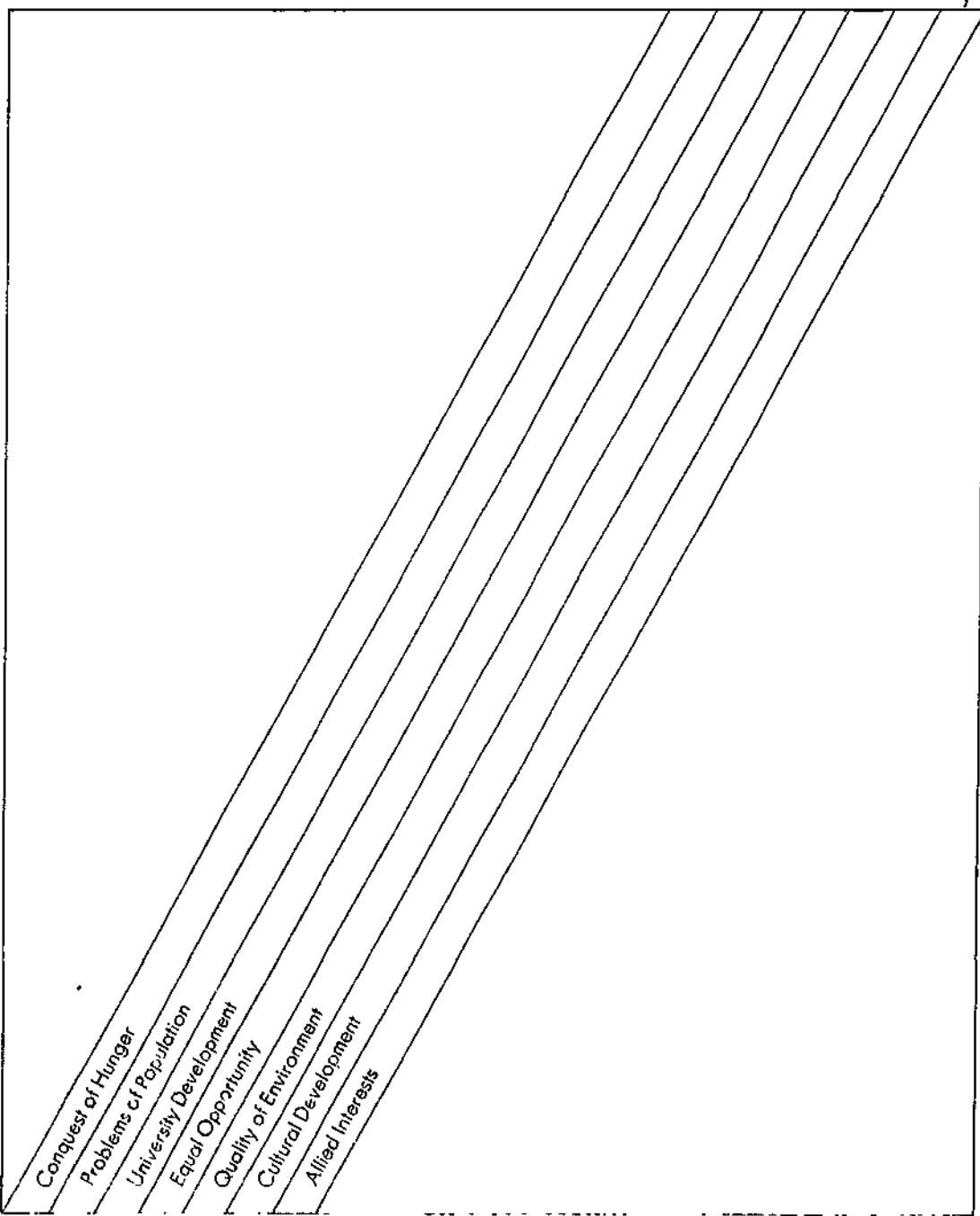


THE PRESIDENT'S REVIEW AND ANNUAL REPORT THE ROCKEFELLER FOUNDATION 1972



Conquest of Hunger
Problems of Population
University Development
Equal Opportunity
Quality of Environment
Cultural Development
Affiliated Interests

THE PRESIDENT'S REVIEW AND ANNUAL REPORT 1972

THE PRESIDENT'S REVIEW
AND ANNUAL REPORT
THE ROCKEFELLER FOUNDATION
1972

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THE ROCKEFELLER FOUNDATION

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ALVIN J. SANDERS, PH.D., Program Associate¹⁰

¹ Beginning July 1972. Also assigned to Social Sciences.

² On study leave beginning October 1972.

³ On assignment to WIIO beginning December 1972.

⁴ Beginning May 1972.

⁵ Beginning October 1972.

⁶ Beginning August 1972.

⁷ Beginning June 1972.

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¹ Beginning May 1972.

² Beginning July 1972. Also assigned to Agricultural Sciences.

³ Beginning April 1972.

⁴ Beginning July 1972.

⁵ On study leave.

⁶ Resigned June 1972.

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¹ Through August 1972.

² Resigned April 1972.

³ Through April 1972.

⁴ Temporary appointment completed.

⁵ Beginning October 1972.

⁶ Beginning July 1972.

⁷ Beginning September 1972.

⁸ Beginning June 1972.

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¹ Temporary appointment completed.

² Deceased May 1972.

³ Through September 1972.

⁴ Beginning September 1972.

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¹ Through June 1972.

² Resigned December 1972.

³ Retired June 1972.

⁴ On assignment in Ceylon.

⁵ Beginning February 1972.

⁶ Beginning July 1972.

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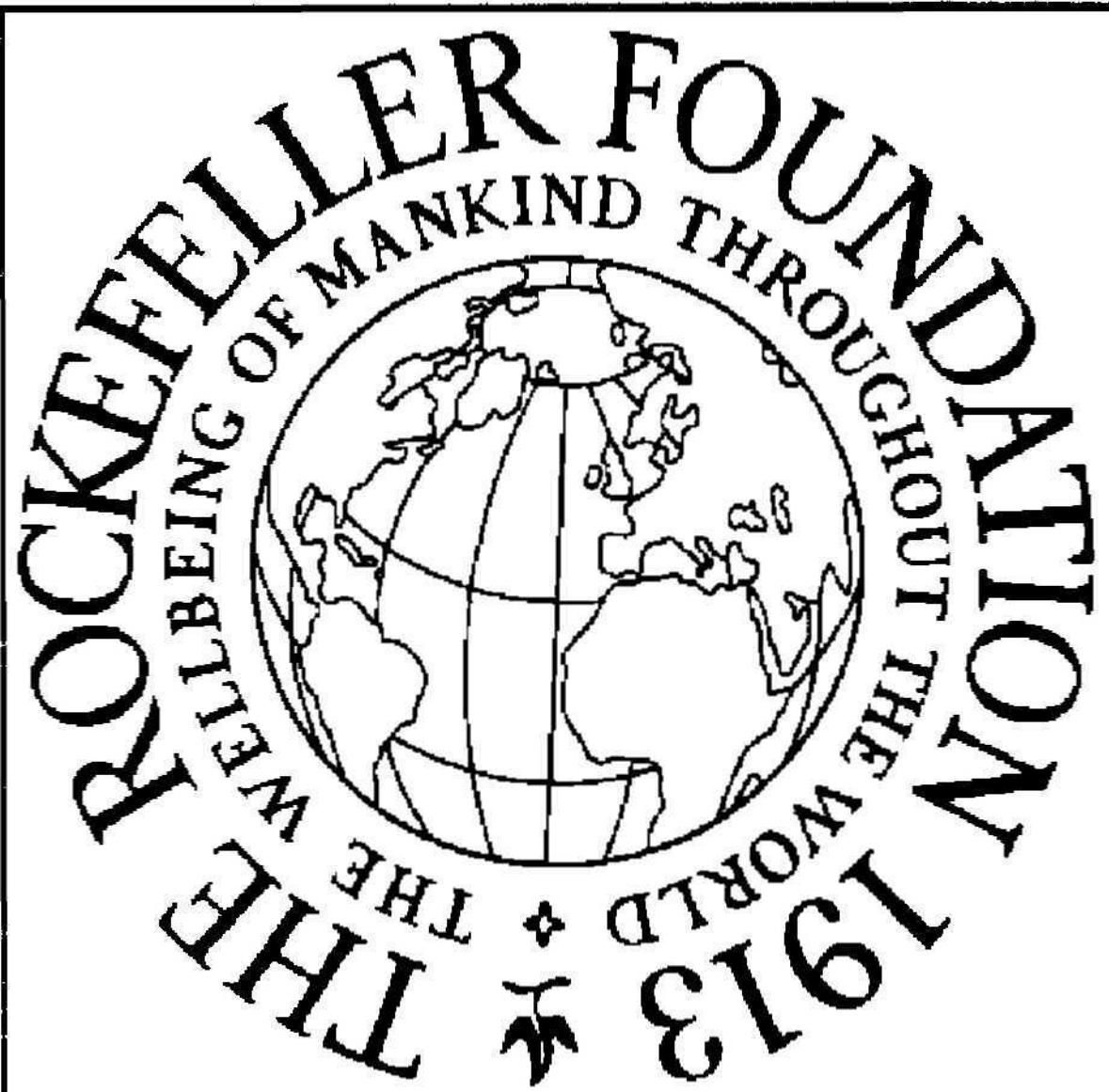
² Through October 1972.

³ Beginning September 1972.

⁴ Retired June 1972.

⁵ On leave of absence.

⁶ Resigned June 1972.



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JOHN H. KNOWLES, M.D.

THE PRESIDENT'S REVIEW

Is it presumptuous of me to speak about foundations in general and The Rockefeller Foundation in particular? After all, I have only been on the job for less than a year. But I have spent these months—in many ways the most interesting of my life—listening to America, and to many people in the developing world where as yet perceived only dimly so much of mankind's future is taking shape.

I have also been reading.

I have read with interest, for example, Waldemar Nielsen's "The Big Foundations," and the headlines stimulated by this book with even more interest: *Research Study Calls Big U. S. Foundations "Passive, Conservative"; The Twentieth Century Fund Report Finds Controversial, Innovative Giving Is Rare* (Wall Street Journal, Oct. 16, 1972); *Philanthropic Foundations Have Traditionally Concentrated Their Grants in Educational Institutions. Two New Books Suggest This Course Has Been Uncreative and Unimaginative* (The Chronicle of Higher Education, Oct. 16, 1972); *Wealthiest Foundations in U. S. Reported To Be "Malfunctioning"* (New York Times, Oct. 17, 1972); *The "Sick" Foundations* (Editorial in the New York Times, Oct. 23, 1972).

I also noted Nielsen's observations that the Trustees of The Rockefeller Foundation surprised the skeptics with my appointment as President of the Foundation and . . . indications were that . . . [Knowles] . . . intended, with the backing of the Trustees, to give The Rockefeller Foundation a new and less constipated style and its greatest shaking up in half a century. My medical specialty however was not gastroenterology but respiratory physiology and diseases of the chest and heart—and the better metaphor might have been that I was called to the house to breathe a new life into a venerable institution.

In fact, why was I offered this magnificent opportunity? There are many in our country far more experienced and better equipped than I. When I asked "Why me?" I was told that what was wanted was, first, a younger man with intensive administrative experience in and a deep commitment to some field of social welfare, and, secondly, someone who was willing and able to stand up and articulate the interests of the Foundation with the public interest.

I believe my experiences in life and my perception of life are consonant with the Trustees' understanding of what I might be able to contribute to The Rockefeller Foundation.

