Bolivia | 1 | | Iran | 1 | | Tanzania | 4 | 3 |
| Brazil | 16 | 7 | Japan | 1 | | Thailand | 69 | 25 |
| Ceylon | 3 | | Kenya | 13 | 5 | Trinidad | 1 | |
| Chile | 38 | 11 | Lebanon | 1 | | Uganda | 15 | 7 |
| Colombia | 54 | 16 | Malaysia | 2 | | United Arab Republic | | 1 |
| Congo, the Republic of the | 3 | | Mexico | 33 | 2 | United States | 2 | |
| Costa Rica | 2 | | Nigeria | 29 | 8 | Uruguay | 1 | |
| Ecuador | 4 | 11 | Pakistan | 1 | 1 | World Health Organization | | 1 |
| Ethiopia | 4 | 1 | Peru | 15 | 9 | | | |
| Guatemala | 1 | 2 | Philippines | 81 | 14 | | | |
| Honduras | 4 | 1 | Rhodesia | 1 | | | | |
| | | | Sudan | 14 | 1 | | | |
| | | | | | | | 441 | 134 |

For its fellowship and scholarship activities The Rockefeller Foundation made available a total of \$4,050,000 for allocation during 1968 and \$4,150,000 for allocation during 1969. From these funds allocations totaling \$646,500 were made in 1968 in the form of unrestricted grants to 97 institutions in the United States and foreign countries where Foundation fellows and scholars are engaged in study and research. Recognizing that the disparity between universities' expenses and their income from tuition and fees is most apparent at the level of graduate

study, the Foundation, since 1958, has made available funds to be disbursed in units of \$1,000 for each full year a fellow spends at a university and \$500 for each half year. This year the amount of these grants was increased to \$1,500 for a full year and \$750 for each half year. The grants are in addition to tuition and other fees paid by the Foundation through its fellowship and scholarship awards.

Fellows and scholars whose awards became active in 1968 are listed by name and country on the following pages.

FELLOWS AND SCHOLARS

*F: Fellow; S: Scholar; AS: Agricultural Sciences;
HSS: Humanities and Social Sciences; MNS: Medical and Natural Sciences*

BRAZIL

TULIO BARBOSA M.S., Rural University of the State of Minas Gerais, 1966. Agricultural Economics. Appointed from Rural University of the State of Minas Gerais. Place of study: U.S.A. s-HSS

JOSE OSWALDO COSTA D.V.M., Federal University of Minas Gerais, 1964. Veterinary Parasitology. Appointed from Federal University of Minas Gerais. Place of study: U.S.A. s-AS

HIPOLITO ASSUCAO ANTONIO MASCARENHAS B.S., Delhi University, 1954. Agronomy. Appointed from Institute of Agronomy of the State of São Paulo, Campinas. Place of study: U.S.A. s-AS

AQUIRA MIZUBUTI M.S., Rural University of the State of Minas Gerais, 1967. Horticulture. Appointed from Rural University of the State of Minas Gerais. Place of study: U.S.A. s-AS

KLAUS REICHARDT D.Agr., University of São Paulo, Piracicaba, 1965. Soil Science. Appointed from University of São Paulo. Place of study: U.S.A. s-as

ANTONIO RAPHAEL TEIXEIRA FILHO M.S., Rural University of the State of Minas Gerais, 1964. Agricultural Economics. Appointed from Rural University of the State of Minas Gerais. Place of study: U.S.A. s-hss

HASIME TOKESHI Liv.Doc., University of São Paulo, Piracicaba, 1966. Plant Pathology. Appointed from University of São Paulo. Place of study: U.S.A. s-as

CHILE

RAUL E. AVENDANO M.S., Purdue University, 1964. Plant Science—Genetics and Breeding. Appointed from Agricultural Research Institute. Place of study: U.S.A. s-as

SERGIO BONILLA E. M.S., University of California, Davis, 1963. Animal Nutrition. Appointed from Agricultural Research Institute. Place of study: U.S.A. s-as

JUAN-CARLOS BRESCIANI Ing.Agr., Catholic University of Chile, 1962. Agronomy. Appointed from Agricultural Research Institute. Place of study: U.S.A. s-as

PEDRO CABEZON BARRENENGOA M.S., University of Wisconsin, 1966. Economics. Appointed from University of Chile, Santiago. Place of study: U.S.A. s-hss

PEDRO A. CASALS BUSTOS Agronomist, University of Concepción, Chillán, 1963. Entomology. Appointed from University of Concepción. Place of study: U.S.A. s-as

EUGENIO CAVIEDES Ing.Agr., University of Chile, Santiago, 1967. Agronomy. Appointed from University of Chile. Place of study: U.S.A. s-as

FERNANDO GARCIA-GOMEZ M.S., University of California, Davis, 1964. Animal Husbandry. Appointed from Catholic University of Chile. Place of study: U.S.A. s-as

GONZALO FELIPE GIL SALAYA M.Sc., University of California, Davis, 1965. Plant Physiology. Appointed from Catholic University of Chile. Place of study: U.S.A. s-as

TERESA JEANNERET Comm.Eng., University of Chile, Santiago, 1959. Economics. Appointed from University of Chile. Place of study: U.S.A. s-hss

JUAN ANTONIO POBLETE REICHARD Civ.Eng., University of Chile, Santiago, 1966. Economics. Appointed from University of Chile. Place of study: U.S.A. s-hss

VICTOR VOLKE Ing.Agr., University of Concepción, 1963. Soil Science. Appointed from Agricultural Research Institute, Temuco. Place of study: Mexico. s-as

COLOMBIA

H. HUMBERTO ARANGO CUENCA B.S., University of Valle, 1967. Sociology. Appointed from University of Valle. Place of study: U.S.A. s-hss

JOSE NELSON CARMONA LONDONO Biostatistics. Appointed from University of Valle. Place of study: Chile. s-mns

JOSE AMERICO CASTILLO BODOYA M.A., Stanford University, 1965. Agricultural Economics. Appointed from University of Valle. Place of study: U.S.A. s-hss

JOSE MILDRED CASTRO OSPINA Lic., University of Valle, 1964. Applied Mathematics. Appointed from University of Valle. Place of study: U.S.A. s-mns

RALPH ERNEST COTTERILL M.Sc., University of Guelph, Ontario, Canada, 1967. Agricultural Economics. Appointed from University of Valle. Place of study: U.S.A. s-hss

RUTH ANN CURTIS DUQUE A.M.T., Radcliffe College, 1954. Comparative Literature. Appointed from University of Valle. Place of study: U.S.A. s-hss

JUAN MANUEL GARCES MUÑOZ Chemist, University of Valle, 1967. Chemistry. Appointed from University of Valle. Place of study: U.S.A. s-mns

FRANCISCO DAVID GENSINI FOSSI M.S., Carnegie Institute of Technology, 1962. Chemical Engineering. Appointed from University of Valle. Place of study: U.S.A. s-mns

RAMIRO GUERRERO MUÑOZ M.S., Cornell University, 1963. Soil Science. Appointed from Colombian Institute of Agriculture. Place of study: U.S.A. s-as

HERNANDO GUERRERO VARGAS Lic., Pedagogical and Technological University of Colombia, Tunja, 1954. Physics. Appointed from University of Valle. Place of study: Puerto Rico. s-mns

JAMES K. MCKENZIE M.Sc., University of Guelph, Ontario, Canada, 1966. Agricultural Economics. Appointed from University of Valle. Place of study: U.S.A. s-hss

GUSTAVO ARMANDO MORALES G. D.T.V.M., University of Edinburgh, 1965. Pathology. Appointed from Colombian Institute of Agriculture. Place of study: U.S.A. s-as

MANUEL JOSE RIOS BETANCOURT Ing.Agr., National University of Colombia, Medellín, 1964. Genetics. Appointed from Colombian Institute of Agriculture, Palmira. Place of study: Mexico. s-as

JESUS ANTONIO RIVERA GOMEZ Ing.Agr., National University of Colombia, Medellín, 1966. Genetics. Appointed from Colombian Institute of Agriculture. Place of study: Mexico. s-as

GENTIL ROJAS M.S., Ohio State University, 1965. Agricultural Economics. Appointed from University of Valle. Place of study: U.S.A. s-HSS

MARIA CLARA URIBE Lic., University of the Andes, 1968. Political Science. Appointed from University of the Andes. Place of study: England. s-HSS

ECUADOR

FAUSTO GERARDO ABAD SALAS Ing.Agr., Central University, 1964. Forage Breeding. Appointed from National Agricultural Research Institute. Place of study: Colombia. s-AS

CESAR OSWALDO ALTAMIRANO MOLINA Agricultural Films. Appointed from National Agricultural Research Institute. Place of study: U.S.A. s-AS

CESAR HAMBURGO CALLES Ing.Agr., Central University, 1964. Forage Management. Appointed from National Agricultural Research Institute. Place of study: Brazil. s-AS

EUSTORGIO ADOLFO CEVALLOS DAVILA Ing.Agr., Central University, 1962. Entomology. Appointed from National Agricultural Research Institute, Quevedo. Place of study: Mexico. s-AS

CARLOS FELIPE CORTAZA G. Ing.Agr., University of Guayaquil, 1961. Plant Science—Genetics and Breeding. Appointed from National Agricultural Research Institute. Place of study: Mexico. s-AS

RAUL ESTUARDO ESCOBAR PADILLA Ing.Agr., Central University, 1959. Agronomy. Appointed from National Agricultural Research Institute. Place of study: Mexico. s-AS

LUIS GUALBERTO MERINO MANCHENO M.S., Michigan State University, 1967. Entomology. Appointed from National Agricultural Research Institute. Place of study: U.S.A. s-AS

CESAR A. PLAZA OLIVES B.S., California State Polytechnic College, 1964. Agronomy and Plant Science. Appointed from National Agricultural Research Institute. Place of study: U.S.A. s-AS

RAUL PAZ JACOME Ing.Agr., Central University, 1962. Agronomy. Appointed from National Agricultural Research Institute, Santo Domingo. Place of study: Mexico. s-AS

JORGE ROMAN M.S.A., University of Florida, 1966. Dairy Science. Appointed from National Agricultural Research Institute. Place of study: U.S.A. s-AS

JUAN GERARDO VEGA VILLAGRAN Ing.Agr., Central University, 1960. Plant Pathology. Appointed from National Agricultural Research Institute. Place of study: Colombia. s-AS

ETHIOPIA

BANTAYEHU GELAW M.S., University of Arizona, 1965. Agronomy. Appointed from Haile Selassie I University. Place of study: U.S.A. s-AS

GUATEMALA

NORBERTO MATZER OVALLE D.V.M., National University of Mexico, 1962. Comparative Pathology. Appointed from University of San Carlos. Place of study: U.S.A. s-AS

FEDERICO ADOLFO RICHTER MARTINEZ Dipl.Bachelor, University of San Carlos, 1968. Virology. Appointed from University of San Carlos. Place of study: Canada. s-AS

HONDURAS

JOSE MONTENEGRO BARAHONA B.S.A., University of Puerto Rico, Rio Piedras, 1965. Phytopathology. Appointed from DESARRURAL, Tegucigalpa. Place of study: Mexico. s-AS

INDIA

ANIL HARILAL BHATT M.A., Maharaja Sayajirao University of Baroda, 1961. Political Science. Appointed from Centre for the Study of Developing Societies, Delhi. Place of study: U.S.A. s-HSS

MAHESHCHANDRA KANHAIYALAL BHATT B.A., Agra University, 1956. Medical Librarianship. Appointed from National Medical Library, New Delhi. Place of study: U.S.A. s-MNS

DHARAM PAL CHAUDHRI Ph.D., University of Delhi, 1968. Economics. Appointed from University of Delhi. Place of study: U.S.A. f-HSS

RAM DEO MISRA M.Sc., Uttar Pradesh Agricultural University, 1966. Soil Science. Appointed from Uttar Pradesh Agricultural University. Place of study: U.S.A. s-AS

V. V. SURYANARAYANA MURTY M.Sc., Osmania University, 1960. Genetics. Appointed from Andhra Pradesh Agricultural University. Place of study: U.S.A. s-AS

ANNE SITARAMA PRABHU Ph.D., Indian Agricultural Research Institute, 1962. Plant Pathology. Appointed from Indian Agricultural Research Institute. Place of study: U.S.A. f-AS

MOHINDER PARTAP SINGH Ph.D., Indian Agricultural Research Institute, 1965. Genetics. Appointed from Indian Agricultural Research Institute. Place of study: U.S.A. f-AS

BABRI NATH TANDON M.D., University of Lucknow, 1958. Nutrition. Appointed from All India Institute of Medical Sciences. Place of study: U.S.A. f-MNS

KENYA

CHARLES BITAROHO KATONGOLE M.R.C.V.S., University of Glasgow, 1967. Animal Science. Appointed from University College, Nairobi. Place of study: England. s-as

LEONARD JAMES KIBERA B.A., University College, Nairobi, 1968. Creative Writing. Appointed from University College, Nairobi. Place of study: U.S.A. s-hss

BENJAMIN EDGAR KIPKORIR B.A., Makerere University College, Kampala, Uganda, 1965. History. Appointed from University College, Nairobi. Place of study: England. s-hss

JOHN NGUTHU MUTIO A.M., Indiana University, 1967. Mathematics. Appointed from University College, Nairobi. Place of study: U.S.A. s-hss

GEORGE SAITOTI B.A., Brandeis University, 1967. Mathematics. Appointed from University College, Nairobi. Place of study: England. s-hss

MEXICO

DAVID ARROYO-RAMOS Cert., National School of Agriculture, 1958. Agronomy. Appointed from National Institute of Agricultural Research. Place of study: Colombia. s-as

J. FRANCISCO O. BRAVO D.V.M., National University of Mexico, 1968. Veterinary Medicine. Appointed from National Institute of Agricultural Research. Place of study: U.S.A. s-as

NATIONAL REPUBLIC OF CHINA

MING HSIEN SUN M.S., University of Minnesota, 1966. Plant Pathology. Appointed from Joint Commission on Rural Reconstruction. Place of study: U.S.A. s-as

NIGERIA

BENJAMIN ADEBAYO AIYEDUN B.Sc., Ahmadu Bello University, 1967. Immunology. Appointed from Nigerian Institute for Trypanosomiasis Research. Place of study: Scotland. s-as

ABDOYE MORAKINYO BABALOLA B.A., University of Ibadan, 1963. Educational Administration. Appointed from University of Ibadan. Place of study: U.S.A. s-hss

OLAJIDE ADEYEMI IDOWU M.R.C.P., Royal Victoria Hospital (Queen's University of Belfast), Ireland, 1964. Genetic Neurology. Appointed from University of Ibadan. Place of study: U.S.A. r-mns

TURNER TIMINIRE ISOUN D.V.M., Michigan State University, 1965. Veterinary Medicine. Appointed from University of Ibadan. Place of study: U.S.A. s-as

LAWRENCE ESIJEMIGBITSE JEMERICBE B.Sc., University of Ife, 1967. Economics. Appointed from University of Ife. Place of study: England. s-hss