I was born in the Roaring Twenties of a hard-working father and an artist mother, both possessed of a magnificent sense of humor. I was reared in the heartland on the Protestant ethic and such homilies as "Finish the Job," "Neither a Borrower Nor a Lender Be," "Cleanliness Is Next to Godliness." I remember my mother feeding stray dogs and cats and itinerant hoboes while

simultaneously lecturing them on the virtues of hard work. My first heroic figure was the family general practitioner—a German immigrant named George Klinkerfues— and at the age of eight I decided I wanted to be a doctor. I graduated from Harvard by the skin of my teeth in 1947; my happiest moments were spent playing the piano in a band, taking a course in Shakespeare's comedies, and performing on various athletic teams. Pre-medicine was all hard science—no social science, no humanities were required—a deficiency which I do not understand to this day.

I graduated from the Washington University (St. Louis) School of Medicine in 1951 and interned at the Massachusetts General Hospital where I was to spend the next 20 years. My second heroic figure was Barry Wood, professor of Medicine at Washington University, who taught me the Socratic method of teaching and learning. From 1953 to 1955 I was assigned to the Portsmouth Naval Hospital in Virginia where I learned that even in the tightest bureaucracy it was possible to accomplish something as long as your energies were directed to problem solving and not complaining. In 1958 I studied respiratory physiology at the University of Rochester where I met my third and fourth heroic figures, Wallace Fenn and Hermann Rahn, who taught me the beauties of the scientific method and infected me with their own passionate commitment, as true scientists, to the quest for knowledge. I then returned to the Massachusetts General Hospital where I practiced and taught medicine and conducted research for the next four years until 1962 when I was named General Director. My fifth heroic figure, Dr. Edward D. Churchill, professor of surgery at Harvard and chief of surgery at the Massachusetts General Hospital taught me the pleasures of reaching outside the field of medicine for added perspective on one's own field, the proper use of the English language (a subscription to the London *Times Literary Supplement* proved invaluable), and the political intricacies of the MGH. My library began to expand to encompass literary criticism, history, and the social sciences.

From 1962 to 1972 I served as General Director of the MGH. It was at this juncture that I learned that what one privately agrees on with one's colleagues can have a devastating but frequently beneficial effect when said publicly. I was appalled at the lack of understanding of the unique position and contribution of the urban *teaching* hospital—its costs, its manpower problems, its buffeting by a multiplicity of private and public forces, near and afar, its disorganization internally. The administrative experience was intense to say the least, and our efforts mounted to articulate the institution with the public interest. We must have done something right for, between 1962 and 1972, the bottom line showed that our annual donors had increased from 10,000 to 100,000 and our annual gifts from \$250,000 to \$4 million.

Three episodes punctuated a lovely decade at the MGH. On a fishing trip

in 1963, I took along a book entitled *The House of Intellect* by Jacques Barzun with the statement on the jacket: "How intellect, the prime force in Western civilization, is being destroyed by our culture in the name of art, science and philanthropy." It is a book of ideas, beautifully expressed. For me, the experience was a revelation.

The second episode was going to Vietnam in 1967 at the request of the State Department and President Johnson to report on the state of health of the civilian population. During the month before we left I read everything I could about the history and culture of Vietnam and the Southeast Asian peninsula that hinges India and China. I kept a daily diary and was able to convert an unbelievably rigorous emotional experience into "conscious thought." I had never forgotten André Malraux's answer to the question of how to make the best of one's life, which was to "convert one's experience into conscious thought."

The third episode was my five-month sojourn with the Nixon Administration when the then Secretary of Health, Education and Welfare, Robert Finch, attempted to have me appointed his Assistant Secretary for Health and Scientific Affairs. This experience allowed me to look objectively at democracy in action—and I capitalized on the experience by enlarging my library on American history, particularly the period between the watershed of the 1890's to the present. It was during this time that I learned the pleasures of understanding at least partially where our country stood as of 1970—through the eyes of Commager, Hofstadter, Lerner, Leuchtenberg, Arthur Link, John Blum, Mark Sullivan, James MacGregor Burns, and Arthur Schlesinger, Jr.—to say nothing of Teddy White. The experience stimulated me to take a year as a part-time fellow in the Kennedy Institute of Politics at Harvard so I could learn more about public policy and public management. I had been heavily involved in it for ten years so why not convert it into "conscious thought"? I had, after all, survived a remarkable decade.

The turbulence of the America of the 1960's reflected a new level of rational and sometimes irrational groping for a new order of life. It was a decade of upheaval—individual, institutional, political, economic, and moral upheaval. By the end of the decade, the country was exhausted by one shock after another, and seemed transiently to be on the ropes. It was an age of anxiety and violence, and as one social critic said, the "onset of the negotiating society"—one in which traditional ways of doing things were disrupted as women, blacks and other minorities, homosexuals, members of the armed forces, students, welfare recipients, and prison inmates, to name but a few, challenged traditional values and the power structures that purveyed those values, demanding and obtaining a rethinking of those values and a redistribution of that power. The relative success of such confrontation

attested to a general public awareness of and sympathy for the deprivations of minority groups and a willingness to review traditional American values. There was also the larger, vaguely perceived feeling that centralized, depersonalized, technical, *machine* control by the bureaucracies of government, big business, or private institutions had to be changed—and local, personal control of one's existence recaptured. Although the established religions continued to decline in their influence in the community, a religious revival of sorts bespoke the search of many for meaning and significance in their lives.

The public mood was one of fear in some quarters; anger, frustration and despair in others; or, worst of all, alienation and apathy. Yet extremist groups abounded, bringing to mind William Butler Yeats:

*Things fall apart; the center cannot hold;
Mere anarchy is loosed upon the world. . . .
The best lack all conviction, while the worst
Are full of passionate intensity.*

The cause of the disease was easily identified but seemingly impossible to remedy—namely a massive scientific and technological machine run wild. Things were in the saddle, not the individual man—things which could wipe out entire populations with the bang of a nuclear bomb or the whimper of unchecked population growth—things which dehumanized individuals and left them powerless to control inexorable forces shaping their lives.

Progress was no longer inevitable and people began to feel that what they did would not affect or shape their futures. **The goods of unbridled industrial expansion were accompanied by the bads of environmental pollution and the exhaustion of finite natural resources.** Trends of global concern were being investigated for their interrelationship and their implications for the future of our planet: accelerated industrial expansion, rapid population growth, depletion of nonrenewable resources, environmental pollution, and malnutrition. The computer-based model could only conclude that civilization would collapse of its own weight—if growth in industrial production and in population continued at its present rates. Food available per capita would ultimately diminish, natural resources would be depleted, obsolescence of plant and equipment would prove irretrievable, and population would diminish rapidly because of starvation and disease, if global warfare had not already intervened. The Malthusian decline would begin about the year 2020.

With all the comforts and luxuries of an advanced industrial country, the American people appeared to be dispirited, to have lost their faith in themselves and in the direction of their country. Glutted with consumer goods and bombarded by the mass media all stressing the good life of endless consumption, the increased time available for leisure and recreation found

many Americans confused, guilt-ridden, and frankly unhappy with themselves. Leisure time was used for the mindless distraction of television or brooding-dark introspection. Schopenhauer said that there are two basic sources of unhappiness: not having what you want: and having it. **Happiness and the full life lie in the challenges and struggles, and the modern American either had everything or was overwhelmed with the magnitude of problems and retreated to apathy.**

Some of the confusion characteristic of the age and of the values in an advanced, industrial society dedicated to increased consumption and growth is illustrated by the following Associated Press news item:

Instant riches came to the _____ family two years ago in the form of a \$200,000 inheritance. Today they were back where they started—"We blew it," said Mrs. _____.

The spending spree was two years in the making, according to Mrs. _____, a mother of four who lives with her husband in a rented house near Los Angeles harbor.

"We waited two long years for the attorneys to haggle, and the Government to get its share, and my sister to make claims against it," she said.

"But when it finally came, it really wore us out spending it. We were just exhausted."

The money, bequeathed by the father of Mrs. _____, went for a variety of items.

"We bought cars and motorcycles for the two boys, and a truck, and a \$2,000 hi-fi with all the components, and clothes, and we put a down payment on a house, and the girls and I all had our teeth capped, and I had my breasts lifted," Mrs. _____ said.

"And, oh yes, we bought ski equipment. And we traveled, we put 200,000 miles on one of the cars in one year. And we all saw psychiatrists."

In contrast to the misfortunes of some contest winners catapulted into unexpected problems when they suddenly become wealthy, the _____ family was united by the inheritance.

"It was the first time in our lives that we really worked and planned together," Mrs. _____ recalled.

An uplifting experience—a technological glut of consumer goods on a background of travel, Freud, and sexual improvement—and the first time a family had "worked and planned together."

Science and technology had created the new age of turbulent concern characterized by transience and impermanence, a new individual and collective self-consciousness, a rapidity of change that required new insight and understanding, new institutions, new values. All seemed pitifully slow in coming.

These were some of the thoughts in my head when I received the invitation, last year, to become President of The Rockefeller Foundation.

Now, what have we been doing since July 5, 1972? I shall not tell you of the hours spent with each member of the staff, the incredible number of interruptions, all conspiring against sustained thought, and the occasional outside supplicants who thought that, at this stage of my life, I was unable to distinguish between shadow and substance.

Our most important attempts to date center around developing a coherent policy with clearly defined ends. Let me describe some elements of our thinking as it has evolved over the past several months.

First of all, the strength of the Foundation resides in the wisdom, intelligence, and intellectual capacity of its staff. These three quite disparate elements are all for naught if they are not combined with a passionate commitment, sustained by driving energy. But how do we maintain our intellectual capacity, overcome the inevitable isolation of foundation life, survive the continuous pressures on our integrity due to the stultifying effects of reading tons of material each year, all the while being told how beautiful we are? In short, how can we stay alive intellectually?

Secondly, how do we know whether we are doing a good job or not? We have no constituency save for the disgruntled majority who don't get our support. (Over 7,000 grant requests a year are turned down while roughly 550 are supported.) How can we obtain an objective view of ourselves? What is the most appropriate paradigm of evaluation? How do we establish our priorities? How do we know that we are doing what we're supposed to be doing? Who will tell us honestly, realizing that we can get only so far with reviewing ourselves and outsiders may not wish to square with us for fear of losing potential support! We are intellectual and social venture capital. Have we taken risks and failed, or succeeded? Should we be criticized for doing things which involve no risk, no turmoil, and yet are not being done by anyone else? How much of our funds should be channeled through other institutions versus support of our own field staff? How fast are our successful innovations institutionalized, turned over to public and private support and expanded while we go on in advance of the conventional wisdom?

Thirdly, the present atomized, departmental approach of categorized individuals has us all confused. The House of Intellect crumbles as every expert lives in glorious isolation without moral commitment to the whole. Isn't it time we indulged in integrated planning and approaches to the world's problems and finally admitted that science and the technological fix is only a part of the solution to the problems? The pill and the I. U. D. are fine but who should use them, for what purposes, and what are the social, economic, moral, and cultural determinants of population control? The same can be said of increased

food production. The first phase was the Green Revolution. The second phase involves its effect on nutrition, family size, jobs, rural-urban migration, employment, land reform, distribution of income, cultural values—and we shouldn't duck these issues. Science and technology without moral ordering of their priorities and full anticipation of their effects exist in a dehumanized, amoral void.

Fourth, where will the people trained to manage the complexities of the modern world come from?

Fifth, with the success of the Stockholm conference on the environment, with the view we obtained of our small, lonely, blue planet hanging in the giant black void, with the effects of instant communication and jet travel—may not the time be ripe once again to intensify efforts for world order, world peace, and the effective reduction of conflict?

I am sure of only a few things at the moment:

Foundations have a magnificent opportunity to maintain the richness of pluralism and heterodoxy which has strengthened our national life and to contribute heavily to social melioration if they have the wit and intellectual capacity to do it. If they don't, I really don't know exactly who will do it outside central government—and I, for one, am not prepared to settle for complete state control yet.

Secondly, there will be one future for the world or none at all—and The Rockefeller Foundation is uniquely equipped to stand up and say so in the current era of neo-isolationism.

Thirdly, the arts and humanities will receive increasing attention with special reference to the moral basis of scientific and technical decisions. We will focus on defined population groups here and abroad with an integrated approach involving the full participation of experts in economics, public health and nutrition, population planning and demography, agriculture, and education—always with the steady hand of the **artist and humanist** for they **will tell us better than we can ourselves who we are and how we're doing**. In the process, we may be able to plug a few leaks in and strengthen the foundation of the House of Intellect with *style*, that is, with the ability to reach our ends with the least expenditure of energy, and with *creativity*, that is, the ability to evoke effective surprise.

THE GLOBAL PERSPECTIVE

To clarify these ideas, a program committee of Trustees was appointed in December, 1972—to conduct a formal review of the overall program and policies of the RF since 1958. What follows is a summary of the major themes that have emerged. When our deliberations are completed we will make them public as a Special Report to the American people.

On the international scene, malnutrition, rapid population growth, ill-health, unemployment and abject poverty, ignorance, and inadequate educational and training opportunities continue to plague the less-developed countries. The gap between developed and developing countries continues to widen, and despite the miracles of the Green Revolution, population growth outstrips the increase in food production. Rapid urbanization finds large segments of the population without vital human services. The actual incidence of conflict within and among nations has increased, while the potential for major conflict expands in the race for economic development and the resultant competition for increasingly scarce natural resources. In the United States, support for the United Nations and United States AID has wavered. For the RF, all this would indicate that the Conquest of Hunger Program be maintained and strengthened, with special emphasis on the "second generation" problems of the Green Revolution: distribution of food, nutritional status, rural-urban migration, employment, income distribution, land reform, and rural development—with specific reference to the plight of the small farmer.

More attention should be directed to defined populations in rural areas of the less-developed countries by interdisciplinary teams specifically concerned with health and nutritional status, population problems, education and training, and economic development.

At the same time, there remain technical and scientific problems related to agriculture and human nutrition, the solutions to which the Foundation should continue to pursue. These include animal diseases such as trypanosomiasis in Africa, the legumes as a prime source of protein for human consumption, to name just a few.

The University Development Program is likely to remain a vital interest of the Foundation with increasing emphasis on education for national and regional development. More attention might well be paid to the continuum of primary, secondary, and higher education and to more rapid utilization of knowledge for improving the quality of life of the people of the developing countries. In addition to its traditional interests in the social sciences, medicine, and agriculture, should the RF not consider increased emphasis on the development of the arts and humanities in the universities where the Foundation works? New types of curricular development should be explored with the goal of relating the educational process more clearly and directly to the problems of the people.

A small, exploratory program in Conflict Resolution and International Affairs is being considered. The times are pressing. Suffice it to say that the world spends \$200 billion annually on arms and \$8 billion for aid to the developing countries. A number of events indicate that this may be a particularly propitious time for increased (and renewed) attention to this field.

The Population Program will remain a significant interest of the Foundation, but with increased emphasis on the social, economic, moral, and cultural determinants of population growth and on educational as contrasted with purely technological services. We will increase our efforts in the support of such work in the developing countries.

On the domestic scene, we will continue to focus on the development of centers of excellence in reproductive biology and population problems with a prime emphasis on developing the sorely needed scientific and administrative leaders of tomorrow. Integration of population programs with medical education will be stimulated. Humanistic (philosophical and ethical) concerns surrounding population controls will need stressing.

THE SCENE AT HOME

In the United States, major issues are those of inequality of opportunity reflected in inadequate access to education and training, health, and legal services. Chronic unemployment, abysmal health statistics, lack of civil rights, gross injustice to minority groups, steadily increasing crime rates, inequality in the distribution of income and wealth, and rising welfare rolls remain grinding problems of catastrophic proportions. Massive federal programs initiated during the Great Society movement of the 1960's have accomplished much good, but the electorate seems reluctant to vote for their continuance, as social degeneration and inexorably rising taxes seem to outstrip social melioration. Our traditional belief in inevitable progress through science and technology is fading rapidly as we confront mounting pollution, urban decay, crime, and persistent inequality.

As an industrial civilization turns the corner and becomes a service society, we find ourselves poorly equipped economically and politically to save ourselves through effective social action. The complexities of managing government at all levels and of the development of an equitable social policy find us poorly equipped to relate economic, legal, political, moral, and cultural concerns to the human behavior of an ethnically and racially diverse population.

All service "industries" (health, environment, government) suffer from a lack of excellence in administration. As the 1960's shade into the 1970's, America may be in the process of rediscovering herself as manifested by the youth movement, the recognition of the persistence of cultural pluralism, and the increasing perception that moral and ethical concerns are of prime importance to the decision-making process.

The Foundation cannot cover the waterfront of scientific and social problems, but it must seek to be knowledgeable about the particulars of social movements and change and to understand their significance. This will require

a small group of individuals who constantly monitor major social and cultural movements, have up-to-date knowledge of state and federal programs, and detailed knowledge of economic research as it relates specifically to human rights and services.

A common thread is the need for more effective development of leaders in public policy and management (at both the national and international level) who understand and can relate the complexities of social melioration and human behavior to the political process.

The Foundation cannot afford to relax its historic commitment to Equal Opportunity and specifically to the eradication of poverty and injustice among minority groups with special attention to blacks—the number one example of gross oppression by white America. We are actively exploring the possibilities of a major addition in rural-urban development in the South—and we hope during 1973 to present new approaches to the reduction of the social and economic injustice suffered by blacks over two centuries of American life. We will also look for opportunities—albeit on a much smaller scale—among other minority groups: Chicanos, Indians, women, children, the “white ethnics”—Mexican-Americans should not be doomed to relive the black experience and successful resolution of either problem could help solve the other.

The arts and humanities tell us who we are, who we have been, where we are disjointed, and what we might become. The perceptual and expressive concerns of the arts must become more central to general education. The moral and ethical concerns of the humanities must weave a thread through all our deliberations—both in our daily work and in our ultimate decisions as to who and what we support. There is a significant ground swell of interest and concern at all levels and age groups of our country (and the world) with the moral ordering of our priorities as a people and a nation. The Foundation must foster and encourage the movement to understand and rediscover ourselves—our historic beliefs and values, our diversity, our very purpose. The RF could play a vital role in an area which many foundations, universities, and Government have shunned.

The Quality of the Environment Program is undergoing intensive study even as national and international concern is mounting in this area of ultimate human concern.

Finally, I believe we are all either tired or bored with the doctrinaire approaches of the far right and far left. We are in the process of re-discovering and re-defining America. We need to be re-energized with the hope and faith that is based on the recognition of the real advances we enjoyed in the sixties.

We deserve to have our heads up, and we should always remember the words of William James: "Damn the absolute!"

The truth is, after all, plural and contingent, never fixed and absolute, and is forever in the making.

Let me finish with a quote from Waldemar Nielsen's book. I do so unashamedly because I can say I had no responsibility for the events which led to his conclusions. Is it necessary to add that the mass media did not use this quote in informing the American people of the book's contents? Nielsen states:

No institution, of course, can be all things to all men. Its quality has to be measured not by some theoretical standard of perfection but by comparison with other institutions. By this test The Rockefeller Foundation has been a great foundation: it has set high standards for itself; it has preserved its integrity; it has persevered in its efforts to fulfill its objectives; and it has major achievements to its credit. Indeed, judged by the magnitude of its contributions to human well-being over the years, The Rockefeller Foundation has accumulated an unrivaled record. In many ways it has been the standard against which the other "modern" foundations have measured themselves.

I can only hope that the next generation's historians will be able to say the same things—fortissimo, not sotto voce.

JOHN H. KNOWLES, M.D.
President

April 4, 1973

CONQUEST OF HUNGER

“Improving
the Prospects of
the Poorest”

More than two-thirds of the world's people live in the poorer nations—most of them depend on subsistence farming for a marginal livelihood. Average incomes are extremely low; most farms are small, some of them are fragmented; opportunities for education, health care, and other amenities are extremely limited. Rural people in these countries must glean an existence from long impoverished soils, using seed and production techniques largely unchanged from centuries past. Because of rapidly expanding populations, isolation, and the lack of opportunity, farm people, particularly the young, continue to move in large numbers to already overcrowded cities. Those who remain produce little for the urban markets. Because of scant cash income, they are unable to purchase the products of urban industry, thus stifling development of domestic markets and of job opportunities in the cities. Consequently, the talents and energies of rural dwellers, which represent a vast potential contribution to development, are not engaged in the tough struggle of nation building.

For 30 years The Rockefeller Foundation has worked at the improvement of farm productivity in the developing countries. It continues to do so in the belief that its contribution will improve the future prospects of large numbers of the poorest of the world's poor.

ASSISTANCE TO SMALL FARMERS

While available evidence indicates that use of high-yielding varieties of rice, wheat, and maize in Asia and the Middle East has in fact reached mostly small farmers, it seems clear that in some areas and some countries new strategies will be needed for farmers with small holdings. Technology itself is as useful for small farms as it is for large holdings, and is generally termed "scale neutral." On the other hand, conventional extension practices, availability of credit, and the supply of crucial fertilizers and pesticides are often denied the small farmer. Institutions and policies have tended to favor the larger farms operated on a cash basis.

Believing that strategies could be identified to bring benefits of rapidly advancing technology to bear on great numbers of small farms, the Foundation has supported several specific efforts on an exploratory basis. The widely known Puebla Project in Mexico, designed to assist some 50,000 families, continued to receive Foundation support (through the International Maize and Wheat Improvement Center) during the year as it reached the final stages of its usefulness as an experiment. Simultaneously, the Foundation has assisted the Foundation for the Promotion of Cooperatives in El Salvador under Father José Romeo Maeda, which involves some 12,000 families. The International Rice Research Institute, with special Foundation funds, has

undertaken—in cooperation with agencies in the Philippines—a three-year program to identify ways to speed the utilization of high-yielding technology by rice farmers not having access to water for irrigation.

Recognizing that Japan has been particularly successful in maintaining a high density of rural population while achieving crop yields among the highest in the world, the Foundation provided modest funds for studies, by authorities in Japan and at the University of Minnesota, of Japanese organization and methods. This information could be of substantial value to other countries facing problems similar to those which Japan faced two or three decades ago.

TECHNOLOGY FOR INTENSIVE AGRICULTURAL PRODUCTION

The improvement of income of rural people will, in most areas of the world, require substantial gains in farm productivity. This, in turn, will require the development of improved crop varieties and animal species, adapted to the conditions of the regions in which they will be used. The Foundation continues to emphasize the application of science to the development of improved technology for the developing countries, with particular emphasis on the basic food crops—the cereal grains, root crops, food legumes, beef, and swine.

In 1972 the Foundation continued to support the highly effective activities of several international agricultural research and training centers which the Ford and Rockefeller Foundations created in the 1960's in cooperation with the host governments concerned. These include the International Rice Research Institute (IRRI) in the Philippines, the International Maize and Wheat Improvement Center (CIMMYT) in Mexico, the International Center of Tropical Agricultural (CIAT) in Colombia, and the International Institute of Tropical Agriculture (IITA) in Nigeria. The Foundation in 1972 provided some \$2,970,000 toward the core support of these institutions out of a total of some \$15 million being provided by international banks, foundations, and national assistance agencies.

The Rockefeller Foundation has maintained an active interest and participation in the Consultative Group on International Agricultural Research, recently organized by the World Bank in consultation with the Development Programme and the Food and Agriculture Organization of the United Nations. This consortium of interested donors, now numbering some 29 governments, foundations, and international agencies, was successful in November 1972 in marshaling more than \$23 million for 1973 expenses of the original four institutes plus costs of two important new centers, the International Potato Center in Peru and the International Crops Research Institute for the Semi-Arid Tropics in India. These institutes enable many nations to obtain help in organizing national programs and campaigns for improvement of

rice, corn, wheat, sorghum and millets, chick peas, pigeon peas, cowpeas, and field beans. Work on cassava, field beans, beef, swine, rice, and corn for South America is under way at CIAT. IITA is concentrating on yams, sweet potatoes, cowpeas, and chick peas for the humid tropics; rice and corn for Africa; and new means of managing crops and soils to permit replacing the ancient and unproductive systems of "slash and burn" agriculture.