GABRIEL IDOWU OLADESI OJO B.Sc., University of Ibadan, 1967. Economics. Appointed from University of Ife. Place of study: U.S.A. s-hss

TITILOYE ADEMOLA OYEJIDE B.Sc., University of Ibadan, 1968. Economics. Appointed from University of Ibadan. Place of study: England. s-hss

MBA UZOUKWU M.S., Michigan State University, 1968. Veterinary Science. Appointed from University of Bi-afrá. Place of study: U.S.A. s-as

PAKISTAN

ZAHUR ALAM M.S., University of Florida, 1966. Horticulture. Appointed from Ministry of Agriculture, West Pakistan. Place of study: U.S.A. s-as

PERU

HANS S. ANDRESEN D.V.M., University of San Marcos, 1955. Veterinary Medicine. Appointed from University of San Marcos. Place of study: U.S.A. s-as

GUILLERMO SANTIAGO BURGA M.S., North Carolina State University, Raleigh, 1966. Poultry Science. Appointed from Agrarian University. Place of study: U.S.A. s-as

FAUSTO HUMBERTO CISNEROS M.S., North Carolina State University, Raleigh, 1964. Entomology. Appointed from Agrarian University. Place of study: U.S.A. s-as

JOSE ANDRES ESTRADA M.S., North Carolina State University, Raleigh, 1964. Soils. Appointed from Agrarian University. Place of study: U.S.A. s-as

JOSE ENRIQUE FERNANDEZ M.S., North Carolina State University, Raleigh, 1967. Agricultural Economics. Appointed from Agrarian University. Place of study: U.S.A. s-hss

JUAN ARTURO FLOREZ MARTINEZ M.S., Washington State University, 1966. Range Management. Appointed from Agrarian University. Place of study: U.S.A. s-as

GUILLERMO G. GOMEZ-GARCIA M.S., North Carolina State University, Raleigh, 1966. Biochemistry. Appointed from Agrarian University. Place of study: U.S.A. s-as

ULISES MORENO-Moscoso Ing.Agr., Agrarian University, 1960. Botany. Appointed from Agrarian University. Place of study: U.S.A. s-as

LUIS AMERICO VALDEZ Ing.Agr., Agrarian University, 1961. Soil Science. Appointed from Agrarian University. Place of study: Mexico. s-as

PHILIPPINES

BENJAMIN SUAREZ AUSTRIA A.M., Harvard University, 1968. Geology. Appointed from University of the Philippines, Quezon City. Place of study: U.S.A. s-MNS

ENRIQUE B. DELACRUZ, Jr. A.B., University of the Philippines, Quezon City, 1964. Philosophy. Appointed from University of the Philippines, Quezon City. Place of study: U.S.A. s-HSS

ALFREDO ESCUERRA EVANGELISTA M.A., University of Chicago, 1959. Anthropology. Appointed from University of the Philippines, Manila. Place of study: U.S.A. s-HSS

SERGIO DE LOS SANTOS GASMEN M.D., University of the Philippines, 1966. Community Medicine. Appointed from University of the Philippines. Place of study: Colombia. F-MNS

ANNADAIY NAVARRO JAVIER-CARLOTA A.B., University of the Philippines, Quezon City, 1965. Experimental Psychology. Appointed from University of the Philippines, Quezon City. Place of study: U.S.A. s-HSS

LEDA LEAL LAYO B.S., University of the Philippines, Quezon City, 1965. Medical Sociology. Appointed from University of the Philippines, Quezon City. Place of study: U.S.A. s-MNS

LETICIA PERLAS MANIEGO-BAUTISTA M.D., University of the Philippines, Manila, 1965. Nutrition. Appointed from University of the Philippines, Manila. Place of study: U.S.A. F-MNS

FRATERNIDAD G. MISTICA M.A., University of Michigan, 1964. English Literature. Appointed from University of the Philippines, Quezon City. Place of study: U.S.A. s-HSS

HONESTO CALANG NUQUI B.S., University of the Philippines, Quezon City, 1965. Mathematics. Appointed from University of the Philippines, Quezon City. Place of study: U.S.A. s-MNS

RODOLFO PARAS PEREZ M.A., University of Minnesota, 1962. Art History. Appointed from University of the Philippines, Quezon City. Place of study: U.S.A. s-HSS

EDMUNDO BARRIOS PRANTILLA B.S.A., University of the Philippines, Los Baños, 1965. Agricultural Economics. Appointed from University of the Philippines, Los Baños. Place of study: U.S.A. s-HSS

EDUARDO CRUZ SISON M.S., University of the Philippines, Los Baños, 1967. Food Science. Appointed from University of the Philippines, Los Baños. Place of study: U.S.A. s-AAS

MANUEL M. VERGEL, JR. M.Eng., Chulalongkorn University, 1966. Agricultural Engineering. Appointed from University of the Philippines, Los Baños. Place of study: U.S.A. s-AAS

SUDAN

MOHAMED AHMED KHALIFA M.Sc., University of North Wales, 1961. Agronomy. Appointed from Khashm El-girba Research Substation. Place of study: U.S.A. s-AAS

TANZANIA

DEUSDEDIT MUJWAHUZI KACISA BISHOTA LL.M., University of London, 1965. International Law. Appointed from University College, Dar es Salaam. Place of study: U.S.A. s-HSS

MARTIN H. Y. KANIKI B.A., University College, Dar es Salaam, 1968. West African History. Appointed from University College, Dar es Salaam. Place of study: England. s-HSS

KIGHOMA ALLY MALIMA M.A., Yale University, 1966. Economics. Appointed from University College, Dar es Salaam. Place of study: U.S.A. s-HSS

THAILAND

ARNUWATRA LIMSUWAN M.D., University of Medical Sciences, 1962. Epidemiology. Appointed from University of Medical Sciences. Place of study: U.S.A. s-MNS

ARONG SUTHASASNA B.A., Thammasat University, 1966. Sociology. Appointed from Thammasat University. Place of study: U.S.A. s-HSS

BOONKONG HUNCHANGSITH B.A., Thammasat University, 1965. Economics. Appointed from Thammasat University. Place of study: U.S.A. s-HSS

CHUMPOL PHOLPRAMOO B.S., University of Medical Sciences, 1968. Physiology. Appointed from University of Medical Sciences. Place of study: U.S.A. s-MNS

KANITA ROENCPITYA M.A., University of Hawaii, 1965. Linguistics. Appointed from Chulalongkorn University. Place of study: U.S.A. s-HSS

MALEE SANDHIKSHETRIN B.A., Jersey City State College, 1968. Nursing Service Administration. Appointed from University of Medical Sciences. Place of study: U.S.A. s-MNS

NARONGCHAI AKRASANEE B.Ed., University of Western Australia, 1967. Economics. Appointed from Thammasat University. Place of study: U.S.A. s-HSS

NIMIT NONTAPUNTHAWAT B.A., Chulalongkorn University, 1967. Economics. Appointed from Thammasat University. Place of study: U.S.A. s-HSS

NUNTHAWUN PRAJAYAYOTHIN B.Ed., Chulalongkorn University, 1968. Educational Administration. Appointed from University of Medical Sciences. Place of study: U.S.A. s-MNS

PANIDA JAYANETRA M.D., University of Medical Sciences, 1963. Clinical Microbiology and Infectious Diseases. Appointed from University of Medical Sciences. Place of study: U.S.A. F-MNS

PHAITOON HATHAMART B.S., Kasetsart University, 1960. Agricultural Economics. Appointed from Kasetsart University. Place of study: U.S.A. S-HSS

PONGSAK DISSAYATAT B.A., Thammasat University, 1965. Political Science. Appointed from Thammasat University. Place of study: U.S.A. S-HSS

PRAKORN CHUDAPONGSE B.S., University of Medical Sciences, 1968. Pharmacology. Appointed from University of Medical Sciences. Place of study: U.S.A. S-MNS

PRAPHAS WEERAPAT M.S., Texas A & M University, 1964. Agronomy. Appointed from Ministry of Agriculture. Place of study: U.S.A. S-AS

SANTHAD ROJANASOONTORN M.S., Oregon State University, 1963. Soil Science. Appointed from Kasetsart University. Place of study: U.S.A. S-AS

SATHIT UTHAISRI B.Ed., University of Western Australia, 1966. Economics. Appointed from Thammasat University. Place of study: U.S.A. S-HSS

SAWARNG CHAROENYING M.Sc.Agr., Agra University, 1961. Entomology. Appointed from Kasetsart University. Place of study: U.S.A. S-AS

SOMBAT CHANTORNVONG B.A., Claremont Men's College, 1968. Political Science. Appointed from Thammasat University. Place of study: U.S.A. S-HSS

SOMPHONG SAHAPHONG M.D., University of Medical Sciences, 1968. Experimental Pathology. Appointed from University of Medical Sciences. Place of study: U.S.A. S-MNS

SUKHUM BUNYARATVEJ M.D., University of Medical Sciences, 1963. Electron Microscopy. Appointed from University of Medical Sciences. Place of study: U.S.A. F-MNS

SUNTHAREE SATHIRANAWIN B.Sc., University of Medical Sciences, 1965. Medical and Surgical Nursing. Appointed from University of Medical Sciences. Place of study: U.S.A. S-MNS

TUNYATAPE SUWANJINDAR B.A., Chulalongkorn University, 1966. Political Science. Appointed from Chulalongkorn University. Place of study: U.S.A. S-HSS

UBOM PUPIPAT M.S., University of Wisconsin, 1961. Plant Pathology. Appointed from Kasetsart University. Place of study: U.S.A. S-AS

VIMOLTIPI ROHITRATANA B.Sc., University of Medical Sciences, 1965. Medical and Surgical Nursing. Appointed from University of Medical Sciences. Place of study: U.S.A. S-MNS

WARIN WONGCHANCHOA M.A., Cornell University, 1965. Economics. Appointed from Kasetsart University. Place of study: U.S.A. S-HSS

UGANDA

GEORGE ALIBARUHO B.A., Makerere University College, 1968. Economics. Appointed from Makerere University College. Place of study: U.S.A. S-MSS

TARSISIO B. KABWEKYERE B.A., Makerere University College, 1968. Sociology. Appointed from Makerere University College. Place of study: England. S-HSS

JAMES KATOROBO B.A., Makerere University College, 1968. Political Science. Appointed from Makerere University College. Place of study: U.S.A. S-HSS

GABRIEL HAMLIN KIWUWA M.S., University of Illinois, 1966. Animal Science. Appointed from Makerere University College. Place of study: U.S.A. S-AS

JOHN NJUKIA B.Sc.Agr., Makerere University College, 1965. Agricultural Economics. Appointed from Makerere University College. Place of study: U.S.A. S-AS

JACOBSON JACKSON OLOYA Ph.D., University of Wales, 1966. Agricultural Economics. Appointed from Makerere University College. Place of study: U.S.A. F-HSS

JULIUS YEFUSA KITUNGULU ZAKE M.S., Michigan State University, 1968. Soil Science. Appointed from Makerere University College. Place of study: U.S.A. S-AS

WORLD HEALTH ORGANIZATION

ALEXANDER MACKENZIE RANKIN M.R.C.P., University of London, 1958. Public Health. Appointed from University College, Dar es Salaam. Place of study: U.S.A. S-MNS

ORGANIZATIONAL INFORMATION

MEETINGS

The annual meeting of the Corporation and a regular stated meeting of the Board of Trustees were held on April 3; a stated meeting of the Board of Trustees was held on December 2 and 3. Five regular meetings and one special meeting of the Executive Committee of the Trustees were held to take actions within the general policies approved by the Board.

TRUSTEES

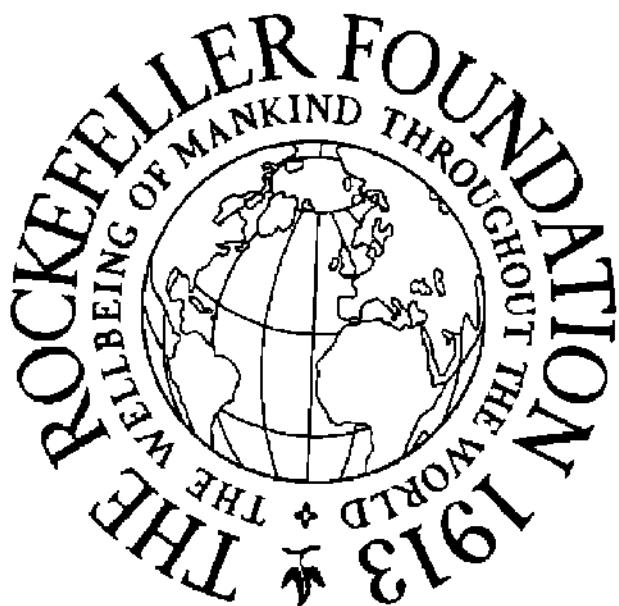
Mr. Lloyd D. Brace retired on June 30, 1968, after 11 years' service as a Trustee. He joined the First National Bank of Boston in 1925, and, prior to his retirement on March 1, 1968, had served as Director, President, Chairman of the Board, and Chairman of the Executive Committee. He has served as a member, director, or trustee of a wide variety of groups, including the American Telephone and Telegraph Company, the Boston Museum of Science, Dartmouth College, the Massachusetts General Hospital, the National Industrial Conference Board, and the United States Council of the International Chamber of Commerce.

Mr. John R. Kimberly retired on June 30, 1968, after serving as a Trustee since 1953. He has been associated with the Kimberly-Clark Corporation since 1924. He became a Vice-President in 1943, President in 1953, and is now Chairman of the company's Board. He was with the Office of Production Management and the War Production Board

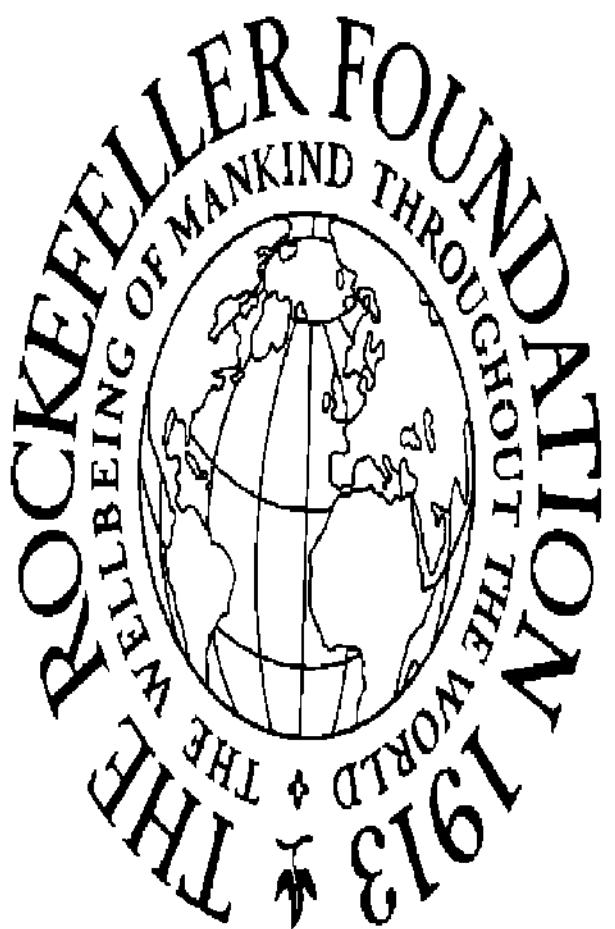
in Washington during World War II. Other boards on which Mr. Kimberly has served include those of the British-American Chamber of Commerce of the Midwest, the First National City Bank of New York, Lawrence College, the Massachusetts Institute of Technology, the National Industrial Conference Board, and the Escuela Agrícola Panamericana, in Honduras.

Mr. John D. Rockefeller IV, the fourth member of his family to serve on the Board of Trustees, succeeded Mr. Brace on July 1, 1968. He was elected to the West Virginia House of Delegates in 1966, and, in November, 1968, became Secretary of State of West Virginia. He has served in various capacities with the Peace Corps and the Department of State, and has been a consultant to the President's Commission on Juvenile Delinquency and Youth Crime, and a field worker in Action for Appalachian Youth. Mr. Rockefeller is a Trustee of the University of Chicago.

Mr. Whitney M. Young, Jr., Executive Director of the National Urban League since 1961, succeeded Mr. Kimberly on July 1, 1968. He was recently named to the Board of Trustees of the new Urban Institute created by the White House, and also serves on a number of other boards and committees, including the President's Committee on Youth Employment, and is an advisor to the Secretary of Health, Education, and Welfare and a consultant to the U. S. Public Health Service.



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Photograph Excised Here

Lloyd D. Bruce

John R. Kimberly

FINANCIAL STATEMENTS 1968

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FINANCIAL SUMMARY FOR 1968

The Trustees of The Rockefeller Foundation approved \$42.6 million in new appropriations during 1968.

The Foundation's five major areas of interest received a total of \$31.5 million, allocated as follows: Toward the Conquest of Hunger—\$5.5 million; Problems of Population—\$3.9 million; University Development—\$7.3 million; Toward Equal Opportunity for All—\$8.3 million; Aiding Our Cultural Development—\$2.1 million, and for projects closely related to these five program areas—\$4.4 million. Grants in aid were funded with \$2.1 million and fellowships with \$3.8 million. Appropriations of \$2.7 million were made for New York program expenses and \$2.5 million for administrative costs.

These new commitments bring to a total of \$992 million the appropriations of The Rockefeller Foundation during the 55 years of its existence.

Payments during 1968 on current and prior appropriations were \$41.5 million. These payments were made from the Foundation's income for the year of \$32.8 million and from \$8.7 million of principal. By the end of 1968, the Foundation's total payments for the 55-year period were \$911.7 million, of which \$760.6 million was paid from income, while \$151.1 million was paid from principal.

At December 31, commitments for future payments aggregated \$80.5 million.

During the year the Trustees reviewed the informal guidelines which have been followed in recent years in setting the general level of annual appropriations. They agreed that in the future the guidelines will be related to market value of investments rather than to annual income. To avoid sharp changes in levels of appropriations from year to year, they adopted a guideline based upon market values of investments for the preceding four years.

The Foundation continued the diversification of its investments by the sale of 294,100 shares of Standard Oil Company (New Jersey) capital stock and the sale of 600,000 shares of Consolidated Natural Gas Company. The proceeds, together with the proceeds from sales of other securities, were reinvested mainly in other common stocks.

The financial statements and the opinion of Haskins & Sells, independent public accountants, are presented in the following pages.

ACCOUNTANTS' OPINION

HASKINS & SELLS

CERTIFIED PUBLIC ACCOUNTANTS

TWO BROADWAY
NEW YORK 10004

February 17, 1969

Board of Trustees,
The Rockefeller Foundation,
111 West 50th Street,
New York 10020.

Dear Sirs:

We have examined the balance sheet of The Rockefeller Foundation, including the schedule of marketable securities, as of December 31, 1968 and the related statement of income and appropriations, statement of principal fund, summary of appropriations and payments, and summary of transactions in marketable securities for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying financial statements and schedule present fairly the financial position of the Foundation at December 31, 1968 and the results of its operations for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Yours truly,

Haskins + Sells

BALANCE SHEET—DECEMBER 31, 1968

ASSETS

| | |
|--|----------------------|
| MARKETABLE SECURITIES—at cost or market value at date of gift or receipt (quoted market value, \$885,636,001) | \$327,960,673 |
| CASH ON HAND AND ON DEPOSIT | 787,469 |
| ADVANCES AND ACCOUNTS RECEIVABLE | 3,320,111 |
| PROPERTY—at nominal or depreciated amount | 74,351 |
| TOTAL | \$332,142,604 |

FUNDS AND OBLIGATIONS

| | |
|-----------------------|----------------------|
| PRINCIPAL FUND | \$247,548,218 |
| UNPAID APPROPRIATIONS | 80,456,379 |
| ACCOUNTS PAYABLE | 4,063,656 |
| PROPERTY FUND | 74,351 |
| TOTAL | \$332,142,604 |

STATEMENT OF INCOME AND APPROPRIATIONS

FOR THE YEAR ENDED DECEMBER 31, 1968

INCOME:

| | |
|-----------|------------------|
| Dividends | \$ 31,204,141 |
| Interest | 1,634,106 |
| | <hr/> 32,838,247 |

APPROPRIATIONS:

| | |
|--|------------------|
| During the year | \$ 42,559,795 |
| Less refunds and lapses of unexpended balances | 108,821 |
| | <hr/> 42,450,974 |

| | |
|--|---------------------|
| EXCESS OF APPROPRIATIONS OVER INCOME FOR THE YEAR CHARGED TO PRINCIPAL FUND | \$ 9,612,727 |
|--|---------------------|

STATEMENT OF PRINCIPAL FUND

FOR THE YEAR ENDED DECEMBER 31, 1968

| | |
|--------------------------|---------------|
| BALANCE, JANUARY 1, 1968 | \$206,693,984 |
|--------------------------|---------------|

ADD:

| | |
|--|-------------------|
| Excess of proceeds from sales of securities over ledger amount | 50,438,950 |
| Contributions received | 28,011 |
| | <hr/> 257,160,945 |

DEDUCT:

| | |
|---|----------------------------|
| Excess of appropriations over income for the year | <hr/> 9,612,727 |
| BALANCE, DECEMBER 31, 1968 | <hr/> \$247,548,218 |

SUMMARY OF APPROPRIATIONS AND PAYMENTS

FOR THE YEAR ENDED DECEMBER 31, 1968

| | |
|--|---------------|
| UNPAID APPROPRIATIONS, JANUARY 1, 1968 | \$ 79,493,501 |
|--|---------------|

APPROPRIATIONS:

| | |
|--|-------------------|
| During the year | \$ 42,559,795 |
| Less refunds and lapses of unexpended balances | 108,821 |
| | <hr/> 121,944,475 |

PAYMENTS:

| | |
|--------------------------------|------------------|
| During the year | 41,519,974 |
| Less refunds on appropriations | 31,878 |
| | <hr/> 41,488,096 |

| | |
|--|----------------------------|
| UNPAID APPROPRIATIONS, DECEMBER 31, 1968 | <hr/> \$ 80,456,379 |
|--|----------------------------|

**SUMMARY OF TRANSACTIONS IN
MARKETABLE SECURITIES**
FOR THE YEAR ENDED DECEMBER 31, 1968

| | | |
|--|---------------|---------------|
| Ledger Amount of Securities, January 1, 1968 | | \$284,329,651 |
| Purchased | \$147,046,293 | |
| Otherwise Acquired | — | 147,046,293 |
| | | 431,375,944 |
| Sold | 86,391,407 | |
| Redeemed at Maturity | 16,993,891 | |
| Amortization of Bond Premiums | 29,973 | 103,415,271 |
| Ledger Amount of Securities, December 31, 1968 | | \$327,960,673 |

TRANSACTIONS IN MARKETABLE SECURITIES
FOR THE YEAR ENDED DECEMBER 31, 1968

| PURCHASED: | LEDGER AMOUNT |
|--|---------------|
| \$ 500,000 U. S. Treasury Bill | \$ 498,625 |
| 1,500,000 U. S. Treasury Bills (under Repurchase Agreement) | 1,500,000 |
| 825,000 U. S. Treasury Note due August 15, 1969 | 823,066 |
| 21,300,000 U. S. Treasury Notes (under Repurchase Agreement) | 21,300,000 |
| 4,500,000 U. S. Treasury Bonds (under Repurchase Agreement) | 4,500,000 |
| 1,000,000 Export-Import Bank Note due August 12, 1968 | 989,667 |
| 1,000,000 Export-Import Bank Note due August 19, 1968 | 988,500 |
| 525,000 Export-Import Bank Notes due August 27, 1968 | 518,787 |
| 3,000,000 Export-Import Bank 6½% Participation Certificates due September 19, 1971 | 3,068,750 |
| 3,000,000 Federal Home Loan Banks 5.80% Bonds due May 25, 1970 | 3,000,000 |
| 3,000,000 Federal Land Banks 6% Bonds due July 20, 1970 | 3,021,562 |
| 1,000,000 Federal Land Banks 6% Bonds due October 20, 1971 | 1,002,813 |
| 1,000,000 Federal Land Banks 5.70% Bonds due February 15, 1972 | 1,000,000 |
| 1,000,000 Federal National Mortgage Association Note due July 11, 1968 | 995,208 |
| 1,000,000 Federal National Mortgage Association Note due July 22, 1968 | 993,452 |
| 500,000 Federal National Mortgage Association 5½% Debenture due July 10, 1969 | 493,906 |
| 5,875,000 Federal National Mortgage Association 6.60% Debentures due June 10, 1970 | 5,932,203 |
| 2,000,000 Federal National Mortgage Association 6% Debentures due March 11, 1971 | 1,998,750 |
| 4,375,000 Federal National Mortgage Association 6% Participation Certificates due February 1, 1971 | 4,378,047 |
| 1,000,000 Federal National Mortgage Association 6.30% Participation Certificate due April 8, 1971 | 1,000,000 |
| 8,000,000 The Chase Manhattan Bank Certificates of Deposit | 8,000,000 |
| 500,000 First National City Bank Certificate of Deposit | 500,000 |
| 1,700,000 Morgan Guaranty Trust Company Certificates of Deposit | 1,739,992 |
| 1,000,000 Bank of America Certificate of Deposit (under Repurchase Agreement) | 1,000,000 |

TRANSACTIONS IN MARKETABLE SECURITIES *continued*

FOR THE YEAR ENDED DECEMBER 31, 1968

| PURCHASED: concluded | | LEDGER AMOUNT |
|----------------------|---|----------------------|
| \$ 1,000,000 | Bankers Trust Company (New York) Certificate of Deposit (under Repurchase Agreement) | \$ 1,000,000 |
| 1,000,000 | The Chase Manhattan Bank Certificate of Deposit (under Repurchase Agreement) | 1,000,000 |
| 1,000,000 | Bethlehem Steel Corporation Note due January 16, 1969 | 993,705 |
| 1,000,000 | General Electric Credit Corporation Note due December 17, 1968 | 998,857 |
| 1,000,000 | Kroger Company (The) Note due December 24, 1968 | 997,667 |
| 500,000 | Scott Paper Company Note due January 28, 1969 | 495,831 |
| 1,000,000 | Union Oil Company of California Note due December 30, 1968 | 996,667 |
| 70,000 | shares Armstrong Cork Company | 5,537,157 |
| 122,000 | " Boeing Company | 8,109,067 |
| 73,000 | " Bristol-Myers Company | 4,991,684 |
| 173,000 | " Burlington Industries, Inc. | 7,442,881 |
| 25,700 | " Burroughs Corporation | 4,994,176 |
| 70,000 | " Carrier Corporation | 5,404,707 |
| 62,000 | " Central Illinois Public Service Company | 1,271,674 |
| 110,000 | " Columbia Broadcasting System, Inc. | 5,750,433 |
| 44,400 | " Consumers Power Company | 1,972,363 |
| 3,500 | " Control Data Corporation | 566,492 |
| 7,000 | " Corning Glass Works | 2,075,476 |
| 16,900 | " Hewlett-Packard Company | 1,261,751 |
| 48,598 | " International Paper Company | 1,758,920 |
| 19,000 | " Sav-A-Stop, Inc. | 509,967 |
| 73,000 | " Texas Instruments Inc. | 7,354,669 |
| 50,000 | " Union Tank Car Company | 1,967,826 |
| 43,500 | " U. S. Plywood-Champion Papers, Inc. | 3,581,536 |
| 46,800 | " Upjohn Company | 2,893,435 |
| 13,400 | " Xerox Corporation | 3,876,024 |
| | | <u>\$147,046,293</u> |

| OTHERWISE ACQUIRED: | | LEDGER AMOUNT |
|---------------------|--|---------------|
| 3,814 | shares Columbia Broadcasting System, Inc. received as a stock dividend on 190,722 shares owned of record November 27, 1968 | — |
| 118,600 | " Eastman Kodak Company received in a stock split on 118,600 shares owned of record May 1, 1968 | — |
| 52,178 | " International Business Machines Corporation received in a stock split on 52,178 shares owned of record May 9, 1968 | — |
| 262,500 | " International Nickel Company of Canada, Ltd. received in a stock split on 175,000 shares owned of record July 18, 1968 | — |
| 212,241 | " Marathon Oil Company received in a stock split on 212,241 shares owned of record December 29, 1967 | — |
| 150,000 | " Union Tank Car Company received in a stock split on 100,000 shares owned of record August 6, 1968 | — |
| | | <u>—</u> |
| | | <u>—</u> |