The Rockefeller Foundation continued in 1972 to support a special program of improvement of wheat headquartered in Turkey with emphasis on cold, hardy winter wheats and practices associated with items for use in the low rainfall areas typical of large sections of the Middle East. Cooperating in this effort are Oregon State University and CIMMYT. In Asia the Foundation continued to provide modest support for an Inter-Asian Corn Improvement Program serving some 10 nations; its headquarters are at Kasetsart University in Bangkok.

A Foundation sorghum improvement specialist has been assigned to Beirut to work with national programs throughout the Middle East-North Africa region. Grants for work on this crop also continued in 1972 at the University of Nebraska and at the East African Agriculture and Forestry Research Organization.

The Foundation's former International Potato Improvement Project, headquartered in Mexico, became a part during the year of the activities of the International Potato Center in Peru. One of the Project's completed activities was a three-year program of assistance to Pakistan.

In cooperation with agricultural authorities of North America and Europe, international donor agencies, and the developing nations, Foundation staff continued the study of need for additional international centers or programs which would permit each of the developing nations to have access to technology and training facilities required for the improvement of its own agriculture. Considering that the technology must be specifically adapted for every season of every region of every nation, the task ahead for the world agricultural community is indeed massive and complex. Only a beginning has been made, but some of the more immediate needs of some nations have been met.

GERMPLASM

During the past 30 years The Rockefeller Foundation, in cooperation with many others, has been involved in the collection, evaluation, and maintenance of collections of the world's major food crops. Thousands of strains of rice, wheat, corn, sorghum, millets, and other crops have now been brought together in storage and are in use by scientists at many national and international centers. During 1972 the Foundation made funds available to

CIMMYT for the collection of additional wheat and corn varieties from areas not adequately sampled or where advances of the Green Revolution are rapidly replacing native strains. Additional funds went to IRRI for similar purposes for rice and to the University of Illinois for assistance with sorghum and millets.

NUTRITION

Many of the Foundation's activities over the years have been concerned with the health and nutrition of people in the poorer areas of the developing countries. The entire agricultural effort of the Foundation is in a sense designed to contribute to both improved diets and the increased incomes which permit families to diversify and increase food intake.

Considering that 50 percent of the world's protein for food is contributed by cereal grains, the Foundation has assisted a number of international institutes, universities in the developing countries, and other centers to develop capabilities of identifying crop strains high both in total protein and in nutritional value of that protein. During the past year programs related to this goal were supported at the Australian National University, at the University of Valle in Colombia, at Kasetsart University in Thailand, and at Washington State University. Studies of protein malnutrition in infants and preschool children were supported at the University of Chile, and Mahidol University, in Thailand, received Foundation funds for support of nutritional activities as part of its community health program.

LEADERSHIP DEVELOPMENT

During 1972 scholarships and fellowships in the agricultural sciences were awarded to some 40 persons from 11 countries to permit them to receive advanced training at universities in the United States, in Mexico, the Philippines, and other countries. The total awards for advanced training of agricultural specialists passed the 1,700 mark in 1972. The increasing number of trained people in the less-developed nations of the world has in recent years permitted the establishment of international professional associations to link authorities in various institutions. The Foundation provided modest support for the Secretariat of the Latin American Association of Plant Science and the recently organized Association for the Advancement of Agricultural Sciences in Africa.

Selective support has also been given to emerging centers of graduate study in the developing countries, primarily through the Foundation's University Development Program described elsewhere. This includes assistance to the University of Ibadan in Nigeria; the universities of Makerere and Nairobi in East Africa; Kasetsart University in Thailand, and the University

of the Philippines. In addition, Foundation support has permitted—on an experimental basis—joint training at the Ph.D. level by the Indian Agricultural Research Institute and the International Rice Research Institute. Mexico's graduate School of Agriculture at Chapingo continues to receive Foundation support of its efforts to develop Latin America's first strong institution granting the Ph.D. degree in agricultural sciences. Support at a modest level continued to go to the Indian Agricultural Research Institute in New Delhi, an institution which has had Foundation assistance since its organization some 15 years ago.

GRANTS AND PROGRAMS APPROVED IN 1972

INTERNATIONAL COOPERATIVE PROGRAMS

Field Staff	\$883,640
Publications	37,190
International Conferences	30,990
	<u><u>\$951,820</u></u>

AUSTRALIA

AUSTRALIAN NATIONAL UNIVERSITY: modification of amino acid composition of plants by mutation. \$14,720.

CHILE

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

COLOMBIA

INTERNATIONAL CENTER OF TROPICAL AGRICULTURE: completion of headquarters facilities, \$2,075,195;

UNIVERSITY OF VALLE: improvement of protein quality in food plants, \$33,000.

COSTA RICA

INTER-AMERICAN INSTITUTE OF AGRICULTURAL SCIENCES: operation of the Secretariat of the Latin American Association of Plant Science. \$15,000.

EL SALVADOR

FOUNDATION FOR THE DEVELOPMENT OF COOPERATIVES: increase of agricultural productivity among small landholders. \$97,415.

ETHIOPIA

ASSOCIATION FOR THE ADVANCEMENT OF AGRICULTURAL SCIENCES IN AFRICA: operating costs of the secretariat. \$15,000.

INDIA

INDIAN AGRICULTURAL PROGRAM: administrative and operating costs, support to the All-India Coordinated Rice Improvement Project, and other approved projects, \$135,000.

KENYA

EAST AFRICAN AGRICULTURE AND FORESTRY RESEARCH ORGANIZATION: improvement of the yield, grain quality, and protein value of sorghum, \$45,000.

UNIVERSITY OF NAIROBI: increase of protein quality in fish, \$7,900.

MEXICO

INTERNATIONAL MAIZE AND WHEAT IMPROVEMENT CENTER:

International Potato Improvement Project:

Operating costs of the Mexican Regional Program of the International Potato Center, Peru, \$137,625;

Operation of an accelerated potato production program in West Pakistan and an in-service training program in Mexico, \$16,200;

Separation payments to employees in Mexico, \$12,200;

Equipment for evaluation of environmental differences that influence potato growth, \$10,000;

Cooperative work between the Toluca Valley experiment station and the International Potato Improvement Project in Mexico, \$5,000.

Promotion of increased production of maize in an area of high population density in the State of Puebla, \$73,326.

NATIONAL SCHOOL OF AGRICULTURE:

Development of graduate work at the Ph.D. level, \$60,000.

PHILIPPINES

INTERNATIONAL RICE RESEARCH INSTITUTE:

Completion of the collection of the world germplasm of rice, \$28,620;

Experimental program to increase the productivity of disadvantaged Asian rice farmers, \$23,400;

Joint Ph.D. training program with the Indian Agricultural Research Institute, \$17,725.

SUDAN

AGRICULTURAL RESEARCH CORPORATION: equipment for wheat improvement program, \$5,700.

TAIWAN

JOINT COMMISSION ON RURAL RECONSTRUCTION: Taiwan Fisheries Research Institute's program on fish ecology and management, \$25,000.

THAILAND

KASETSART UNIVERSITY: improvement of protein in rice, \$1,300.

MAHIDOL UNIVERSITY:

Research on the relationships between malnutrition and resistance to infection, \$10,000;
Department of Biochemistry, applied nutrition research program, \$14,000;
Research in the Department of Pathology on aflotoxin-producing molds, \$13,700.

TURKEY

WHEAT IMPROVEMENT PROJECT IN THE MIDDLE EAST:

Salaries of the breeder and pathologist, \$62,000;
Local recurrent expenses, \$55,300;
Supplies and equipment, \$41,340;
Program support of staff members, \$9,600.

UNITED KINGDOM

OVERSEAS DEVELOPMENT INSTITUTE, England: research program to be conducted with the University of Reading designed to develop improved administrative methods and institutions for agricultural development, \$15,000.

UNIVERSITY OF GLASGOW, Scotland: trypanosomiasis research, \$15,000.

UNITED NATIONS FOOD AND AGRICULTURE ORGANIZATION

Pilot for a computerized agricultural research information system, \$15,000;
Symposium on nutritional improvement of food legumes, \$2,500.

UNITED STATES

ASSOCIATES OF THE NATIONAL AGRICULTURAL LIBRARY, Maryland: to assist visiting scholars, \$5,000.

ATLANTIC COUNCIL OF THE UNITED STATES, District of Columbia: study on "U. S. Agriculture in a World Context," \$25,000.

CORNELL UNIVERSITY, New York: research on cold tolerance in maize, \$15,000.

EAST-WEST CENTER, Hawaii: study by East-West Food Institute of fisheries-related problems of the Pacific region, \$4,800.

GORDON RESEARCH CONFERENCES, Rhode Island: Conference on plant cell and tissue culture, \$4,000.

INDIANA UNIVERSITY FOUNDATION: research on electrolyte transport in the small intestine aimed at lowering infant mortality due to nonspecific diarrhea, \$12,150.

KANSAS STATE UNIVERSITY: research on intergeneric crosses involving wheat, barley, and oats, \$12,000.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY: establishment and operation of an international nutrition planning and training center to experiment with the development of an integrated approach to nutrition planning which may be helpful to nations most in need of it, \$230,000.

MICHIGAN STATE UNIVERSITY: comparative study of vole and rat bioassays for dietary protein quality, \$16,500.

NATIONAL ACADEMY OF SCIENCES, District of Columbia: study of efficiency of agricultural production in the United States, \$50,000.

NORTH CAROLINA STATE UNIVERSITY: research on rice blast disease, \$10,000.

SAINT LOUIS UNIVERSITY, Missouri: equipment for the Anemia and Malnutrition Research Center, University of Chiang Mai, Thailand, \$31,700.

STANFORD UNIVERSITY, California: research on the economic, cultural, and technical determinants of change in tropical African agriculture, \$14,600.

UNIVERSITY OF CALIFORNIA:

Davis

Study of hybridization of plants, \$14,940;

Riverside

Research on rooting behavior and nematode control in wheat production, \$40,000.

UNIVERSITY OF ILLINOIS: support of a long-range project in the Crop Evolution Laboratory to collect, classify, and preserve the world germplasm of sorghum and millets, \$13,500.

UNIVERSITY OF MINNESOTA:

Research under the direction of its Economic Development Center on "Technology, Institutions, and Development: Minnesota Agriculture, 1880-1970," \$13,000;

Study of small farms in Japan, \$12,900.

UNIVERSITY OF WISCONSIN:

Research to increase yield and adaption of cultivated tetraploid potatoes, \$15,000;

Research on "Microeconomic Decisions and the Long-Run Development of Agriculture," \$5,965.

UTAH STATE UNIVERSITY: assistance to its College of Agriculture in range and livestock research projects in the State of Zacatecas, Mexico, \$2,500.

WASHINGTON STATE UNIVERSITY: research on nutritional qualities of major cereal crops, \$15,000.

PROBLEMS OF POPULATION

“Underfinanced,
Understaffed,
and Overburdened”

Population specialists continue to pursue three basic goals whose conjunction is seen as the best hope of keeping man's numbers from making the earth uninhabitable: to gain a better understanding of human reproduction so as to develop better means of fertility control; to broaden perspectives on the social, economic, and psychological forces that move people to restrict family size; and to translate this information into practical policy and action. The Rockefeller Foundation is supporting several related avenues of approach to these objectives, notably a series of special fellowships for outstanding researchers in reproductive biology in addition to grants to university departments and laboratories for work in this field. The Foundation also makes grants to individuals and to institutions for relevant studies in the social sciences, and makes awards for research, training, and community service in family planning both in the United States and abroad. Work in public education and diffusion of information is also being given support, as are several important projects devoted to evaluation of ongoing or recently terminated programs.