TRANSACTIONS IN MARKETABLE SECURITIES *continued*

FOR THE YEAR ENDED DECEMBER 31, 1968

| SOLD: | | PROCEEDS | LEDGER AMOUNT |
|--------------|---|----------------------|----------------------|
| \$ 1,500,000 | U. S. Treasury Bills (under Repurchase Agreement) | \$ 1,500,000 | \$ 1,500,000 |
| 21,550,000 | U. S. Treasury Notes (under Repurchase Agreement) | 21,550,000 | 21,550,000 |
| 4,500,000 | U. S. Treasury Bonds (under Repurchase Agreement) | 4,500,000 | 4,500,000 |
| 500,000 | U. S. 3 1/8% Treasury Bonds due May 15, 1968 | 498,125 | 497,500 |
| 1,000,000 | Export-Import Bank Note due August 12, 1968 | 989,667 | 989,667 |
| 1,000,000 | Export-Import Bank Note due August 19, 1968 | 988,500 | 988,500 |
| 3,000,000 | Federal Land Banks 6% Bonds due July 20, 1970 | 3,015,000 | 3,021,562 |
| 1,000,000 | Federal National Mortgage Association Note due July 11, 1968 | 995,208 | 995,208 |
| 2,000,000 | Federal National Mortgage Association 5 1/4% Debentures due September 10, 1968 | 1,998,125 | 1,993,071 |
| 1,000,000 | Federal National Mortgage Association 6.30% Participation Certificate due April 8, 1971 | 1,011,250 | 1,000,000 |
| 3,500,000 | The Chase Manhattan Bank Certificates of Deposit | 3,500,000 | 3,500,000 |
| 1,000,000 | Bank of America Certificate of Deposit (under Repurchase Agreement) | 1,000,000 | 1,000,000 |
| 1,000,000 | Bankers Trust Company (New York) Certificate of Deposit (under Repurchase Agreement) | 1,000,000 | 1,000,000 |
| 1,000,000 | The Chase Manhattan Bank Certificate of Deposit (under Repurchase Agreement) | 1,000,000 | 1,000,000 |
| 600,000 | shares Consolidated Natural Gas Company | 17,576,212 | 3,603,294 |
| 11,475 | " Continental Insurance Company | 885,184 | 484,817 |
| 62,500 | " Crown Zellerbach Corporation | 3,925,209 | 3,391,122 |
| 72,300 | " Great American Holding Corporation | 2,266,429 | 2,314,613 |
| 137,300 | " Hartford Fire Insurance Company | 4,352,298 | 2,441,238 |
| 150,000 | " Hooker Chemical Corporation | 8,790,605 | 6,235,636 |
| 50,000 | " Insurance Company of North America | 2,882,231 | 2,411,908 |
| 99,100 | " National Steel Corporation | 4,586,401 | 4,557,613 |
| 40,000 | " Owens-Corning Fiberglas Corporation | 3,246,018 | 2,530,742 |
| 223,000 | " Scott Paper Company | 6,221,780 | 6,926,557 |
| 294,100 | " Standard Oil Company (New Jersey) | 22,490,415 | 1,522,264 |
| 100,000 | " Travelers Corporation (The) | 2,614,538 | 856,405 |
| 60,000 | " Union Carbide Corporation | 2,437,788 | 2,973,773 |
| 150,000 | " Weyerhaeuser Company | 11,009,374 | 2,605,917 |
| | | <u>\$136,830,357</u> | <u>\$ 86,391,407</u> |

TRANSACTIONS IN MARKETABLE SECURITIES *concluded*

FOR THE YEAR ENDED DECEMBER 31, 1968

| REDEEMED AT MATURITY: | | PROCEEDS | LEDGER AMOUNT |
|-----------------------|---|----------------------|----------------------|
| \$ 500,000 | U. S. Treasury Bill | \$ 498,625 | \$ 498,625 |
| 525,000 | Export-Import Bank Notes due August 27, 1968 | 518,787 | 518,787 |
| 1,000,000 | Federal National Mortgage Association Note due July 22, 1968 | 993,452 | 993,452 |
| 500,000 | Federal National Mortgage Association 5 1/8% Debenture due September 10, 1968 | 499,844 | 499,844 |
| 8,500,000 | The Chase Manhattan Bank Certificates of Deposit | 8,500,000 | 8,500,000 |
| 1,250,000 | First National City Bank Certificates of Deposit | 1,250,000 | 1,250,000 |
| 1,700,000 | Morgan Guaranty Trust Company Certificates of Deposit | 1,739,992 | 1,739,992 |
| 1,000,000 | General Electric Credit Corporation Note due December 17, 1968 | 998,857 | 998,857 |
| 1,000,000 | Kroger Company (The) Note due December 24, 1968 | 997,667 | 997,667 |
| 1,000,000 | Union Oil Company of California Note due December 30, 1968 | 996,667 | 996,667 |
| | | <u>\$ 16,998,891</u> | <u>\$ 16,998,891</u> |

SCHEDULE OF MARKETABLE SECURITIES

DECEMBER 31, 1968

| FIXED INCOME SECURITIES | LEDGER AMOUNT | MARKET VALUE |
|-------------------------------------|-----------------------------|-----------------------------|
| U. S. Government Obligations | \$ 7,896,504 | \$ 7,837,531 |
| U. S. Government Agency Obligations | 34,773,176 | 34,267,188 |
| Corporate Obligations | <u>3,444,536</u> | <u>3,265,786</u> |
| | <u>46,114,216</u> | <u>45,370,505</u> |
| COMMON STOCKS | <u>281,846,457</u> | <u>840,265,496</u> |
| TOTAL | <u>\$327,960,673</u> | <u>\$885,636,001</u> |

| FIXED INCOME SECURITIES | PAR | LEDGER AMOUNT | MARKET VALUE |
|---|------------------|------------------|------------------|
| <i>U. S. Government Obligations:</i> | | | |
| <i>Notes</i> | | | |
| 6%—August 15, 1969 | \$ 825,000 | \$ 823,066 | \$ 821,906 |
| 5 5/8%—August 15, 1974 (Under Repurchase Agreement) | 2,750,000 | 2,750,000 | 2,750,000 |
| <i>Bonds</i> | | | |
| 4%—August 15, 1970 | 2,000,000 | 1,934,375 | 1,931,875 |
| 4%—February 15, 1972 | 1,500,000 | 1,436,250 | 1,412,812 |
| 4 1/8%—November 15, 1973 | 1,000,000 | 952,813 | 920,938 |
| | <u>8,075,000</u> | <u>7,896,504</u> | <u>7,837,531</u> |

SCHEDULE OF MARKETABLE SECURITIES *continued*

DECEMBER 31, 1968

| FIXED INCOME SECURITIES <i>concluded</i> | PAR | LEDGER AMOUNT | MARKET VALUE |
|---|-------------------|-------------------|-------------------|
| <i>U. S. Government Agency Obligations:</i> | | | |
| Export-Import Bank Participation Certificates 6½%—September 19, 1971 | \$ 3,000,000 | \$ 3,068,750 | \$ 2,985,000 |
| Federal Home Loan Banks Bonds 5¾%—March 25, 1969 | 3,000,000 | 3,003,821 | 2,988,750 |
| 5.80%—May 25, 1970 | 3,000,000 | 3,000,000 | 2,960,625 |
| Federal Land Banks Bonds 4¼%—October 20, 1969 | 3,000,000 | 2,925,000 | 2,928,750 |
| 6%—October 20, 1971 | 1,000,000 | 1,002,813 | 986,250 |
| 5.70%—February 15, 1972 | 1,000,000 | 1,000,000 | 970,000 |
| Federal National Mortgage Association | | | |
| Debentures 4¾%—April 10, 1969 | 2,000,000 | 1,965,000 | 1,985,000 |
| 5½%—July 10, 1969 | 500,000 | 493,906 | 495,313 |
| 6%—December 12, 1969 | 3,000,000 | 3,003,437 | 2,981,250 |
| 6.60%—June 10, 1970 | 5,875,000 | 5,917,902 | 5,860,312 |
| 6%—March 11, 1971 | 2,000,000 | 1,998,750 | 1,970,000 |
| Participation Certificates 6%—February 1, 1971 | 4,375,000 | 4,378,047 | 4,298,438 |
| 5.20%—January 19, 1972 | 3,000,000 | 3,015,750 | 2,857,500 |
| | <u>34,750,000</u> | <u>34,773,176</u> | <u>34,267,188</u> |

Corporate Obligations:

Notes

| | | | |
|---|-----------|---------|---------|
| Bethlehem Steel Corporation January 16, 1969 | 1,000,000 | 993,705 | 993,705 |
| Scott Paper Company January 28, 1969 | 500,000 | 495,831 | 495,831 |

Bonds

| | | | |
|---|----------------------|----------------------|----------------------|
| General Motors Acceptance Corporation 5%—August 15, 1977 | 1,000,000 | 975,000 | 861,250 |
| International Bank for Reconstruction and Development 3½%—October 15, 1971 | 1,000,000 | 980,000 | 915,000 |
| | <u>3,500,000</u> | <u>3,444,536</u> | <u>3,265,786</u> |
| TOTAL FIXED INCOME SECURITIES | <u>\$ 46,325,000</u> | <u>\$ 46,114,216</u> | <u>\$ 45,370,505</u> |

SCHEDULE OF MARKETABLE SECURITIES *concluded*

DECEMBER 31, 1968

COMMON STOCKS

| | SHARES | LEDGER AMOUNT | MARKET VALUE |
|--|-----------|----------------------|----------------------|
| American Electric Power Company, Inc. | 135,701 | \$ 1,074,595 | \$ 5,122,713 |
| American Home Products Corporation | 106,200 | 3,628,841 | 6,872,000 |
| American Telephone & Telegraph Company | 175,926 | 4,636,063 | 9,324,078 |
| Armstrong Cork Company | 70,000 | 5,587,157 | 5,442,500 |
| Boeing Company | 177,000 | 13,055,840 | 10,066,875 |
| Bristol-Myers Company | 73,000 | 4,991,684 | 4,973,125 |
| Burlington Industries, Inc. | 173,000 | 7,442,881 | 7,698,500 |
| Burroughs Corporation | 25,700 | 4,994,176 | 6,180,850 |
| Carrier Corporation | 70,000 | 5,404,707 | 5,495,000 |
| Central Illinois Public Service Company | 140,000 | 2,829,415 | 3,395,000 |
| Columbia Broadcasting System, Inc. | 194,536 | 9,998,080 | 10,456,334 |
| Consumers Power Company | 99,070 | 4,481,666 | 4,470,534 |
| Continental Oil Company | 300,000 | 1,834,168 | 23,700,000 |
| Control Data Corporation | 3,500 | 566,492 | 504,875 |
| Corning Glass Works | 42,000 | 6,803,589 | 12,085,500 |
| DuPont (E. I.) de Nemours and Company | 53,000 | 10,039,968 | 8,745,000 |
| Eastman Kodak Company | 237,200 | 7,790,263 | 17,374,900 |
| Firestone Tire & Rubber Company | 207,900 | 9,673,965 | 12,292,087 |
| Ford Motor Company | 492,891 | 22,948,266 | 26,123,223 |
| General Electric Company | 189,000 | 11,631,709 | 17,742,375 |
| General Motors Corporation | 195,532 | 10,481,427 | 15,471,469 |
| Hanna Mining Company | 94,075 | 4,377,577 | 7,837,850 |
| Hartford Fire Insurance Company | 165,000 | 2,933,753 | 8,683,125 |
| Hewlett-Packard Company | 16,900 | 1,261,751 | 1,417,487 |
| International Business Machines Corporation | 104,356 | 10,248,105 | 32,872,140 |
| International Nickel Company of Canada, Ltd. | 437,500 | 8,496,169 | 17,062,500 |
| International Paper Company | 300,000 | 4,620,039 | 11,287,500 |
| Marathon Oil Company | 424,482 | 3,708,384 | 22,868,968 |
| Minnesota Mining & Manufacturing Company | 100,000 | 6,312,717 | 10,462,500 |
| Mobil Oil Corporation | 600,000 | 7,778,152 | 35,250,000 |
| Monsanto Company | 102,000 | 3,587,400 | 5,686,500 |
| National Cash Register Company | 26,250 | 1,785,892 | 3,018,750 |
| National Steel Corporation | 114,900 | 5,281,256 | 5,385,987 |
| Peoples Gas Company | 84,000 | 1,057,373 | 3,328,500 |
| Public Service Electric & Gas Company | 90,000 | 2,886,217 | 3,161,250 |
| Sav-A-Stop, Inc. | 19,000 | 509,967 | 560,500 |
| Southern Company (The) | 342,000 | 8,853,096 | 9,704,250 |
| Standard Oil Company (Indiana) | 2,000,000 | 14,184,718 | 122,750,000 |
| Standard Oil Company (New Jersey) | 3,705,900 | 19,181,761 | 291,376,388 |
| Texas Instruments Inc. | 73,000 | 7,354,669 | 7,555,500 |
| Union Tank Car Company | 300,000 | 2,561,013 | 12,637,500 |
| U. S. Plywood-Champion Papers, Inc. | 43,500 | 3,581,536 | 3,539,813 |
| Upjohn Company | 96,800 | 5,422,990 | 5,396,600 |
| Xerox Corporation | 22,000 | 6,013,970 | 5,885,000 |
| TOTAL COMMON STOCKS | | \$281,846,457 | \$840,265,496 |

PAYMENTS 1968

Approximately 92 percent of all 1968 payments were made in the United States, including expenditures for equipment and supplies purchased for shipment to foreign grantees. Payments marked () represent refunds.

INTERNATIONAL

Cooperative programs of The Rockefeller Foundation

| | |
|--|-------------|
| Conquest of Hunger—field staff in the Agricultural Sciences | \$2,198,918 |
| University Development—Program development and field staff in the Humanities and Social Sciences | 628,281 |
| Virus Research Program—field staff | 553,371 |
| Field Research in Medical Sciences, Nutrition, and Population Problems | 913,559 |

Organization of American States

Inter-American Institute of Agricultural Sciences, Costa Rica

| | |
|---|--------|
| Secretariat for the Latin American Association of Plant Science | 4,500 |
| Conference of the Inter-American Association of Agricultural Librarians and Documentalists | 10,418 |
| Support for the secretariat of the Inter-American Association of Agricultural Librarians and Documentalists | 4,500 |
| Toward a conference on agricultural education | 2,300 |

United Nations

Economic Commission for Asia and the Far East

| | |
|--|---------|
| Demographic program | (7,676) |
| <i>Food and Agriculture Organization of the United Nations</i> | |
| Training awards for Middle Eastern wheat specialists | 52,870 |
| Provision of liaison officers | 20,000 |

Conferences at the Villa Serbelloni

| | |
|--|--------|
| Community medicine in developing countries | 20,016 |
| East African Rangelands | 17,340 |
| Agricultural development in emerging nations | 6,042 |
| The university's response to student needs | 11,366 |

World Association for Animal Production

| | |
|-----------------------------|--------|
| Costs of a world conference | 15,000 |
|-----------------------------|--------|

ARGENTINA

Torcuato di Tella Institute

| | |
|---|--------|
| Support of the Latin American Center for Advanced Musical Studies | 24,808 |
|---|--------|

Toward studies for developing and modernizing social science data archives in Latin America

University of Buenos Aires

| | |
|---|-------|
| Development of medical and natural sciences | 8,081 |
|---|-------|

University of Cuyo

| | |
|--|--------|
| Support of the Faculty of Medical Sciences | 48,842 |
|--|--------|

Other support

| | |
|--|-------|
| Fellowships and scholarships for individuals | 8,912 |
|--|-------|

AUSTRALIA

| | |
|---|-------|
| University of Melbourne | |
| Contribution toward fellowship operations | 1,500 |

Other support

| | |
|--|-------|
| Fellowships and scholarships for individuals | 4,843 |
|--|-------|

BOLIVIA

| | |
|---|-------|
| Fellowships, scholarships, and travel grants to individuals | 7,992 |
|---|-------|

BRAZIL

| | |
|-----------------------------|-------|
| Aflotoxin studies in Brazil | 1,101 |
|-----------------------------|-------|

Brazilian Society of Genetics

| | |
|-----------------|-------|
| General support | 4,000 |
|-----------------|-------|

Federal University of Minas Gerais

| | |
|-------------------------------------|--------|
| General development | 28,769 |
| Research in the Faculty of Medicine | 3,353 |

Institute of Agronomy of the State of São Paulo

| | |
|--|-------|
| Support of the Tropical Center of Food Research and Technology | 2,112 |
|--|-------|

Rural University of the State of Minas Gerais

| | |
|---|-------|
| Contribution toward fellowship operations | 1,500 |
| Purchase of library materials | 3,732 |

University of Bahia

| | |
|---|-------|
| Support of the Laboratory of Human Genetics | 4,235 |
|---|-------|

University of Paraná

| | |
|--|-------|
| Catalogue of neotropical bees | (41) |
| Research in the Laboratory of Human Genetics | 2,741 |
| Travel of a geneticist to a meeting in Tokyo | 1,775 |

University of Rio Grande do Sul

| | |
|--|-------|
| Research in the Laboratory of Animal Genetics | 1,828 |
| Research in the Laboratory of Human Genetics | 1,949 |
| Support for the Laboratory of Molecular Genetics | 3,300 |

University of São Paulo

| | |
|---|--------|
| Equipment for the Department of Clinical Medicine | 5,423 |
| Equipment for the Department of Genetics | 11,490 |
| Research in the Laboratory of Animal Genetics | 11,752 |
| Research in the Laboratory of Human Genetics | 6,000 |
| Research at the School of Agriculture, Piracicaba | 19,932 |
| Support of the Department of Physiology | 1,331 |

Cooperative programs

| | |
|---|--------|
| Belém Virus Laboratory | 76,133 |
| Visiting faculty (Federal University of Minas Gerais) | 1,036 |

Other support

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| Purchase of books for a research scholar | 365 |
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PAYMENTS 1968

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| Fellowships, scholarships, and travel grants to individuals | 123,283 | Cooperative program | |
| | | International Development Center, Santiago | 49,924 |
| CANADA | | Visiting faculty (Universities in Santiago) | 36,333 |
| McGill University | | Other support | |
| Contribution toward fellowship operations | 6,000 | Shipment of scientific materials | 330 |
| Transportation facilities for faculty assigned to African universities | (228) | Fellowships, scholarships, and travel grants to individuals | 246,507 |
| University of Manitoba | | COLOMBIA | |
| Contribution toward fellowship operations | 1,500 | Colombian Association of Faculties of Medicine | |
| Research on wheat-rye hybrids | 18,951 | Support of its program | 37,600 |
| CEYLON | | Colombian Association for the Scientific Study of Population | |
| Fellowships and scholarships for individuals | 13,731 | Toward its organizational and administrative costs | 15,000 |
| CHILE | | Colombian Institute of Agriculture | |
| Agricultural Research Institute | | General support | 30,677 |
| Activities of the Institute | 93,225 | International Center of Tropical Agriculture | |
| Cooperative research projects | 3,661 | Development of bibliographic and library services | 10,100 |
| Library development, research, and training | 133 | Program in tropical agriculture | 160,795 |
| To enable five animal scientists to attend a meeting in Lima, Peru | 600 | Teaching, research, and extension programs | 141,753 |
| Catholic University of Chile | | Toward costs of establishing the Center | 4,351 |
| Electron microscope studies | 1,938 | National University of Colombia | |
| Equipment and supplies for the Laboratory of Physiopathology | 3,481 | Contribution toward fellowship operations | 2,250 |
| Research in the Center of Economic Studies | 20,330 | Pan American Federation of Associations of Medical Schools | |
| Support of the program of the School of Economics and Business Administration | 53,000 | Meeting of Latin American educators | 12,800 |
| Support of the Faculty of Agronomy | 2,186 | University of the Andes | |
| Supplementary funds for research equipment | 85 | Research and training in political science | 2,670 |
| Support of the Laboratories of Neurophysiology and of Electron Microscopy | 8,003 | Support of the Department of Biology pre-medical program | 25,000 |
| Undergraduate research program in history | 4,914 | University of Antioquia | |
| Council of Rectors of Chilean Universities | | Support of the School of Library Science | 48,039 |
| Equipment and supplies | 11,021 | University of Valle | |
| University of Chile | | Contribution toward fellowship operations | 3,000 |
| Contribution toward fellowship operations | 750 | Appointment of an archivist in the Faculty of Philosophy, Letters, and History | 6,150 |
| Development of the Faculty of Medicine library | 5,268 | Cooperation of sanitary engineering students in the schistosomiasis control project in St. Lucia, West Indies | 4,825 |
| Equipment, supplies, and library materials for research in reproductive biology | 1,653 | Creative writing workshop | 1,500 |
| Family planning programs | 142,246 | Development of administrative services | 2,025 |
| Protein malnutrition study | 7,500 | Development of the Department of Music | 1,083 |
| Research equipment for the Department of General Biochemistry | 6,297 | Development of the Library | 2,557 |
| Research in the Graduate School of Economics | 1,214 | Development of the University Hospital and Medical School | 87,147 |
| Research on malnutrition in infants and preschool children | (288) | Engineering studies in the United States for a faculty member | 3,000 |
| Support for the Graduate School of Economics and the Institute of Economics | 50,049 | Equipment and supplies for the Faculty of Medicino | 2,918 |
| Support of the Department of Electrolytic Physiology | 7,557 | Equipment for the Biology Department | 26,105 |
| Support of the Center of Research on American History | 76,251 | Equipment and structural changes in laboratories for its Faculty of Architecture | 11,998 |
| Support of the Faculty of Sciences | 82,442 | | |

PAYMENTS 1968

COLOMBIA (cont'd)

University of Valle (cont'd)

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| Equipment and supplies for the Faculty of Economics | 1,620 |
| Equipment and supplies for the School of Nursing | 5,135 |
| General support | 118,125 |
| Improvement of student services | 15,000 |
| Individual study project in endocrinology in the United States | 5,500 |
| Laboratory equipment and nutrition research program | 10,958 |
| Postgraduate training awards for non-Colombians | 45,000 |
| Research in grains and other products with the Colombian Institute of Agriculture | 437 |
| Research on marketing agricultural food products | 8,500 |
| Research programs in the Faculty of Philosophy, Letters, and History | 3,263 |
| Research on protein malnutrition and study of food plants | 651 |
| Research in reproductive biology | 1,040 |
| Research and teaching equipment for the Division of Pharmacology | 1,725 |
| Research and teaching in agricultural economics and farm management | 11,798 |
| Research and teaching project in the Division of Social Sciences and Economics | 19,900 |
| Special seminar programs | 6,100 |
| Toward staff salaries in the Faculty of Philosophy, Letters, and History | 6,928 |
| Support of the Department of Preventive Medicine | 371 |
| Support of the Division of Health Sciences | 308,992 |
| Support of the Faculty of Medicine | 43,161 |
| Support of the language laboratory | 6,183 |
| Support of the Medical Center | 8,491 |
| Support of the University Hospital | 9,088 |
| Toward costs of research on production economics and farm management in the Cauca Valley | 6,000 |
| Toward expenses of a survey team | 750 |
| Toward a graduate program in the School of Nursing | 67,868 |
| Toward metabolic studies in Israel | (279) |
| Toward salaries in the Departments of History and Literature | 11,444 |
| Cooperative programs | |
| Colombian and Andean Centers | 69,306 |
| University Development Program Center (University of Valle) | 81,778 |
| Virus laboratory, Cali | 81,216 |
| Visiting faculty (University of Valle) | 68,134 |
| Other support | |
| Fellowships, scholarships, and travel grants to individuals | 345,548 |

COSTA RICA

University of Costa Rica

| | |
|---|--------|
| Equipment for bean virus research | 16,637 |
| Other support | |
| Fellowships and scholarships for individuals | 9,989 |
| ECUADOR | |
| National Agricultural Research Institute | |
| Development of a rice program | 5,896 |
| Development of its experiment stations and strengthening of research and training | 12,079 |
| Laboratory equipment | 8,665 |
| Cooperative program | |
| Colombian and Andean Centers—cooperative activities in Ecuador | 30,700 |
| Other support | |
| Fellowships and scholarships for individuals | 63,578 |

EL SALVADOR

Travel grants to individuals

ETHIOPIA

Haile Selassie I University

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|---|-------|
| Evaluation of the culture and productivity of teff | 3,995 |
| Study of genetic variability in the sorghum species | 1,711 |

Other support

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| Fellowships and scholarships for individuals | 22,120 |
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FRANCE

International Council on Archives

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|---|-------|
| Study of the archival situation in selected African countries | 8,500 |
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GERMANY

Fridericiana Technical University

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| Contribution toward fellowship operations | 1,500 |
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GHANA

| | |
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| Fellowships and scholarships for individuals | 1,487 |
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GUATEMALA

| | |
|---|--------|
| Fellowships, scholarships, and travel grants to individuals | |
| | 12,201 |

GUYANA

Ministry of External Affairs

| | |
|--|-------|
| Purchase of a collection of basic works in international relations | 1,717 |
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HONDURAS

Pan American Agricultural School

| | |
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| General development | 28,745 |
| Plant science symposium | (2,335) |

PAYMENTS 1968

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|---|----------|--|
| Other support | | JAMAICA |
| Fellowships and scholarships for individuals | 21,273 | University of the West Indies |
| | | Support of the Faculty of Medicine 16,338 |
| | | Visiting faculty assignment to the University of Ibadan 10,800 |
| INDIA | | |
| All India Institute of Medical Sciences | | |
| Support of the teaching hospital | 82,390 | Other support |
| Teaching and research equipment | 2,806 | Travel grants to individuals 1,125 |
| Indian Cancer Research Centre | | |
| Research in biophysics | 58 | JAPAN |
| Indian Council of Medical Research | | International Christian University |
| Support of the Reproductive Physiology Unit | 4,307 | Study of the effects of higher education on student values (1,500) |
| Indian International Centre | | Other support |
| General support | 27,000 | Fellowships, scholarships, and travel grants to individuals 5,544 |
| Indian School of International Studies | | |
| Staff training program | (485) | KENYA |
| Punjab Agricultural University | | East African Community |
| Development of an experiment station | 21,083 | Support of the East African Agriculture and Forestry Research Organization 15,878 |
| Seth Gordhandas Sunderdas Medical College | | Doctoral research and thesis costs for a member of the East African Agriculture and Forestry Research Organization 1,450 |
| Teaching and research | 14,219 | Teaching and research in veterinary science 7,025 |
| University of Delhi | | |
| Comparative studies of Western and Indian music | 18,752 | Egerton College |
| Advanced library training | 27,756 | Faculty development 15,016 |
| Cooperative programs | | |
| Ballabhgarh Rural Health Centre | 30,945 | Ministry of Agriculture and Animal Husbandry |
| Indian Program Center | 91,447 | Support of the Agricultural Education Commission (3,437) |
| Indian Agricultural Program | 299,475 | Support of the Plant Breeding Station, Njoro 8,654 |
| Laboratory for grain research at the Indian Agricultural Research Institute | 14,377 | |
| Virus Research Centre, Poona | (10,203) | University College, Nairobi |
| Visiting faculty (University of Delhi) | 41,912 | Development of the library of the Department of History 79 |
| Other support | | Individual study project in university administration 720 |
| Fellowships, scholarships, and travel grants to individuals | 204,105 | Library development (153) |
| IRAN | | Meeting of agricultural economists (160) |
| Fellowships and scholarships for individuals | 6,277 | Graduate B.Phil.-degree course in economics 13,875 |
| ISRAEL | | Reading skills project for first-year students 6,720 |
| Hebrew University of Jerusalem | | Research in the basic sciences 10,201 |
| Comparative analysis of processes and problems of modernization | 1,500 | Research in the Cultural Division, Institute for Development Studies 15,500 |
| Travel for participants in a conference on tradition and change | 5,428 | Research on pneumonia of cattle, sheep, and goats 9,000 |
| ITALY | | Support of the Department of Government and Administration 2,068 |
| University of Rome | | Visiting lecturer in development administration 20,844 |
| Contribution toward fellowship operations | 750 | Other support |
| Villa Serbelloni | | Fellowships, scholarships, and travel grants to individuals 83,442 |
| Research and Conference Center of The Rockefeller Foundation | 248,750 | |
| KOREA | | |
| | | Fellowships and scholarships for individuals 658 |
| LEBANON | | |
| | | Fellowships and scholarships for individuals 7,188 |

PAYMENTS 1968

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|--|---------|---|---------|
| LESOTHO | | Cooperative program | |
| Ministry of Foreign Affairs | | International Potato Improvement Project | 22,719 |
| Purchase of a collection of basic works in international relations | 410 | Other support | |
| | | Fellowships, scholarships, and travel grants to individuals | 155,726 |
| LIBERIA | | | |
| Cuttington College and Divinity School | | | |
| Program in economics and business administration | 4,604 | | |
| MALAWI | | | |
| Fellowships and scholarships for individuals | (135) | | |
| MALAYSIA | | | |
| Fellowships and scholarships for individuals | 8,890 | Other support | |
| | | Fellowships and scholarships for individuals | 22,786 |
| MEXICO | | | |
| Colegio de México | | | |
| Research in economics and demography | 38,291 | | |
| International Maize and Wheat Improvement Center, Chapingo | | | |
| Development of its headquarters facilities | 212,195 | | |
| Maize improvement program in Kenya | 23,970 | | |
| Operating costs and support of the Central American Corn Improvement Project | 400,000 | | |
| Pilot program in corn production | 71,509 | | |
| Potato production program in West Pakistan, and related training in Mexico | 4,890 | | |
| Protein quality laboratory | 23,864 | | |
| Research in California on a spring and winter wheat breeding program | 15,000 | | |
| Travel for a consulting team of crop physiologists | 2,637 | | |
| Mexican Center of Writers | | | |
| Creative writing programs | 3,500 | | |
| National Institute of Agricultural Research | | | |
| Expenses of a meeting of the Potato Association of America | (377) | | |
| Support of the National Agricultural Center, Chapingo | 2,188 | | |
| National School of Agriculture | | | |
| Contribution toward fellowship operations | 3,750 | | |
| Support of the Graduate School | 51,509 | | |
| National University of Mexico | | | |
| Graduate training in chemistry and biochemistry | 15,700 | Cooperative programs | |
| Study of theatre architecture | (599) | | |
| Technological Institute of Monterrey | | | |
| Extension of graduate studies in the School of Agriculture | 20,382 | University Development Program Center (University of Ibadan) | 11,683 |
| University of Sonora | | Visiting faculty (University of Ibadan) | 75,076 |
| Arid lands research in cooperation with the University of Arizona | 127,550 | Special field operations in virology | 2,212 |
| University of the State of Veracruz | | | |
| Training and research in the Faculty of Veterinary Medicine and Animal Husbandry | 122 | Other support | |
| | | Fellowships, scholarships, and travel grants to individuals | 185,790 |
| NORWAY | | | |
| Christian Michelsen Institute | | | |
| Research project on the East African economy | 5,750 | | |

PAYMENTS 1968

PAKISTAN

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|---|--------|---|--------|
| Central Institute of Islamic Research | | Graduate scholarships in the College of Arts and Sciences and the School of Economics | 19,015 |
| Support of research | 96 | Laboratory equipment for the College of Medicine | 51 |
| Other support | | Support of the Institute of Hygiene | 384 |
| Fellowships, scholarships, and travel grants to individuals | 14,636 | Support of the University Press | 7,013 |
| | | Completion of individual graduate study in the United States | 2,000 |