RESEARCH IN REPRODUCTIVE BIOLOGY

Population control, for all the progress it has made, is still handicapped by its rudimentary technology. The contraceptive measures most commonly used—the anovulant pill and the intrauterine coil—have serious drawbacks, especially for large-scale public programs in developing areas, which are usually underfinanced, understaffed, and overburdened. Discovery of a simple, safe, inexpensive, acceptable birth control technique is probably the greatest hope for achieving a rapid and dramatic breakthrough in fertility control. Studies in reproductive biology are currently going forward in many universities and research centers with funding from national and private sources. One major effort is being sponsored by the Population Council, whose International Committee for Contraceptive Research is screening developments in a worldwide intensive program which got under way last year with Foundation sponsorship and this year received continued support.

The Foundation again this year provided support for reproductive biology research and training at university centers in the United States and elsewhere, particularly where an outstanding scientist or research group is doing pioneering work or where the grant will serve to build up the research potential of a department of obstetrics-gynecology. A few distinguished centers devoted exclusively to studies in reproductive biology, like the Harvard Laboratory of Human Reproduction and Reproductive Biology, are also receiving support. A grant made to Harvard this year will underwrite research expenses of a team to be installed at the Laboratory starting in 1973; the

sixth major research group to be associated with the Laboratory, it will work on hypothalamic-releasing hormones, ovarian function, steroid binding receptor proteins, and the formation of estrogens in the brain.

Many of the grants made to institutions subsidize an original approach or line of investigation not likely to be eligible for funds from conventional sources. A grant to the University of Pennsylvania supports a well-advanced project in reproductive endocrinology involving artificial inhibition of testicular and ovarian steroid hormones which may lead to new approaches to preventing conception. Another group, at the University of Pennsylvania's Monell Chemical Senses Center, received support for research on the chemical signals and messengers known to be involved in animal mating and conception and on possible analogs in human fertility. Powerful new techniques of chemical analysis may permit more precise characterization of subtle vestigial changes in the human ovarian cycle and thus lead to a simple means of recognizing fertile and infertile intervals. Bristol University in England received support for the establishment of a research team focusing on the immune mechanisms that operate at different stages of the reproductive process. More exact knowledge of these reactions might permit extremely precise contraceptive intervention, which would be safer than such relatively crude methods as suppression of ovulation, with its frequent side effects.

SPECIAL FELLOWSHIP PROGRAM

This year seven special research awards were made, in a projected series designed to recruit the exceptional investigator in the search for better fertility curbs. The fellowships went to outstanding young scientists for projects in reproductive biology: the program's dual purpose is to increase the number of people working in this field and to attract to it the highest order of scientific talent. The awards are aimed at encouraging interests that fall more or less outside the orthodox career-ladder framework. They represent a timely response to the growing tendency among young scientists to look for work that has visible relevance to today's pressing social problems as well as inherent scientific challenge. They are aimed also at the man trained in reproductive biology whose project interest may lie in a different field: the special fellowship gives him a chance to take time off for an interval of intensive work in an adjacent discipline, which may result in new insights and new approaches to research in human reproduction and contraceptive development. The fellowships also provide research and training opportunities for recent graduates in obstetrics and gynecology, offering them a stepping stone toward academic careers as an alternative to private practice. Strengthening obstetrics-gynecology as an academic discipline is a long-

range goal toward which the Foundation has made significant contributions in the past through grants to universities and medical schools throughout the country.

GRANTS IN THE SOCIAL SCIENCES

Increasing Foundation emphasis is being placed on support for research in the social-science aspects of population problems. Short-lived successes and near-failures of past programs, especially in developing countries, have often been traced to a lack of understanding of how economic forces such as income levels and social factors, women's opportunities and options, affect overall population growth rates; or how family structure, cultural pressures, and expectations for the future in terms of longevity, infant mortality, and economic security, influence individual attitudes toward family size. Formulation of public policy as well as the specifics of action and educational programs require an overview that the demographer, the economist, the sociologist, and specialists in related fields can help to sharpen.

Grants made in this area cover a broad band of research, training, and action. A series of awards for individual studies of the social science and legal aspects of population issues was continued in cooperation with the Ford Foundation. This year 26 winning projects were announced, 8 of them to be sponsored by The Rockefeller Foundation (see page 28). The program is designed to encourage social science and legal scholars to turn their minds to subjects that will cast light on some of the questions facing policy makers and planners in such crucial areas as the relation between population and laws relating to housing, property, education, and health; international cooperation on population policies; possible economic effects of zero population growth; effects of economic planning policies on migration and urbanization; the effects on population of changes in the status and roles of women. This year the grantees come from seven countries and represent 15 disciplines including law, political science, economics, psychology, epidemiology, and city planning.

Also given support was a program of research and training at the University of Pennsylvania's Population Studies Center, dealing with the little-understood relationships between socioeconomic conditions and levels of fertility in developing countries. The curriculum offers training in demography, economics, political science, and sociology, and since a large number of the scholars are from the developing nations, new graduate courses are being introduced which will stress the interrelations between population dynamics and economic development. Graduate thesis research will also be guided into these channels so that students from developing areas will be better equipped to deal with the problems facing their own nations.

Formulation of national population policy is the concern of a consortium of eight population study groups from Latin American nations, known as CLACSO (Commission for Population and Development of the Latin American Social Science Council), which this year launched a cooperative regional program of social science research. Areas pinpointed as urgently needing clarification in these countries include the relationships between population growth, employment, and income distribution; the relationships between population growth, social stratification, and political instability; the economic, social, and political implications of rapid urbanization resulting from farm-to-city migration; and the social, cultural, economic, religious, and political factors that influence decisions about family size. The group plans to support research on these questions in the cooperating countries, with a view to influencing national policy makers. Training of more social scientists in population analysis and policy formulation is also part of the platform. The Colegio de México, which is handling grants made to the consortium, received Foundation funds this year for support of research costs for the regional program. Participating research centers are in Brazil, Mexico, Argentina, Colombia, and Chile; the United Nations Latin American Demographic Center, located in Santiago, will be the coordinating unit.

FAMILY PLANNING ASSISTANCE

Support for the organization and operation of family planning centers and training for family planning workers both in the United States and abroad has been an important Foundation commitment in the past. This year the Foundation continued to provide funds for special purposes.

A grant of \$3 million to the Population Council will support the work of its Technical Assistance Division and its fellowship program for the next three years, contributing to the Council's yearly budget of about \$17 million. The Population Council is probably the world's most influential organization dealing with problems of population. The Technical Assistance Division helps with the development of family planning programs throughout the world, at the request of governments; its staff includes both physicians and social scientists. Its International Postpartum Program, begun in 1965 with aid from the Foundation, has been a notable success, and has spearheaded similar efforts by other agencies. The Division is now undertaking a series of experimental projects aimed at bringing low-cost maternal and child health care to poor rural areas of Asia, Africa, and Latin America as a practical framework for offering family planning. Fellowships awarded by the Council emphasize training of specialists from developing countries, who can contribute to building local research and teaching institutions and lead national family planning programs.

Another important organization which has a distinguished record of effective work in the field of family planning is the American Friends Service Committee; a Foundation grant made this year will support its ongoing programs.

Family planning services for the Albany area of upstate New York will be developed by the Albany Medical College with the aid of Foundation funds made available this year. Starting with a core educational program for medical students, residents, and nurses, the project, run by the Department of Obstetrics and Gynecology, will eventually branch out to offer training over a wider region, including continuing education for physicians. The Department also plans to introduce instruction for postpartum patients in hospitals, using a closed-circuit television technique that was developed at the Harlem Hospital Center in New York. The program will serve a 19-county area with a population of 2,200,000.

Several other centers received grants for educational and information programs in family planning, including the Planned Parenthood Association of Maryland, the Population Crisis Committee, and Yale University; and abroad, institutions in Indonesia, Iran, and the Philippines.

GRANTS AND PROGRAMS APPROVED IN 1972

INTERNATIONAL COOPERATIVE PROGRAMS

Field Staff in community planning	\$ 48,090
Publications	8,250
International Conferences	<u>16,500</u>
	<u><u>\$ 72,840</u></u>

PROGRAM OF SOCIAL SCIENCE AND LEGAL RESEARCH ON POPULATION POLICY:

COLUMBIA UNIVERSITY: to enable professors John U. Farley and Maurice Wilkinson to undertake research on the effects of traditional economic policy instruments on population growth patterns, \$22,485.

LATIN AMERICAN CENTER OF DEMOGRAPHY, Chile: to enable Dr. Gerardo González Cortés to complete research on the role of decision-making in the formulation of population policy in Chile, \$8,195.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY: a cross-cultural study to be conducted by Professor Wayne A. Cornelius, Jr., of politicization and demand-making behavior among low-income migrants to large cities, \$30,690.

PENNSYLVANIA STATE UNIVERSITY: micro-economic analysis of a Colombian family planning program by William J. Kahley, Department of Economics, \$20,570.

PRINCETON UNIVERSITY: completion of a study by Dr. Richard E. Bilsborrow on the effects of population growth on economic development, \$4,291.

UNIVERSITY OF CALIFORNIA, Berkeley:

Research to be conducted by Mrs. Louise Resnikoff on the relationship of population pressure to land use and agricultural innovation among the Waluguru of Tanzania, \$19,133;

To enable Patricia Anglim to complete research on support for Ghana's family planning policy, \$4,125.

UNIVERSITY OF HAWAII: research to be conducted by Dr. Bertrand Renaud on population distribution, changes in the urban structure, and regional economic development in Korea, \$13,857.

UNIVERSITY OF MICHIGAN: research to be conducted by Dr. Aram A. Yengoyan and Dr. Daniel G. Bates on rural population, family structure, and modes of production in the Philippines and Iran, \$3,696.

UNIVERSITY OF TORONTO, Canada: research to be conducted by Professor Janet W. Salaff on the motivation for delayed marriage for Hong Kong women, \$14,058.

UNIVERSITY OF WISCONSIN: research to be conducted by Peter H. Lindert on fertility, land, and income distribution, \$19,979.

CANADA

QUEENS UNIVERSITY, Ontario: basic science research position in reproductive biology in the Department of Obstetrics and Gynecology, \$47,800.

GHANA

UNIVERSITY OF GHANA: study of the processes of cyclical labor migration in West Africa. \$2,500.

INDONESIA

GADJAH MADA UNIVERSITY: regional conference of Asian universities on population education, \$15,000.

UNIVERSITY OF INDONESIA: teaching of family planning in the Faculty of Medicine, \$15,000.

IRAN

PAHLAVI UNIVERSITY: teaching of population and family planning in the School of Medicine. \$15,000.

MEXICO

EL COLEGIO DE MEXICO: research on problems relevant to the formulation of national population policies in Latin America to be conducted under the supervision of the Commission for Population and Development of the Latin American Social Science Council, \$100,000.

PERU

CAYETANO HEREDIA UNIVERSITY OF PERU: research in reproductive endocrinology, \$15,000.

PHILIPPINES

CHILDREN'S MEDICAL CENTER: study of the potential of midwives as motivators for family planning, \$15,000.

NATIONAL SCIENCE DEVELOPMENT BOARD: study of effectiveness of motivators attached to clinics of the Family Planning Organization, \$12,500.

XAVIER UNIVERSITY: development of research and training programs in demography and population studies, \$15,000.

THAILAND

MAHIDOL UNIVERSITY:

Research in reproductive biology in the Faculty of Science and Ramathibodi Faculty of Medicine, \$15,000;

Research in reproductive immunology in the Department of Microbiology, Faculty of Science, \$13,500.

UNITED KINGDOM

UNIVERSITY OF BRISTOL: research group in reproductive immunology in the Department of Pathology, \$300,000.

UNITED STATES

ALBANY MEDICAL COLLEGE, New York: educational program in family planning in its Department of Obstetrics and Gynecology, \$300,000.

AMERICAN BUREAU FOR MEDICAL AID TO CHINA, New York: teaching program in population and family planning in Taiwan, \$25,000.

AMERICAN FRIENDS SERVICE COMMITTEE, Pennsylvania: family planning programs, \$54,000.

ASSOCIATION OF AMERICAN MEDICAL COLLEGES, District of Columbia: regional seminars on the teaching and practice of family health in Africa, \$7,500.

ASSOCIATION FOR THE STUDY OF ABORTION, New York: evaluation of its activities, \$15,000.

BAYLOR COLLEGE OF MEDICINE, Texas: research and evaluation of a program in family planning, \$50,000.

CITIZENS COMMITTEE ON POPULATION AND THE AMERICAN FUTURE, District of Columbia: operating costs, \$25,000.

EAST-WEST CENTER, Hawaii: pilot study of the generation and diffusion of adaptive technology in a developing country, \$14,620.

EMORY UNIVERSITY, Georgia: nursing student summer program in the teaching of family planning, \$5,900.

HARVARD UNIVERSITY, Massachusetts:

Research in the Laboratory of Human Reproduction and Reproductive Biology of the Medical School, \$500,000;

Development of a program on population, maternal and child health, and nutrition in Haiti, \$24,000;

Research training program at the Laboratory of Human Reproduction and Reproductive Biology, \$5,000.

JAMES MADISON CONSTITUTIONAL LAW INSTITUTE, New York: program in population law, \$50,000.

PENNSYLVANIA STATE UNIVERSITY: Basic science research position in the Department of Obstetrics and Gynecology at its Milton S. Hershey Medical Center, \$210,000.

PLANNED PARENTHOOD ASSOCIATION OF MARYLAND: development of a program in population and family planning education in collaboration with the Baltimore City Public Schools, \$86,000.

POPULATION COUNCIL, New York:

Fellowship program, and the program of its Technical Assistance Division, \$3,000,000; For its International Committee for Contraceptive Research, \$500,000.

POPULATION CRISIS COMMITTEE, District of Columbia: educational program in population, \$25,000.

UNIVERSITY OF ALABAMA: basic science research position in reproductive biology in the Department of Obstetrics and Gynecology, \$136,500.

UNIVERSITY OF MIAMI: research in reproductive immunology, \$15,000.

UNIVERSITY OF MICHIGAN: analytical study by its Center for Population Planning, School of Public Health, of family planning technical assistance programs of multilateral agencies, \$15,000.

UNIVERSITY OF NORTH CAROLINA: analysis of the organization and function of university population centers, \$34,000.

UNIVERSITY OF PENNSYLVANIA:

Comprehensive study by its Monell Chemical Senses Center of volatile substances of functional and diagnostic significance in human reproduction, \$350,000;

Training and research program in its Population Studies Center on the interaction of population growth and socioeconomic development in the developing nations, \$265,000;

Training program for family planning workers, \$7,900.

YALE UNIVERSITY, Connecticut: educational and training program in population and family planning under the direction of the Department of Obstetrics and Gynecology, \$10,000.

WAKE FOREST UNIVERSITY, North Carolina: research in reproductive immunology in the Department of Obstetrics and Gynecology of its Bowman Gray School of Medicine, \$98,000.

WASHINGTON UNIVERSITY, Missouri: study of the teaching of family planning and population in medical schools in the United States. \$22,000.

WAYNE STATE UNIVERSITY, Michigan: reference book on the pathology and physiology of human reproduction and fertility regulation, \$5,000.

UNIVERSITY DEVELOPMENT

“A Beginning,
Middle,
and an End”

The Foundation in 1972 completed a decade of assistance to universities in the developing countries. Its work was favorably reviewed in June 1972 at a conference in Bellagio, Italy, of the heads of the major international donor agencies meeting to consider problems of education in the less developed countries. The International Council for Educational Development published a rather extensive description of the effort entitled "Higher Education for National Development: One Model for Technical Assistance." An international commission on cultural relations characterized the program as an outstanding "success story."

The first decade of assistance under the program demonstrated that institution building was as appropriate and definable a task in higher education as it had proved to be for the two score schools of public health assisted by the Foundation in the 1920's and the area studies centers in the 1950's. The rationale of the University Development Program was from the outset rooted in the tradition of institution building plus the belief that, for the less developed countries, the missing factor was educated people and trained leadership. Needed were not only the doctors, engineers, economists, and agronomists who would chart the nation's course, but those who could multiply themselves by training other men to fill such posts.

A second part of the rationale was that a concentrated attack on a single urgent problem, while necessary, is insufficient. Often the only thing worse than failure may be success. It is imperative to identify pressing human needs, but no less imperative to grasp their interrelationships. The earlier triumphs of public health in reducing mortality have had some part in ushering in the population explosion. The Green Revolution of the 1960's will ultimately prove successful only if its relationship with employment, land reform, internal migration, and political structures is recognized.

To contribute to university development, it was essential that the Foundation have a plan with a beginning, a middle, and an end. In operational language, it had "to get in and get out."

The Foundation's plan envisaged at least four distinct phases, varying from country to country in their application. Phase I involved assistance to speed the transition from a colonial to a national university. Toward this end, the Foundation made available on long-term assignments, a few career members of its professional staff. Also involved was the identification and definition of discrete and manageable areas of assistance in which the Foundation had the experience and competence to be helpful. Phase II signaled the emergence of national leadership. If Phase I required a critical mass of outside educators and institution builders, Phase II called for a very few.

low-profile consultants. Phase III marked the putting to work of new capacities, planning for graduate programs, serving the community, and turning emergent human resources toward the solution of national and regional problems. Phase IV was the time for giving to others by those who had received. It saw first-generation university development centers helping second-generation centers. Thus leaders from the University of Valle in Colombia are now at work helping the University of Bahia in Brazil, as are leaders of the older universities in East Africa at the University of Zaïre.

To be effective, a plan must be flexible, taking its cues from the strengths and weaknesses within each institution and adapting its timetable to changing needs. Institutions differ and therefore patterns of assistance vary. Nevertheless, there must be a plan, a timetable, and defined stages.

Three major developments marked the year 1972. First, programs of relevant graduate studies were launched or strengthened in certain centers, with great benefit and prestige to the nations concerned. For example, the Government of Thailand reported savings of nearly a million dollars in foreign exchange and other costs through the training of 90 graduate students in the biomedical sciences at its own Mahidol (Medical Sciences) University, using \$10,000 as the cost of sending one student abroad for advanced scientific training. The Government of the Philippines profited not only from training Philippine and other Asian economists at the Faculty of Economics of the University of the Philippines, but from the task forces in land reform and income distribution to which the faculty contributed experienced leadership. In Latin America, training for health scientists was made more economical and relevant through the use of the resources of what has become the strongest regional program, namely the University of Valle. It is noteworthy that as these institutions in the later phases of their development reached out to help themselves and others, Foundation assistance and personnel markedly diminished.

Secondly, programs that serve the local community increasingly took root. In 1972, the University of Valle continued to support, as did the community, the program of health services in Candelaria which had been launched with Foundation leadership and support. The Bureau of Resource Assessment and Land Use Planning at the University of Dar es Salaam in Tanzania provided continuing advice and leadership in these important areas, as did the Economic Research Bureau in the vital sector of rural development. The University of Ibadan in Nigeria, which in the decade of Foundation assistance had moved from a Nigerian component of staff comprising only 20 percent of total faculty to more than 70 percent, launched a new program of integrated rural development in a rural community close to Ibadan.

Thirdly, universities strengthened cooperative programs with governments directed at national problems. The Institute for Development Studies at the University of Nairobi in Kenya joined with government economists in an effort to strengthen economic planning while at the same time giving increasing attention to rural development. In the Philippines, the Comprehensive Community Health Program, initiated by the University of the Philippines and The Rockefeller Foundation for a rural community in Luzon, became increasingly a nationally supported effort. In Thailand, the corn and sorghum program, assisted by the Foundation and involving both Kasetsart University and the Ministry of Agriculture, received increased national support.

These and other programs mark the changing emphasis in mature university development centers at the same time that new centers are receiving attention in Brazil, Indonesia, and Zaïre. Assistance to them will also follow a plan with a beginning, a middle, and an end.

GRANTS AND PROGRAMS APPROVED IN 1972

INTERNATIONAL COOPERATIVE PROGRAMS

Field Staff	\$1,547,620
Visiting Faculty	445,500
Project Support	524,100
Publications	900
International Conferences	8,300
	<hr/>
	<u>\$2,526,420</u>

COLOMBIA

UNIVERSITY OF VALLE:

Rockefeller Foundation International Program in University Development, visiting faculty requested by the University of Valle:

Dr. Farzam Arbab to continue as visiting professor of physics;

Dean H. Wilson to continue as visiting professor, Division of Engineering;

Scholarships for graduates, \$57,000;

Library acquisitions for graduate programs. \$55,600;

Division of Sciences:

Equipment and supplies, \$34,000;

Research projects, \$1,662;

Division of Humanities:

Equipment, \$10,000;

Research program, \$906;

Division of Health Sciences, three research projects, \$6,319;

Division of Engineering, equipment and supplies, \$2,966.

GHANA

ASSOCIATION OF AFRICAN UNIVERSITIES: workshop on problems of the African university, \$15,000.

INDONESIA

GADJAH MADA UNIVERSITY:

Construction of staff housing, \$60,000;

Costs related to the development of programs at Indonesian institutions of higher education, \$58,500;

Faculty of Forestry, equipment, \$20,000;

Participation by staff in instructional, research, extension, and developmental programs conducted by national and international agencies, \$20,000; .

English language training for prospective scholarship candidates in agriculture, \$13,000;

Study of problems of university development in Asia, Africa, and Latin America, \$5,000;

Regional symposium on tropical plant protection, \$2,000.

KENYA

UNIVERSITY OF NAIROBI:

Rockefeller Foundation International Program in University Development, visiting faculty requested by the University of Nairobi:

John H. Power, University of Hawaii, Honolulu, to continue as visiting research professor, Institute for Development Studies;

Continuation of Dr. C. Kenneth Prewitt's assignment as visiting senior research fellow. Institute for Development Studies;

Institute for Development Studies, continued support of research and staff development, \$75,000;

Department of Economics: support of East African graduate scholars in the B. Phil. program, \$15,125;

Department of Government:

Research and preparation of teaching materials, \$13,625;

Staff development, \$6,517;

Assignment of an investigator to do research on the economic returns to the various educational investments in Kenya, \$11,500;

Expansion of the regional activities of the Universities of East Africa, \$9,980;

Department of Linguistics and African Studies, further development of its research and training program, \$5,600;

Institute for African Studies, four experimental workshops in music and dance, \$5,600;

Department of Sociology, teaching and research, \$5,260;

Faculty of Veterinary Science, staff development, \$5,000.

NIGERIA

AHMADU BELLO UNIVERSITY, development of a teaching and research program in agricultural marketing, \$6,500.

UNIVERSITY OF IBADAN:

Rockefeller Foundation International Program in University Development, visiting faculty requested by the University of Ibadan:

Dr. Richard C. Maxon, Iowa State University, as visiting senior lecturer, Department of Agricultural Economics;

Studies of employment opportunities and policies in Nigerian agriculture, \$60,482;

Faculty of Medicine, arbovirus research, \$15,000;

Faculty of Social Sciences, graduate training, \$43,000;

Faculty of Agriculture, Forestry, and Veterinary Science, graduate training, \$36,850;

Research on problems of employment of graduates of the university, \$24,383;

Department of Economics, staff development, \$11,600;

Department of Political Science, staff development, \$9,620;

Department of Agricultural Economics and Extension, postdoctoral fellowship, \$9,580;

Establishment of West African Association of Agricultural Economists, \$8,736;

Appointment of an Acting Director for its Computer Centre, \$8,525;

Support of a postdoctoral fellow in economics, \$6,865;

Department of Chemistry and Hematology, research on hemoglobins, \$6,500;

Department of Agricultural Economics and Extension, staff development, \$5,050;

Department of Animal Science, staff development, \$4,500.