PERU

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|---|---------|---|---------|
| Agrarian University | | Construction of faculty housing | (2,578) |
| Cooperative program with the Agricultural Research and Extension Service | 123,011 | Consultation on developing the biosciences | 1,000 |
| Agricultural Research and Extension Service | | Development of the Social Sciences and Humanities Center | 121,088 |
| Cooperative program with the Agrarian University | 152,163 | Establishment of a graduate program in physiology in the College of Medicine | 5,400 |
| Universidad Nacional de San Antonio Abad del Cuzco | | Faculty housing and development of facilities for teaching the humanities and social sciences | (1,594) |
| Construction of cases for a herbarium | 2,000 | Individual research project in Philippine history | 6,283 |
| University of San Marcos | | Individual research project on international trade | 9,512 |
| Equipment and supplies for an arbovirus research program | 2,203 | Individual project in music research and composition | 13,600 |
| Support of the Faculty of Veterinary Medicine | 48,675 | Research project in Indonesia | 4,000 |
| Support for an international graduate program in the Faculty of Veterinary Medicine | 30,849 | Research on Philippine manufacturing | 10,000 |
| Other support | | Rural community health teaching service | 44,000 |
| Fellowships, scholarships, and travel grants to individuals | 131,677 | Schistosomiasis research laboratory in the College of Medicine | 14,933 |
| | | Preparation of a textbook for freshman English courses | 6,150 |
| | | Cooperative program | |
| | | University Development Program Center (University of the Philippines) | 80,069 |
| | | Visiting faculty (University of the Philippines) | 121,634 |

PHILIPPINES

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|---|--------|---|---------|
| International Rice Research Institute | | Other support | |
| International cooperative training and extension activities | 93,000 | Fellowships, scholarships, and travel grants to individuals | 484,026 |

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| General support | 472,275 | POLAND | |
| Photographic coverage of its rice programs in Thailand and India | 1,281 | Travel grants to individuals | 500 |
| Research and training on cropping systems | 76,800 | | |
| Training awards and travel for eight Indian rice specialists | 2,044 | RHODESIA | |
| Travel to the United States for two staff members | 1,200 | University College of Rhodesia and Nyasaland | |

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|--|--------|--------------------------------------|--------|
| Press Foundation of Asia | | RHODESIA | |
| Establishment of its secretariat and program | 25,000 | Research and training in agriculture | 34,178 |

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| University of the Philippines | | Research and training in agriculture | 34,178 |
| Support of the Department of Anatomy | 2,593 | Research on tsetse metabolism | 3,703 |

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| Support of the Department of Anatomy | 2,593 | Other support | |
| Support of the Department of Biochemistry | 8,037 | Fellowships and scholarships for individuals | 4,460 |

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| Library facilities for the Department of English and Comparative Literature | 308 | ST. LUCIA | |
| Laboratory equipment for the Department of Pediatrics, College of Medicine | 3,013 | St. Lucia Planned Parenthood Association | |

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|--|--------|---|---------|
| Equipment for the Department of Pharmacology, College of Medicine | 4,264 | Development of its family planning clinic | 3,300 |
| Equipment and supplies for the Department of Physiology, College of Medicine | 14,098 | Cooperative program in schistosomiasis research and control | 216,922 |

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|---|--------|------------------------------|-----|
| Corn and sorghum research and training projects at its College of Agriculture | 36,006 | SENEGAL | |
| Scholarship program in the College of Agriculture | 15,000 | Travel grants to individuals | 326 |

PAYMENTS 1968

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|--|--------|--|---------|
| SUDAN | | | |
| University of Khartoum | | | |
| General development | 5,356 | Equipment and supplies for the Department of Pathology, Faculty of Science | 9,961 |
| Cooperative program | | Support of the Faculty of Medical Sciences | 467,475 |
| Visiting faculty (University of Khartoum) | 53 | Equipment and supplies for research in the Faculty of Medical Sciences | 3,934 |
| Other support | | Stipends for students | 11,000 |
| Fellowships, scholarships, and travel grants to individuals | 54,027 | Local consulting committee | |
| Consultation on graduate training in nutritional sciences | | | 863 |
| SWEDEN | | | |
| Travel grants to individuals | (397) | Cooperative programs | |
| Inter-Asian Corn Program | | | 36,778 |
| Rice and corn-sorghum research programs in Thailand | | | 64,002 |
| University Development Program Center, Bangkok | | | 195,248 |
| Visiting faculty (Universities in Bangkok) | | | 179,520 |
| SWITZERLAND | | | |
| Graduate Institute of International Studies | | Other support | |
| Training and research in international relations | 37,177 | Fellowships, scholarships, and travel grants to individuals | 413,914 |
| International Press Institute | | TRINIDAD | |
| Program for the Asian press | 29,450 | University of the West Indies | |
| Other support | | Food crop research and graduate program | 23,679 |
| Travel grants to individuals | 2,152 | Expenses of participants in a symposium on nematodes of tropical crops | 3,500 |
| TANZANIA | | Support of the Faculty of Agriculture | (3,401) |
| Dar es Salaam School of Medicine | | Support of the Trinidad Regional Virus Laboratory | 25,105 |
| Development of population studies | 6,357 | Other support | |
| Ministry of Health and Labour | | Fellowships, scholarships, and travel grants to individuals | 7,357 |
| Training program for rural physicians | 8,537 | TURKEY | |
| University of East Africa | | Hacettepe Science Center | |
| <i>University College, Dar es Salaam</i> | | Development of family planning clinics | 84,500 |
| Economic research | 31,530 | UGANDA | |
| Visiting research professor in economics | 15,285 | University of East Africa | |
| Experimental programs in the Department of Political Science and History | 13,500 | Activities of academic Councils | 5,000 |
| Program in management and administration | 10,816 | Library development | (494) |
| Research and teaching in geography | 42,836 | Research on steroid hormones | 8,500 |
| Study project in problems of local administration in India | 5,400 | Travel for 12 scholars to professional meetings in Dakar | (1,967) |
| Other support | | Appointment of a liaison officer | 11,934 |
| Fellowships, scholarships, and travel grants to individuals | 31,178 | University of East Africa | |
| THAILAND | | <i>Makherere University College</i> | |
| Kasetsart University | | Development of the Master of Arts program in African studies | 5,168 |
| Experiment station development | 33,013 | Faculty development and research in the Faculty of Agriculture | 95,340 |
| Purchase of equipment for the Veterinary School | 21,758 | Support of the Faculty of Agriculture | 58,382 |
| Scientific equipment for programs in the agricultural sciences | 17,950 | Support of the Kasangati health center | (5,258) |
| Thammasat University | | Graduate training program in the Department of Medicine | 7,291 |
| Library development for the Faculty of Economics | 296 | Research on bilharziasis | (28) |
| University of Medical Sciences | | | |
| Appointment of a laboratory director at the Faculty of Medical Sciences | 6,000 | | |

PAYMENTS 1968

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|--|---------|---|---------|
| Research lecturer on the politics of resource allocation | 1,472 | Other support | |
| Training of graduates for administrative posts | 15,766 | Fellowships, scholarships, and travel grants to individuals | 8,114 |
| Commonwealth Institute of Biological Control | | Scotland | |
| Toward support of a biological control station | 93 | Royal Hospital for Sick Children, Glasgow | |
| Cooperative program | | Contribution toward fellowship operations | 1,500 |
| University Development Program Center, Entebbe | 65,729 | University of Edinburgh | |
| Visiting faculty (University of East Africa) | 161,956 | Contribution toward fellowship operations | 7,500 |
| Other support | | Other support | |
| Fellowships, scholarships, and travel grants to individuals | 93,658 | Travel grants to individuals | 1,996 |
| UNITED ARAB REPUBLIC | | UNITED STATES | |
| Fellowships, scholarships, and travel grants to individuals | 7,010 | Alabama | |
| UNITED KINGDOM | | Auburn University | |
| England | | Creative writing project | 8,000 |
| Ditchley Foundation | | Research on freshwater pond fish culture | 91,709 |
| Conference on the needs of developing countries | 4,746 | Arizona | |
| Institute for Strategic Studies | | University of Arizona | |
| Research on strategic problems in non-Atlantic areas | 25,000 | Arid lands research in cooperation with the University of Sonora, Mexico | 151,484 |
| London School of Hygiene and Tropical Medicine | | Individual research project on personnel systems and the culture of poverty | 13,328 |
| Population control program | 1,067 | Research on unified water, food, and power production in a coastal desert community | 16,015 |
| Overseas Development Institute | | Research on water resources | 9,062 |
| Toward the costs of research on rural development | 12,950 | California | |
| University of Cambridge | | California Institute of Technology | |
| Contribution toward fellowship operations | 1,500 | Contribution toward fellowship operations | 1,500 |
| Support of the British Committee on the Theory of International Politics | 201 | Teaching and research on the interrelationships of science, technology, and society | 109,564 |
| Research in animal behavior | 13,511 | California State College at Los Angeles | |
| University of London | | Educational program of the Greater Los Angeles Consortium | 25,000 |
| Contribution toward fellowship operations | 18,750 | Support of the Community Relations Office | 51,766 |
| Fellowships in the Institute of Advanced Legal Studies | 4,773 | Cooperative program with the Alain LeRoy Locke High School | 189,597 |
| Research on the medieval background of the common law | 704 | Center Theatre Group of Los Angeles | |
| University of Oxford | | Playwright-Directors Development Program of the Mark Taper Forum | 90,000 |
| Contribution toward fellowship operations | 6,000 | The Claremont Colleges | |
| University of Sussex | | Program of Special Directed Studies | 650,000 |
| Contribution toward fellowship operations | 4,500 | Douglass House Foundation | |
| Research on agricultural economics in the Sudan | (964) | Toward costs of the Watts Writers Workshop | 19,000 |
| Research on agricultural economics in Tanzania | 5,574 | Oakland Symphony Orchestra Association | |
| Travel of scholars to a conference in Italy | 919 | Performances of new works by the Oakland Symphony Orchestra | 20,000 |
| Visiting faculty assignments in Africa, Asia, and Latin America | 29,667 | Occidental College | |
| Victoria University of Manchester | | Discovery and support of talented minority-group students | 98,182 |
| Contribution toward fellowship operations | 4,500 | | |

PAYMENTS 1968

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| UNITED STATES (con'd) | | |
| Palo Alto Medical Research Foundation | | University of Colorado |
| Contribution toward fellowship operations | 750 | Contribution toward fellowship operations 3,000 Four-week residence of a dance company 20,000 Research in population growth and economic development in Mexico 1,551 |
| Pomona College | | The university orchestra program with the Denver Symphony Orchestra 20,000 |
| Contribution toward fellowship operations | 1,500 | |
| San Francisco State College | | University of Denver |
| Creative writing project | 4,733 | Assignment of social science scholars to universities abroad 33,700 Support of its Department of Theatre (580) |
| Stanford University | | |
| Contribution toward fellowship operations | 13,500 | Connecticut |
| Establishment of a professional theatre and a program for the M.F.A. degree | 75,000 | Association of Schools of Public Health |
| Study of the determinants of change in tropical African agriculture | 41,567 | Study of the teaching of population dynamics (3,840) |
| Study project on expenditure in rural Uganda | 4,931 | |
| Support of the School of Medicine | 299,389 | Connecticut College |
| | | Creative project in choreography 6,000 Experimental summer school program for talented disadvantaged high school graduates 20,000 |
| University of California | | |
| <i>Berkeley</i> | | Connecticut Players Foundation |
| Contribution toward fellowship operations | 66,250 | Theatre-in-the-streets program of the Long Wharf Theatre 18,400 |
| Exchange program in maternal health services with Makerere University College | 42,540 | |
| Expenses of a symposium on the genetics of colonizing species | (1,607) | Hotchkiss School |
| <i>Davis</i> | | Summer school program for talented disadvantaged high school students 20,000 |
| Political science project on Asian administration | 15,000 | |
| Research on rat control | 32,172 | Wesleyan University |
| Support for the International Agricultural Institute | 15,000 | Academic reinforcement program for selected new students 39,038 Theatre program with the Eugene O'Neill Memorial Theater Foundation 79,000 |
| Travel of two scientists to a meeting of the International Veterinary Students Union in Scotland | 864 | |
| <i>Los Angeles</i> | | Yale University |
| Research on the role of the Diet in Japanese politics | 6,444 | Contribution toward fellowship operations 6,750 Advanced training program for African students at the Law School 7,625 |
| Study of Brazil's foreign policy | 11,501 | Program for the completion of scholarly works by senior faculty members 8,800 |
| Support of its Educational Opportunities Program | 78,094 | Research in South Asia on early Asian history (293) Research on the history of the British Parliament 1,150 |
| <i>Riverside</i> | | Rockefeller Foundation participation in the Yale Arbovirus Research Unit 154,000 |
| Activities of the Dry-Lands Research Institute | 128,075 | Research and training program of the Yale Arbovirus Research Unit 2,000,000 |
| University of Southern California | | Support of the School of Drama 260,139 |
| Contribution toward fellowship operations | 9,000 | Yale Summer High School program 15,000 |
| Training for music critics | 53,529 | Transitional-year program for talented disadvantaged high school graduates 182,500 |
| Watts Labor Community Action Committee | | |
| Program to increase economic opportunity | 25,000 | Delaware |
| Cooperative program | | University of Delaware |
| Research in virology | 33,911 | Creative writing project 8,000 |
| <i>Colorado</i> | | |
| Colorado State University | | District of Columbia |
| Contribution toward fellowship operations | 2,250 | American Association for the Advancement of Science |
| Music Associates of Aspen | | Expenses of four symposium speakers 3,815 |
| Support for teachers attending the Aspen summer music school | 14,940 | |