UNIVERSITY OF LAGOS: Human Resources Research Unit, investigation of unemployment and human resource utilization in Nigeria, \$30,000.

PHILIPPINES

UNIVERSITY OF THE PHILIPPINES:

Comprehensive Community Health Program, \$69,783;

School of Economics for scholarships, research, library support, and equipment, \$40,950;

Social Sciences and Humanities Center, equipment, \$1,222.

TANZANIA

UNIVERSITY OF DAR ES SALAAM:

Rockefeller Foundation International Program in University Development, visiting faculty requested by the University of Dar es Salaam:

Dr. Goran Hyden to continue as visiting senior lecturer Department of Political Science;

Dr. Abdul A. Jalloh as visiting senior lecturer Department of Political Science;

Dr. Gerhard Tschannerl to continue as research fellow Bureau of Resource Assessment and Land Use Planning;

Economic Research Bureau, rural development, \$25,000;

Bureau of Resource Assessment and Land Use Planning, research and teaching in geography, \$18,103;

Faculty of Arts and Social Sciences, professional training of two members of the faculty, \$14,900;
Staff development in economics, \$14,850;
Department of Economics and Sociology, teaching through research programs, \$9,450;
Preparation of three issues of the *African Review*, \$8,400.

THAILAND

KASETSART UNIVERSITY:

Research support and operating costs of the agricultural program, \$174,900;
Graduate assistantships in agriculture, \$37,800;
Faculty of Agriculture, research leadership positions, \$5,000;
Advisory services by visiting agricultural specialists, and study and observation visits by selected university staff, \$5,000.

MAHIDOL UNIVERSITY:

Rockefeller Foundation International Program in University Development, visiting faculty requested by Mahidol University:
Dr. Harjadi Dhanutirto, University of Indonesia, as research associate, Department of Physiology;
Dr. Siti Dawiesah Ismadi, Gadjah Mada University, as research associate, Department of Biochemistry;
Dr. Adrian J. Lamb to continue as research associate, Department of Biochemistry;
Dr. Richard J. Littleton to continue as research associate, Department of Microbiology;
Faculty of Science, research and teaching equipment and support of graduate programs in the life sciences, \$169,050;
Ramathibodi Faculty of Medicine, research equipment, \$85,000;
Development of a self-instructional program in pharmacology, \$12,670.

THAMMASAT UNIVERSITY:

Rockefeller Foundation International Program in University Development, visiting faculty requested by Thammasat University:
Dr. Bevans D. Mabry to continue as visiting professor, Faculty of Economics;
Social Sciences Association of Thailand for publication of social science textbooks in Thai, \$45,589;
Faculty of Liberal Arts: research on the concept of evil in Thai, Asian, and Southeast Asian drama, \$10,755;
Faculty of Economics:
Scholarships in the M. Econ. program, \$9,690;
To establish an Economic Research Project, \$6,000;
Research on income distribution in Thailand, \$2,650;
Research for a volume on cultural development in Thailand, \$3,000.

UGANDA

MAKERERE UNIVERSITY:

Rockefeller Foundation International Program in University Development, visiting faculty requested by Makerere University:

Dr. William J. Flocker, University of California, Davis, as visiting professor, Department of Soil Sciences;

Dr. Alfred A. J. Francis, University of the West Indies, as senior lecturer, Department of Economics;

Dr. Dean L. McIlroy, Jr. to continue as lecturer, Department of Animal Science and production;

Dr. Gerald Thierstein to continue as senior lecturer, Department of Agriculture, Engineering, and Land Planning;

Faculty of Agriculture:

Faculty development and research, \$52,000;

Equipment, \$3,000;

Research, teaching, and graduate studies in political science, \$13,140;

Faculty of Social Sciences, teaching and research, \$10,500;

Department of Geography, research on spatial distribution of retail and service centers in the Kampala region, \$3,674;

Conference of East African university administrators held at Lusaka, Zambia, \$3,040.

ZAIRE

NATIONAL UNIVERSITY OF ZAIRE: staff development, \$23,244.

Related Grants

HARVARD UNIVERSITY, Massachusetts: participation of a Kenyan scholar in the ILO Mission on Employment, \$1,000.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY: university development assignments, \$275,000.

STATE UNIVERSITY OF NEW YORK AT STONY BROOK: computerization of admissions at the University of Ibadan, \$42,424.

TORCUATO DI TELLA INSTITUTE, Argentina: multi-country collaborative research project on problems of employment and labor force absorption in Latin America, \$258,000.

TUFTS UNIVERSITY, Massachusetts: Yvon M. Bongoy for research on investment and economic development of the Republic of Zaïre, \$5,000.

UNIVERSITY OF CALIFORNIA:

Davis

University development assignments in Africa, Asia, and Latin America, \$280,000.

Santa Barbara

Dr. William J. Chambliss, Department of Sociology, for research on crime in West Africa, \$7,497.

UNIVERSITY OF GUELPH, Canada: research in agricultural economics, \$32,000.

UNIVERSITY OF HAWAII: university development assignments in Africa, Asia, and Latin America, \$280,000.

UNIVERSITY OF MINNESOTA: university development assignments, \$275,000.

UNIVERSITY OF NOTRE DAME, Indiana: university development assignments, \$275,000.

UNIVERSITY OF OREGON: Dr. W. Ed Whitelaw, Department of Economics, for completion of his research on urban behavior in Nairobi, \$5,900.

UNIVERSITY OF TORONTO, Canada: university development assignments, \$15,000.

YALE UNIVERSITY: university development assignments in Africa, Asia, and Latin America, \$280,000.

WORKING seminar of social science research related to unemployment problems in Africa (Bellagio), \$14,000.

EQUAL OPPORTUNITY

**“A Wide Range of
Challenges Confronts
the Nation”**

Moving toward equal opportunity in the United States continues to be a struggle against ignorance, poverty, and racial discrimination. It is clear that these struggles are not identical but that they reenforce each other and make the task of finding solutions especially difficult. While significant gains were made during the last decade in granting legal or administrative rights, in many instances these rights still have to be put into practice. It is one thing to decree an end to segregated schools; quite another to implement school integration programs effectively. Indeed, there are indications that many individuals and groups which were active in the civil rights field during the past few years have wearied of the battle and shifted their attention to other concerns.

A wide range of challenges confronts the nation in attempting to transform American institutions and practices to assure equality of opportunity and treatment in all walks of life for black and other minority-group citizens. The Rockefeller Foundation, in its equal opportunity efforts, has believed that it is essential to select a limited number of strategic target areas for careful attention and sustained support. During 1972 the program has focused on four such areas: leadership development and training for minority-group individuals, career development and professional training for the disadvantaged in selected fields, development of innovative community education programs, and outreach programs for the rural poor.

LEADERSHIP DEVELOPMENT AND TRAINING

The special program for training minority-group school administrators at the superintendent level has received wide attention from educators. Twenty-nine administrators have already participated in this training, including ten men and two women who are serving as interns with some of the nation's leading superintendents during this academic year—the third year of the program. Participants from the first two years have moved on to positions of greater responsibility—three are now serving as superintendents.

During the year another approach to the development of minority-group administrators was initiated. Working closely with Richard Clowes, Los Angeles County Superintendent of Schools, an in-service training program was developed through which talented teachers are receiving training and on-the-job experience in administrative and supervisory positions. Many suburban schools are beset by some of the same challenges that confront major city systems, including an increasing percentage of minority-group students. The diversity of the Los Angeles County school population, which includes a significant number of Chicano students, makes this an excellent location for this in-service training effort.

Community colleges, state universities, and other post-secondary educational institutions are providing new opportunities for minority-group administrators. Two programs to assist such institutions with training administrators were initiated during the year:

The member institutions of the Academic Affairs Conference of Mid-western Universities have developed a minority internship program which should serve as a model for identifying and training new talent. Interns in this program will have an intensive nine months in administrative experience on one of the A.A.C.M.U. campuses, working closely with mentors—deans, vice presidents, presidents, and other institutional leaders. The program provides for seminars; meetings with community, business, and industrial groups; a directed reading program; and activities keyed directly to training administrators. In addition to candidates from institutions which belong to A.A.C.M.U., six interns will be drawn each year from nonconference institutions. Special attention will be given to possible interns from black colleges.

A new effort was also planned to train administrators specifically for community colleges. These colleges, which have been created at the rate of one per week over the past decade, are playing an increasingly important role in the nation's system of higher education. There is a special need to develop administrators for them who are sensitive to the diverse populations they serve.

Attention was also given during the year to administrative and leadership training in other areas:

An internship program for training administrators of government-funded assistance programs was developed with the aid of outside consultants. This effort is directly responsive to the needs of municipalities and nongovernmental agencies which need minority-group administrators trained to deal with the plethora of federal and state programs dealing with the people from whom these administrators have been drawn.

The Interracial Council for Business Opportunity was organized in 1963 to assist minority-group businessmen to develop, own, and manage their own enterprises. The Council has received nationwide attention for its program of teaming successful businessmen with minority businessmen starting new ventures. Of perhaps even greater importance are its continuing programs aimed at developing a larger and more sophisticated business leadership group within the minority community. The Rockefeller Foundation made a grant to ICBO during 1972 to enable it to recruit six qualified management training coordinators to give full-time leadership to training programs in New York City, Los Angeles, Dallas, Washington, St. Louis, and New Orleans.

A grant to the Boy Scouts of America has led to the establishment of an Educational Field Laboratory to train indigenous leadership—both professional and volunteer—to deal more effectively and sensitively with the needs of inner-city boys.

The National Urban League, with its objective of encouraging poor people “to develop the capacity to do, to act, and to bring about change themselves” decided to establish a long-term voter education and registration effort as a part of its New Thrust Program. A grant from the Foundation is supporting program leaders in target cities and supplying the costs of leadership development seminars.

The Urban and Policy Sciences Program at the State University of New York at Stony Brook has added to its research activities an internship program linked to agencies dealing with urgent public sector environmental problems. One agency with which it has an especially good working relationship is the Environmental Protection Administration of New York City for which it serves as a technical advisory body. Support from the Foundation has enabled Stony Brook to expand its program and particularly to recruit minority-group students. It is expected that this program will serve as a model for training for new careers, and that the minority group members will make New York City's Environmental Protection Administration and similar agencies increasingly sensitive to the concerns of all segments of the population.

Foundation support for health career training programs for the disadvantaged continued during 1972. Two such grants were to the New England Hospital at Roxbury, Massachusetts. They were: Open the Doors Wider in Nursing, and Health Careers (which embraces both professional and sub-professional jobs). The short-range objectives of both programs are to encourage increasing numbers of disadvantaged young people to enter careers in the health field that are both satisfying and economically rewarding. The long-range objectives are to help bring about changes in educational institutions and other agencies that will make special efforts unnecessary.

Additional support was also given to Harvard University in 1972 for its Health Careers summer program. This program consists of three important elements: formal work in one of the three basic science courses offered by the Harvard Summer School, academic tutorial assistance, and clinical tutorial aid in one of the Harvard-affiliated hospitals or in the Dental School.

INNOVATION IN SCHOOL-COMMUNITY EDUCATION

School-community advisory councils have become an important avenue for the involvement of community representatives and school personnel in decision-making at the local school level. Because of the diversity of most

metropolitan areas, there is an urgent need for the development of local educational programs for these councils. And these programs must have the guidance of competent educators and experienced citizens.