PAYMENTS 1968

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| American Historical Association | | Georgia |
| Project on the use of films in historical teaching and research | 6,874 | Atlanta Arts Alliance Composer-in-residence with the Atlanta Symphony Orchestra |
| American Institute of Biological Sciences | | Atlanta University Center Corporation Appointment of a visiting professor of music and drama |
| Toward publication of the Proceedings of the 17th International Horticultural Congress | (4,700) | General development |
| Board of Education of the District of Columbia | | Development of the library |
| Summer course in urban problems for secondary school students | 9,100 | Support of the post of executive secretary |
| Catholic University of America | | Study of library needs |
| Contribution toward fellowship operations | 9,000 | Toward costs of collecting the papers of Dr. Martin Luther King, Jr. |
| Citizens' Crusade Against Poverty | | Emory University |
| Operating costs for the Citizens' Advocate Center | 15,000 | Student assistance program |
| Georgetown University | | Mercer University |
| Contribution toward fellowship operations | 3,750 | Discovery and support of talented minority-group students |
| George Washington University | | Morehouse College |
| Contribution toward fellowship operations | 1,500 | Individual project on the social history of the South |
| Preparation of corn and wheat bibliographies | 21,942 | Southern Regional Council |
| National Academy of Sciences | | Creative writing project |
| Exploratory studies in environmental science | 40,000 | General support |
| Studies in water resource problems in Africa | 49,995 | Spelman College |
| Support of its Board on Medicine | 25,000 | Establishment of an intercollegiate chorus |
| National Symphony Orchestra Association of Washington, D. C. | | The university orchestra program with the Atlanta Symphony Orchestra |
| Composer-in-residence with the Washington National Symphony | 7,650 | Hawaii |
| Population Reference Bureau | | Oceanic Foundation |
| Latin American educational program | 20,000 | Fish culture research |
| Urban Coalition | | Research in its Brackish-Water Fish Culture Laboratory |
| Support of its national and local programs | 100,000 | University of Hawaii |
| Washington Drama Society | | Contribution toward fellowship operations |
| Training for the Arena Stage company | 10,656 | Studies of bacterial blight of rice |
| Washington Urban League | | Illinois |
| Support of new appointments | 78,500 | Associated Colleges of the Midwest |
| Florida | | Transitional-year program for disadvantaged high school graduates |
| University of Florida | | Association of American Medical Colleges |
| Contribution toward fellowship operations | 18,000 | Operating costs of its Division of International Medical Education |
| Assignment of scholars to universities abroad | 138,894 | Association of American Universities |
| Exchange of doctors and nurses with the University of Valle | 1,912 | Conference with British university leaders |
| Faculty and graduate research on the Caribbean area | (456) | Chicago Urban League |
| University of Miami | | Activities on Chicago's West Side |
| Program of advanced education for disadvantaged students | 21,900 | Conference for Chicago school principals |
| University of South Florida | | Educational seminars for the Afro-American Pioneers' Association |
| Four-week residency of a dance company | 15,000 | Support for its West Side branch office |

PAYMENTS 1968

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|---|--------|---|---------|
| UNITED STATES (cont'd) | | | |
| Community Consolidated School District No. 65 | | | |
| Evaluation study of school integration | 55,360 | Plant collection in Brazil | (1,938) |
| | | Research on qualitative improvement of corn | 9,200 |
| Foundation for International Cooperation | | | |
| Conference of the International Confederation of Christian Family Movements | 24,500 | University of Notre Dame | |
| | | Activities of the Neighborhood Study Help Program | 25,000 |
| | | Evaluation of the freshman humanities seminar | 9,500 |
| | | Latin American research and training program in the social sciences and humanities | 140,000 |
| Northwestern University | | | |
| Contribution toward fellowship operations | 6,000 | <i>Iowa</i> | |
| Creative writing project | 7,200 | Grinnell College | |
| Faculty assignment to the University College, Dar es Salaam | 9,262 | Discovery and support of talented minority-group students | 81,445 |
| Toward a conference on Middle Eastern problems | 10,000 | Support of the Lenox String Quartet as a group-in-residence | 20,000 |
| Southern Illinois University | | | |
| Contribution toward fellowship operations | 2,250 | Iowa State University | |
| The university orchestra program with the St. Louis Symphony Orchestra | 12,500 | Contribution toward fellowship operations | 24,000 |
| University of Chicago | | | |
| Contribution toward fellowship operations | 13,500 | University of Iowa | |
| Research in the Department of Economics | (210) | Contribution toward fellowship operations | 1,500 |
| Development of a family planning service | 60,188 | Creative writing project | 11,000 |
| Editing of the papers of James Madison | 10,000 | Program for the composition and performance of new music | 30,873 |
| Program to foster the composition and performance of contemporary music | 20,000 | | |
| Research in the Center for the Study of American Foreign and Military Policy | 20,250 | <i>Kansas</i> | |
| Research on economic effects of national agricultural policies | 9,458 | Kansas State University | |
| Research on poverty | 45,200 | Contribution toward fellowship operations | 4,500 |
| Support of the Section of Nuclear Medicine | 29,620 | Toward costs of publishing the <i>Sorghum Newsletter</i> | 750 |
| The university orchestra program with the Chicago Symphony Orchestra | 20,000 | | |
| University of Illinois | | University of Kansas | |
| Contribution toward fellowship operations | 14,250 | Contribution toward fellowship operations | 2,250 |
| Program of its summer music workshop | 7,150 | | |
| Travel costs of staff members | 9,000 | <i>Kentucky</i> | |
| | | University of Kentucky | |
| Y.M.C.A. of Metropolitan Chicago | | Contribution toward fellowship operations | 1,500 |
| Cooperative activities with disadvantaged groups in the area | 15,000 | | |
| Leadership training development program | 45,000 | <i>Louisiana</i> | |
| | | Free Southern Theater | |
| <i>Indiana</i> | | Support of free public performances | 20,000 |
| Gary Community School Corporation | | | |
| Planning costs for a school-community program | 15,000 | Louisiana State University | |
| | | Contribution toward fellowship operations | 1,500 |
| Indiana State Symphony Society | | | |
| Performance of new works by the Indianapolis Symphony | 16,350 | Tulane University | |
| | | Contribution toward fellowship operations | 4,500 |
| Indiana University | | Family planning program | 328,840 |
| Contribution toward fellowship operations | 6,750 | Latin American legal and social science research and training | 33,329 |
| Purdue University | | Student assistance program | 105,188 |
| Contribution toward fellowship operations | 29,250 | Training program for foreign fellows | 10,576 |
| Graduate studies in animal genetics by a Costa Rican scholar | 3,000 | | |
| | | <i>Maine</i> | |
| | | Bowdoin College | |
| | | Recruitment and assistance of talented minority- group students | 19,800 |
| | | | |
| | | <i>Maryland</i> | |
| | | Goucher College | |
| | | Toward costs of a six-week institute on the performing arts | 15,000 |

PAYMENTS 1968

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| The university orchestra program with the Baltimore Symphony Orchestra | 19,500 | Tufts University | |
| Contribution toward fellowship operations | 7,500 | Contribution toward fellowship operations | 1,500 |
| Research in the School of Advanced International Studies | 36,994 | Visiting faculty assignment to the Catholic University of Chile | 6,975 |
| Seminars for young diplomats | 14,831 | Visiting faculty assignment to the University of Chile | 8,756 |
| Research on schistosomiasis | 54,860 | | |
| Visiting investigator in reproductive biology | 14,000 | | |
| University of Maryland | | Williams College | |
| Contribution toward fellowship operations | 2,250 | Activities of the Center for Environmental Studies | 50,000 |
| Massachusetts | | Program in music education and performance | 13,000 |
| Boston Symphony Orchestra | | | |
| Fellowship and scholarship program of the Berkshire Music Center | 50,000 | Michigan | |
| Boston University | | American Economic Association | |
| Contribution toward fellowship operations | 8,250 | Expenses of participants in a meeting on international liquidity | 750 |
| Remedial program for high school students planning to study nursing | 128,723 | Higher Education Opportunities Committee | |
| Education Development Center | | Student counseling and college assistance programs in Detroit | 20,000 |
| Summer institute for reading teachers | 15,000 | Michigan State University | |
| Elma Lewis School of Fine Arts | | Contribution toward fellowship operations | 18,750 |
| Support for its dance program | 25,000 | Appointment of a research assistant at the University of Valle | 5,762 |
| Harvard University | | Individual study project on nutritional development in Nigeria | 13,930 |
| Contribution toward fellowship operations | 24,000 | Research in educational psychology by a Kenyan scholar | 1,100 |
| Economic research on input-output techniques | 31,740 | University of Michigan | |
| Population studies in India by its Center for Population Studies | 60,000 | Contribution toward fellowship operations | 12,000 |
| Programs in community health | 200,000 | Establishment of a performing group for contemporary music | 23,000 |
| Research on the biology of the corn plant | 14,792 | Wayne State University | |
| Research project in the Department of Preventive Medicine | 19,978 | Contribution toward fellowship operations | 9,750 |
| Research and training in radiobiology | 32,010 | Cooperative program of its College of Nursing with the Schools of Nursing of Dillard University, Louisiana, and Tuskegee Institute, Alabama | (1,164) |
| Study of means to provide family planning services in rural Chile | 25,000 | Individual study project on Caribbean states | 1,500 |
| Support of the Center for Population Studies | 41,079 | Western Michigan University | |
| Visiting fellowships in international affairs | 2,089 | Meeting of specialists on the Philippines | 1,223 |
| International legal studies and advanced training for Africans | 16,376 | Minnesota | |
| Independent Schools Talent Search Program | | Augsburg College | |
| ABC summer programs | 150,000 | Research on changing attitudes within and outside urban ghettos | 9,733 |
| Massachusetts Institute of Technology | | Minneapolis Public Schools Special School District No. 1 | |
| Contribution toward fellowship operations | 7,500 | Expansion of its community-school centers program | 10,192 |
| Creative writing project | 8,000 | Minnesota Orchestral Association | |
| Mount Holyoke College | | Performances of new works by the Minneapolis Symphony Orchestra | 23,312 |
| Experimental summer school program for talented disadvantaged high school students | 50,000 | Twin City Area Educational Television Corporation | |
| Smith College | | "Black Voices" series | 75,000 |
| Visiting appointment in economics at the Atlanta University Center | 21,100 | | |

PAYMENTS 1968

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|--|---------|--|--|---------|
| UNITED STATES (cont'd) | | | | |
| University of Minnesota | | | | |
| Contribution toward fellowship operations | | | Collaboration of a demographer | 12,000 |
| Research project on agricultural growth in international perspective | 10,500 | | Expenses of participants in a population conference | 4,200 |
| Salary supplement for a research associate | 15,000 | | Research on Black Mountain College | 13,000 |
| | 2,667 | | Support of the Princeton Cooperative Schools Program | 51,727 |
| Mississippi | | | Rutgers, the State University | |
| Alcorn Agricultural and Mechanical College | | | Contribution toward fellowship operations | 6,750 |
| Exploratory studies for development projects in Mississippi | 17,659 | | Support of the Contemporary Chamber Ensemble as a group-in-residence | 60,000 |
| Mississippi State University | | | Woodrow Wilson National Fellowship Foundation | |
| Contribution toward fellowship operations | 1,500 | | Graduate fellowship program for Negro veterans | 97,300 |
| Tougaloo College | 744 | | Teaching internship program | 183,000 |
| Contribution to its library fund | | | New Mexico | |
| Missouri | | | Opera Association of New Mexico | |
| Arts and Education Council of Greater St. Louis | | | Apprentice Program for Young Singers | 30,000 |
| Experimental program of cultural enrichment in inner-city areas | 100,000 | | New York | |
| Saint Louis University | | | Agribusiness Council | |
| Development of the Anemia and Malnutrition Research Center, Chiang Mai, Thailand | 28,409 | | Toward its operating expenses | 25,000 |
| University of Missouri | | | Albarwild Theatre Arts | |
| Contribution toward fellowship operations | 6,000 | | Playwright training and production of new plays | 70,000 |
| Training of a Thai fishery biologist | (237) | | American Council of Learned Societies | |
| Washington University | | | Support of its program | 500,000 |
| Contribution toward fellowship operations | 1,500 | | American Place Theatre | |
| Creative writing project | 13,000 | | Support of its activities | 60,275 |
| Work-study program for high school graduates | 64,468 | | American Public Health Association | |
| Nebraska | | | Toward costs of a conference | 10,000 |
| Creighton University | | | American Puppet Arts Council | |
| Conference on teaching family planning and population dynamics | 7,000 | | Activities of the Bil Baird Theater | 17,200 |
| University of Nebraska | | | Association for the Study of Abortion | |
| Contribution toward fellowship operations | 4,500 | | Toward an international conference | 15,000 |
| Research on sorghum improvement | 112,519 | | Ballet Theatre Foundation | |
| Research on modification of tropical corn germplasm | 25,000 | | Development program for young choreographers | 8,000 |
| New Hampshire | | | Bank Street College of Education | |
| Dartmouth College | | | Support of the Division of Field Action | 270,364 |
| ABC programs in public high schools | 37,579 | | Bedford-Stuyvesant Restoration Corporation and Bedford Stuyvesant Development and Service Corporation | |
| Phillips Exeter Academy | | | Block renovation and program support | 350,000 |
| Special urban program in the summer school | 25,270 | | Brooklyn College of the City University of New York | |
| University of New Hampshire | | | College talent search project | 4,000 |
| Creative writing project | 8,200 | | Business Committee for the Arts | |
| New Jersey | | | Development of support for the arts | 75,000 |
| Princeton University | | | Carnegie Endowment for International Peace | |
| Contribution toward fellowship operations | 3,000 | | Training program for foreign service officers | 166,667 |
| Assignment of scholars to universities abroad | 48,339 | | | |

PAYMENTS 1968

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| Columbia University | | Institute of International Education | |
| Contribution toward fellowship operations | 12,000 | International education program | 75,000 |
| Health services training program for Urban League staff members | 10,100 | Participation of five Latin Americans in a seminar on political science education | 1,300 |
| Individual study project on Burma and Malaysia | 15,000 | Toward costs of a meeting of the Council on Higher Education in the American Republics | 1,800 |
| Individual study project in mathematics | 3,580 | | |
| Preparation of the memoirs of a retired Foundation officer | 6,566 | | |
| Program in the Graduate School of Journalism on urban racial problems | 89,500 | International Graphic Arts Society | |
| Research in the Russian Institute | 4,265 | Toward establishing print loan collections at predominantly Negro institutions | 14,500 |
| Research on international organizations in the School of International Affairs | 37,000 | LaMama Experimental Theatre Club | |
| Survey on environmental pollution | 25,000 | Support of its activities | 65,000 |
| Visiting appointment to the University College, Dar es Salaam | 8,271 | Martha Graham Foundation for Contemporary Dance | |
| | | Filming of dance works | 25,000 |
| Cornell University | | Metropolitan Applied Research Center | |
| Contribution toward fellowship operations | 35,250 | Study of urban ghettos | 125,000 |
| Cooperation with the University of the Philippines in the humanities and social sciences | 54,659 | Mobilization For Youth | |
| New York State College of Agriculture training program in plant breeding | 18,366 | Toward its Cultural Arts Program | 18,000 |
| Orientation course for foreign graduate students in agriculture | (5,008) | Montefiore Hospital—Neighborhood Medical Care Center | |
| Political science training for a Thai scholar | 4,700 | Contribution toward fellowship operations | 750 |
| Purchase of an automobile for visiting professors at the University of the Philippines | 3,600 | Mount Sinai School of Medicine | |
| Recruitment and assistance of talented minority-group students | 102,609 | Research on motivation for family planning | 12,937 |
| Return travel of a faculty member of the University of the Philippines | 750 | N.A.A.C.P. Legal Defense and Educational Fund | |
| Social science research | 1,500 | Development of its Community Service Division | 98,800 |
| Study on Negro employment in central New York State | 15,000 | National Educational Television and Radio Center | |
| Summer economics program for students from predominantly Negro colleges | 20,650 | Programs on regional theatre | 150,000 |
| Visiting assignment to the University of Valle | 16,000 | National Industrial Conference Board | |
| | | Toward establishment of the Agribusiness Council | 10,000 |
| Council on Foundations | | National Music Council | |
| Support for its program | 100,000 | Performance of innovative works at the Whitney Museum | 14,540 |
| Dance Theatre Foundation | | National Urban League | |
| Development of new choreography | 7,500 | Leadership development program | 200,000 |
| Education and World Affairs | | New Lafayette Theatre Workshop | |
| Study of talent migration | 42,583 | Support for its activities | 140,000 |
| Encyclopaedia of the Social Sciences | | New School for Social Research | |
| Faculty development in selected colleges | 378 | Individual creative project | 7,000 |
| Fordham University | | New York Shakespeare Festival | |
| Contribution toward fellowship operations | 3,000 | Program for new playwrights and directors | 25,000 |
| Foreign Policy Association | | New York University | |
| Support for a publication on the world population crisis | 10,000 | Contribution toward fellowship operations | 1,500 |
| Harlem Commonwealth Council | | Professional training and creative work in theatre arts | 100,000 |
| Toward establishment of the Community Service Loan Corporation | 26,000 | Research on radiation hazards | 108,949 |
| | | Support of the Institute of Fine Arts | 15,860 |

PAYMENTS 1968

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| UNITED STATES (cont'd) | | | |
| New York University Medical Center | | | |
| Production of an English-Spanish correlation index to biomedical library classification schemes | 7,500 | Union Theological Seminary | |
| | | Planning for a theatre criticism training program | 2,250 |
| New York Urban League | | | |
| Toward a program of street workers in problem-area high schools | 100,000 | University of Buffalo Foundation | |
| | | Support of the Creative Music Associates | 95,650 |
| New York Zoological Society | | | |
| Research and scientific equipment | 55,750 | University of Rochester | |
| | | Contribution toward fellowship operations | 1,500 |
| Paper Bag Players | | | |
| Creation and rehearsal of new works, and performances in New York schools | 14,000 | Vassar College | |
| | | Creative writing project | 7,400 |
| Philharmonic-Symphony Society of New York | | | |
| Composer-in-residence with the New York Philharmonic | 7,500 | Volunteers for International Technical Assistance | |
| | | Expenses of an evaluation trip to the Philippines | 1,807 |
| Population Council | | | |
| Research on population problems | 552 | General support | 19,000 |
| Support of its Technical Assistance Division | 600,000 | Yeshiva University | |
| | | Contribution toward fellowship operations | 1,500 |
| Repertory Theater of Lincoln Center | | | |
| Activities of the Forum theatre | 50,000 | Programs in community health | 170,980 |
| Research Foundation of the State University of New York | | | |
| Contribution toward fellowship operations | 3,000 | Consultants for the creative writing program | |
| | | | 9,202 |
| Sarah Lawrence College | | | |
| Support of the Aeolian Chamber Players as a group-in-residence | 67,950 | Rockefeller Foundation Fellowship and Scholarship Directory and History of the Fellowship and Scholarship Program of The Rockefeller Foundation | |
| Investigation of a new educational program for disadvantaged students | 7,760 | Preparation, publication, and distribution costs | 7,182 |
| Saratoga Performing Arts Center | | | |
| East Coast branch of the Congress of Strings | 20,000 | Purchase and distribution of publications | 61,969 |
| Society for Strings | | | |
| Summer program for string teachers | 7,590 | Symposium on "Strategy for the Conquest of Hunger" | |
| | | | 47,562 |
| State University of New York at Buffalo | | | |
| Completion of Ph.D. degree by a Kenyan Research project by a Nigerian scholar | 2,325 1,800 | Conference on support of research in reproductive biology | |
| | | | 816 |
| State University of New York at Stony Brook | | | |
| Work on a documentary history of 20th-century Mexico | (3,250) | Rockefeller Archives and Research Center | |
| | | Plan for construction, management, and financing | 13,473 |
| Syracuse University | | | |
| Contribution toward fellowship operations | 4,500 | Rockefeller Foundation—New York | |
| Study of United States technical assistance | (1,021) | Administrative services | 2,623,809 |
| Creative writing project | 4,000 | Medical and Natural Sciences | 404,731 |
| Theater in the Street | | Agricultural Sciences | 482,164 |
| Free outdoor dramatic productions | 17,500 | Humanities and Social Sciences | 383,642 |
| Theatre Incorporated | | Arts | 148,345 |
| Training program | 10,028 | Inter-Program | 855,623 |
| | | | |
| | | North Carolina | |
| | | Duke University | |
| | | Contribution toward fellowship operations | 3,000 |
| | | Student assistance program | 163,619 |
| | | | |
| | | North Carolina School of the Arts | |
| | | Establishment of the Piedmont Chamber Players | 83,000 |
| | | | |
| | | North Carolina State University | |
| | | Contribution toward fellowship operations | 15,750 |
| | | Plant collecting project in South America | 2,700 |
| | | | |
| | | University of North Carolina | |
| | | <i>Chapel Hill</i> | |
| | | Contribution toward fellowship operations | 1,500 |

PAYMENTS 1968

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| Cooperative program in population studies with the University of Medical Sciences, Thailand | 68,500 | Portland State College | |
| Carolina Population Center research program | 103,000 | Concert-demonstrations by the Group for Contemporary Music | 24,000 |
| Family planning unit | 52,265 | | |
| Educational materials on population and computerized information service | 166,684 | Reed College | |
| <i>Greensboro</i> | | Discovery and support of talented minority-group students | 83,666 |
| Creative writing project | 8,000 | Establishment of a research center in the humanities | 99,555 |
| North Dakota | | | |
| North Dakota State University | | University of Oregon | |
| Contribution toward fellowship operations | 10,500 | Contribution toward fellowship operations | 1,500 |
| Travel of a research geneticist to professional meetings | 1,570 | | |
| Ohio | | Pennsylvania | |
| Antioch College | | American Friends Service Committee | |
| Discovery and support of talented minority-group students | 233,274 | Costs of a conference on Indian-Pakistani relations | 9,000 |
| Case Western Reserve University | | Bryn Mawr College | |
| Contribution toward fellowship operations | 1,500 | Contribution toward fellowship operations | 1,500 |
| Teaching and research program in population | 7,000 | | |
| Travel to the University of an Israeli immunochemist | 2,800 | Carnegie-Mellon University | |
| Cleveland Public Schools | | Summer program for students of acting | 2,584 |
| Community activities in the Glenville area | 36,821 | | |
| Greater Cleveland Associated Foundation | | Friends Neighborhood Guild | |
| Training of Negro executives and a survey of the Hough district | 37,500 | Counseling and assistance for youth in disadvantaged neighborhoods | 34,384 |
| Karamu Foundation | | Haverford College | |
| Consultations for community development projects | 10,000 | Internship in college administration | 6,990 |
| Miami University | | Post-baccalaureate program | 156,601 |
| Research in economics in Thailand and assistance to the Foundation's University Development Program in Bangkok | 9,436 | Jefferson Medical College of Philadelphia | |
| Musical Arts Association | | Contribution toward fellowship operations | 1,500 |
| Composer-in-residence with the Cleveland Orchestra | 7,750 | Lincoln University | |
| Oberlin College | | Appointment of a writer-in-residence | 7,500 |
| Study of adjustment problems of minority-group college students | 11,000 | Discovery and support of talented disadvantaged students | 60,000 |
| Summer school program for talented disadvantaged high school students | 60,000 | Special program for entering students | 31,500 |
| Summer workshops for public school music teachers | 95,905 | Pennsylvania State University | |
| Ohio State University | | Contribution toward fellowship operations | 1,500 |
| Contribution toward fellowship operations | 5,250 | School District of Philadelphia | |
| Oklahoma | | Support for school-community programs in ghetto areas | 78,500 |
| Oklahoma State University | | Swarthmore College | |
| Contribution toward fellowship operations | 3,750 | Discovery and support of talented minority-group students | 42,000 |
| Research on the nutrition of ruminant animals | 15,000 | Temple University | |
| Oregon | | Contribution toward fellowship operations | 750 |
| Oregon State University | | Individual research project on Mindanao | 3,000 |
| Contribution toward fellowship operations | 10,500 | University of Pennsylvania | |
| Individual study project on nitrogen fixation | 15,000 | Contribution toward fellowship operations | 4,500 |
| | | Conference of the VIIth International Congress of Nutrition in Hamburg, Germany | 3,000 |
| | | Studies in urban design | 10,823 |
| | | Support of the Pennsylvania Contemporary Players | (203) |

PAYMENTS 1968

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| UNITED STATES (cont'd) | | University of Texas | |
| University of Pittsburgh | | Contribution toward fellowship operations | 4,500 |
| Contribution toward fellowship operations | 15,000 | Toward a documentary history of 20th-century Mexico | 3,250 |
| English language program at universities in Bangkok | 103,044 | | |
| Research and training in radiation health | 77,055 | | |
| Puerto Rico | | <i>Utah</i> | |
| University of Puerto Rico | | University of Utah | |
| Contribution toward fellowship operations | 1,500 | Modern dance repertory company | 199,350 |
| | | Performances of new works by the Utah Symphony Orchestra | 12,500 |
| Rhode Island | | Utah State University | |
| Brown University | | Contribution toward fellowship operations | 6,000 |
| Preparation of a course on standard English | 17,817 | | |
| Tennessee | | <i>Vermont</i> | |
| Fisk University | | Bennington College | |
| Construction and building renovation | 160,000 | Creative writing project | 5,000 |
| Construction costs of library | 350,000 | | |
| Faculty appointments | 150,000 | Experiment in International Living | |
| Program in sociology in cooperation with Vanderbilt University | 10,630 | Toward costs of sending three disadvantaged youngsters abroad | 750 |
| Summer assignments for faculty members | 389 | | |
| Surveys of organizational and financial procedures and space utilization | 3,045 | Marlboro School of Music | |
| Staff recruitment costs, and student assistance grants | 63,333 | Contemporary music program | 16,666 |
| Southwestern at Memphis | | | |
| Summer youth theatre | 10,000 | <i>Virginia</i> | |
| University of Tennessee | | George C. Marshall Research Foundation | |
| Contribution toward fellowship operations | 750 | Toward operating expenses | 25,000 |
| Exchange program with the Faculty of Medicine of the University of Valle, Colombia | 55,000 | | |
| Vanderbilt University | | Virginia Polytechnic Institute | |
| Contribution toward fellowship operations | 4,500 | Contribution toward fellowship operations | 3,750 |
| | | Discovery and support of talented minority-group students | 35,183 |
| Texas | | University of Virginia | |
| Baylor University | | Contribution toward fellowship operations | 750 |
| Family planning program in its College of Medicine | 28,850 | | |
| Dallas Symphony Orchestra | | <i>Washington</i> | |
| Composer-in-residence | 10,000 | Conservation Foundation | |
| Performance of new works | 12,000 | Toward a conference on ecological aspects of international development | 25,000 |
| Houston Baptist College | | | |
| Scholarships in the School of Nursing | 100,000 | University of Washington | |
| Southern Methodist University | | Activities of the Contemporary Performing Group | 70,244 |
| Contribution toward fellowship operations | 1,500 | Actor training program with the Seattle Repertory Theatre | 32,500 |
| Research on production functions and income distribution in agriculture and industry | 8,000 | Development of a Division of Family Planning and Education | 76,315 |
| Texas A & M University | | Performances of new works by the Seattle Symphony Orchestra | 17,470 |
| Contribution toward fellowship operations | 6,750 | Training for staff members of the School of Fisheries, Catholic University of Valparaiso, Chile | 60,469 |
| Research and training in tropical veterinary medicine | 121,842 | Washington State University | |
| | | Contribution toward fellowship operations | 1,500 |
| | | Western Washington State College | |
| | | Educational program for disadvantaged junior high school students | 42,975 |

PAYMENTS 1968

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| <i>West Virginia</i> | | | |
| American Symphony Orchestra | | Cooperative potato research with the Colombian Institute of Agriculture | 12,000 |
| Workshops for conductors | (4,177) | Research and training in the breeding, genetics, and pathology of the potato | 42,273 |
| West Virginia University | | Research on the social implications of disease control | 87,728 |
| Recruitment of professors in agriculture to serve in East Africa | 8,253 | Support for a summer laboratory school | 37,500 |
| West Virginia University Foundation | | Visiting faculty assignments in Africa, Asia, and Latin America | 54,500 |
| Computer-based bibliography of agricultural sciences in East Africa | 15,000 | | |
| <i>Wisconsin</i> | | <i>United States—General</i> | |
| Agronomic Science Foundation | | Fellowships, scholarships, and travel grants to individuals | 73,191 |
| Attendance of two Colombian scientists at professional meetings in the United States | 1,220 | Support of work in the creative arts | 188,923 |
| Crop Science Society of America | | Miscellaneous | 47 |
| Publication of <i>Mutants of Maize</i> | 6,000 | | |
| Marquette University | | URUGUAY | |
| Contribution toward fellowship operations | 4,500 | Fellowships and scholarships for individuals | 8,043 |
| University of Wisconsin | | YUGOSLAVIA | |
| Contribution toward fellowship operations | 31,500 | Travel grants to individuals | 945 |
| African appointments | 16,456 | TOTAL—1968 Net Payments | \$41,488,095 |

SUMMARY OF FUNDS APPROPRIATED 1968

| | |
|---|-----------------------------------|
| APPROPRIATIONS AND ALLOCATIONS REPORTED | \$32,257,620 |
| LESS ALLOCATIONS AND GRANTS IN AID FROM PRIOR YEAR APPROPRIATIONS INCLUDED ABOVE | <u>6,149,902</u> \$26,107,718 |
| ADDITIONAL 1968 APPROPRIATIONS FOR LATER ALLOCATION BY EXECUTIVE COMMITTEE OR OFFICERS | 5,397,782 |
| GRANTS IN AID (1969) | 2,059,750 |
| FELLOWSHIPS AND SCHOLARSHIPS (1969) | 3,782,075 |
| NEW YORK BUDGETS (1969) | |
| MEDICAL AND NATURAL SCIENCES | 474,100 |
| AGRICULTURAL SCIENCES | 508,800 |
| HUMANITIES AND SOCIAL SCIENCES | 412,100 |
| ARTS | 158,100 |
| INTER-PROGRAM | 1,115,400 |
| ADMINISTRATION | <u>2,543,970</u> <u>5,212,470</u> |
| TOTAL APPROPRIATIONS, 1968 | <u><u>\$42,559,795</u></u> |

ARTHUR J. ANDERSON BEQUEST

Arthur J. Anderson, who died in Tucson, Arizona, on June 15, 1961, left his Estate in trust for his sister during her life, the remainder to be divided equally between The Rockefeller Foundation and the University of Denver. His sister died in Tucson on February 5, 1966. During 1968 the First National Bank of Arizona, Trustee under Mr. Anderson's will, completed its distribution of the Estate assets to the residuary legatees. The Foundation has received a total of \$69,361.98 from the Estate as the Arthur J. Anderson Research Fund, which has been devoted to purposes, within the program of the Foundation, authorized by the donor.

Mr. Anderson is not known to have had any communication with the Foundation. He was a cabinetmaker in Denver until his retirement in 1953; he then moved to Tucson, where he spent the rest of his life.

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