The Los Angeles City School District, the second largest city school system in the nation, as a part of an attempt to infuse the educational system with a spirit of renewal, created school-community advisory councils involving school staff, secondary school students, and members of the community. Recognizing that there will be a need for guidance and orientation, the district, with support from the RF, has prepared and distributed instructional materials to each local council and provided in-service training programs for school administrators and council members. Another important segment of this program involves the advisory councils not only in the design of innovative and clearly defined demonstration programs for improving the quality of education, but also in developing programs to improve citizen participation.

These school-community advisory councils can be expected to play an increasingly important role in bridging the gap between the community and the school system. The bold decision of the Los Angeles school leaders to have every school in the system develop its own school-community advisory council and at the same time place greater responsibility on the local schools for improving student performance has attracted nationwide attention. The lessons learned should be valuable for the many other school systems that are attempting to bring their communities into the school decision-making process.

Through a grant to the Kanawha County School System in West Virginia, two community school projects of a similar nature are moving ahead. One embraces both the Washington Junior High School, whose students come from deprived rural Appalachian families, and the George Washington Senior High School, most of whose students are from an affluent Charleston suburb but some of whom are pupils who have finished Washington Junior High School and are bused there. The other project is at Stonewall Jackson Senior High School in central Charleston, whose students come from deprived and middle-class families both black and white. The problems are the same in both projects in that they stem from deprivations and conflicts in value systems. Specific programs have been developed by community leaders and educators with several goals in mind: to increase the quality of education and of life for the target population, to aid the unemployed to develop saleable skills and the employed to improve their skills, and to provide a model of community education that may be followed by surrounding communities. In this program school facilities are used for community education programs, specifically for providing courses for disadvantaged adults. The Mott Foundation and Ball State University are providing community school in-service training, con-

sultant services, and evaluation and supervisory services, along with other technical assistance.

An innovative Open Classroom Program was initiated in the New York City school system during this past year. The open classroom concept, which has received wide attention, is built on the philosophy that the classroom should be open to ideas, and that teachers should act as guides rather than merely as examples of authority. Thus the student becomes a self-motivated learner rather than a passive recipient of information. The teachers begin with the assumption that the children want to learn and *will* learn in their fashion. Respect for and trust in the child are perhaps the most basic principles. This program fits squarely within the design-for-change program which has recently been established in New York City. Foundation funds have enabled the school system to move ahead with intensive workshop and training sessions for key advisors who will then train additional school personnel in the key features underlying the Open Classroom.

RURAL DEVELOPMENT

Alcorn Agricultural and Mechanical College and Mississippi State University have developed a joint institutional approach to bring about social and economic development in some of the rural areas of Mississippi. A co-ordinating council, made up of staff members from the two institutions, meets regularly. Through its efforts, state and federal funds were obtained for the development at Alcorn of a program of agricultural research and extension.

This year the Foundation made a grant to the College and the University that will enlarge the capability of the existing program to improve the lives of the rural poor in southwestern Mississippi. The grant will assist with the costs of short courses and training programs for farmers and community leaders, make possible additional Alcorn staff in plant and animal sciences, provide graduate and undergraduate assistantships, and support a summer field program for undergraduates at Alcorn. It will also help provide the assignment of staff members and special consultants from Mississippi State to Alcorn. The Southern Regional Education Board, which is following the Alcorn-Mississippi State programs closely, is hopeful that it may develop into a model that can be used by other institutions in the South.

The College of the Albemarle continues its experiment in educational assistance to the rural poor in northeast North Carolina. Its program, funded by the Foundation, is designed to: identify persons in rural areas who could profit by general education or occupational training; motivate, test, and counsel them in order to guide them into training programs that will prepare them for employment; and assist them with their financial problems during their schooling and help them find jobs afterward.

GRANTS APPROVED IN 1972

ALCORN AGRICULTURAL AND MECHANICAL COLLEGE, Mississippi: toward a program of agricultural research, extension, and training, \$79,500.

AMERICANS FOR INDIAN OPPORTUNITY, District of Columbia: educator to develop Indian programs in schools, \$15,000.

BOARD OF EDUCATION OF THE CITY OF NEW YORK: Open Classroom program, \$325,000.

BOY SCOUTS OF AMERICA, New Jersey: inner-city leadership development, \$150,000.

CHICAGO COMMONS ASSOCIATION: collaboration with the Spanish Coalition for Jobs to develop new resources for the Latino communities, \$15,000.

COLLEGE OF THE ALBEMARLE, North Carolina: education and training opportunities for rural poor, and economic and cultural development of the community, \$200,000.

CORNELL UNIVERSITY, New York: program to aid black graduate students in the social sciences in theses research, \$25,000.

DUKE UNIVERSITY, North Carolina: symposium, "Redevelopment of the Rural South, Prelude to a More Humane Urban South" held in Birmingham, Alabama, \$6,000.

EDUCATION FOR INVOLVEMENT CORPORATION, District of Columbia: summer program for training high school students in social action skills, \$15,000.

FISK UNIVERSITY, Tennessee: strengthening its Honors Program, \$134,500.

GEORGE WASHINGTON UNIVERSITY, District of Columbia: Workshops for Careers in the Arts, \$25,000.

HARVARD UNIVERSITY, Massachusetts:

Research on racial attitudes toward black candidacy for high political office, \$70,000.

Health careers program for students from disadvantaged groups, \$50,000.

W. Barry Wood scholarships for medical students, \$25,000.

HOWARD UNIVERSITY, District of Columbia: planning committee for a National Commission on Higher Education for Black Americans, \$5,000.

HUNTER COLLEGE OF THE CITY UNIVERSITY OF NEW YORK: for use by the Hunter College High School for intercollege internships for senior students involving job experience in the community, \$12,500.

INTERNSHIP PROGRAM FOR SCHOOL ADMINISTRATORS: interns given grants were:

Dr. Laval S. Wilson (Community Consolidated School District No. 65, Cook County, Illinois, additional costs), \$600;

Robert L. Marion (Flint Community Schools, Michigan), \$30,422;

Paul L. Vance (School District of Philadelphia), \$33,173;

Delores T. Davis (Public Schools of the District of Columbia), \$23,680;

Chester M. Whittaker (Trenton Board of Education, New Jersey), \$25,731;

Julio R. Garcia (Soquel Elementary School District, California), \$33,799;

William J. Murray (Ravenswood City School District, California), \$33,519;

Joseph E. Johnson (Wilmington Public Schools, Delaware), \$31,720;

Dr. John B. Lum (San Francisco Unified School District), \$26,007;

Elbert A. Colum (San Diego City Schools), \$29,437;

Betty Showell (Baltimore City Schools), \$28,014;
Dr. Calvert H. Smith (University of Cincinnati), \$28,470;
Gilbert Guzman and Robert Matthews (San Diego City Schools, additional costs), \$2,132;
John C. Newton (Berkeley Unified School District), \$31,752;
John H. Griffith (Rochester City School District, New York, additional costs), \$460;
Oliver S. Coleman (Detroit Public Schools, additional costs), \$985.

Other grants under this program included:

Orientation programs for the superintendents and administrators participating in the program, \$40,000;

Dade County Public Schools, Florida: training program for school administrators in a multi-ethnic environment, \$15,000;

Office of the Los Angeles County Superintendent of Schools: leadership training program for school administrators, \$300,000;

Wilmington Public Schools, Delaware: training program for school administrators, \$23,500.

HOUSTON BAPTIST COLLEGE, Texas: scholarships for nursing candidates, \$3,750.

INDIANA STATE UNIVERSITY: Academic Affairs Conference of Midwestern Universities for internships for minority group administrators, \$157,000.

INTERRACIAL COUNCIL FOR BUSINESS OPPORTUNITY, New York: expansion of its training programs in education for business leadership, \$300,000.

KANAWHA COUNTY SCHOOL SYSTEM, West Virginia: community schools programs, \$150,000.

LOS ANGELES CITY UNIFIED SCHOOL DISTRICT: school-community advisory councils, \$300,000.

METROPOLITAN DETROIT YOUTH FOUNDATION: leadership development program, \$72,000.

NEW ENGLAND HOSPITAL, Massachusetts:

Health Vocational Training Program, \$500,000;

Health Careers Training Program for disadvantaged students, \$450,000.

OGLALA SIOUX COMMUNITY COLLEGE, South Dakota: appointment of a development officer for the Lakota Higher Education Center and Sinte Gleska College, \$15,000.

SAN DIEGO CITY SCHOOLS, California: operation of two coordinated school-community education centers, one in the Chicano community, the other in the black community, \$100,000.

SEQUATCHIE VALLEY PLANNING AND DEVELOPMENT AGENCY, Tennessee:

Director's salary, \$14,400;

Summer program to develop administrative capabilities for students interested in public service careers, \$6,000.

UNIVERSITY OF NORTH CAROLINA: School of Journalism to enable a black social scientist to participate in the school's study of the 1972 presidential election, \$15,000.

UNIVERSITY SYSTEM OF GEORGIA: rural development meeting, \$500.

URBAN INSTITUTE, District of Columbia: study of cost differentials among varied school districts in the provision of educational services, \$15,000.

WATTS LABOR COMMUNITY ACTION COMMITTEE, California: paramedical training program, \$200,000.

YALE UNIVERSITY, Connecticut: research on methods of increasing public participation in the planning of community housing programs, \$15,000.

QUALITY OF THE ENVIRONMENT
“Learning to Cope
with
Biological Variables”

In recent years concern has grown regarding the deterioration of man's environment, the possibility that with the present pace of industrialization supplies of critical non-renewable resources might soon be exhausted and that options for future generations are being seriously reduced. Perspectives of environmental problems vary among nations depending on their stage of economic development or modernization, and among groups within nations. Within our own nation some groups are alarmed by long-term global changes including the fouling of the air envelope or the oceans. Others work for the conservation or preservation of resources. Still others are primarily concerned with more immediate and visible problems including air quality in urban areas, pollution of waterways, and encroachment by urban populations on the rural areas. A fourth perspective, particularly of the poor, excludes concern for most of the previously mentioned problems, for the environmental factors they care about are crime, dirty and unsafe streets, poor housing, and other aspects of poverty or inadequacy of services.

As it has developed its Quality of the Environment program, the Foundation has kept in mind the range of perspectives that exist, and in fact several of its programs attempt to contribute to environmental improvements. For example, under Conquest of Hunger, attention is focused particularly on certain of the basic needs—including more food and increased income for the millions of poor abroad. Universities in poorer countries being assisted by the Foundation are concerned with many aspects of improvement of urban and rural life. At home, efforts under Equal Opportunity are directed toward problems that many would consider of importance environmentally. The Foundation's work in population is attempting to deal with a root cause of the entire range of environmental concerns—burgeoning populations which threaten to outstrip resources.

Under the Quality of the Environment program attention has been directed, for the most part, to problems in the United States. Particular emphasis has been on those with which the Foundation can help in special ways as a result of its competence in the fields concerned and its experience in marshaling talent and funds in them.

While man has developed the capability to masterplan major engineering feats such as the moon and Mars shots or the development of satellite communications systems, he has not had such success in dealing with efforts involving a biological component, that is, involving living systems. In the latter case, he works not with physical constants but with biological variables. This is not to say that there has not been success by existing scientific and educational institutions or agencies of government in the biological fields; indeed there has, as this nation's progress in agriculture and medicine attests.

For ecological problems, however, the necessary disciplines which must work together do not have a heritage of cooperation or concerted effort toward defined goals that is found in schools of medicine or agriculture. New combinations of specialists from diverse fields are now needed, particularly at the universities. The Foundation has enabled several leading universities to strengthen their capability to contribute to solutions of environmental problems in the regions they serve. They include the University of Michigan; Utah State University, which is working on problems of the Wasatch Front; the University of California at Davis, which is concerned with problems of land use planning, natural ecosystems management, policy analysis, and distribution of environmental information; Oregon State University, which is looking at alternatives for the development of the Willamette Valley; Penn State University; and the universities of Wisconsin and Minnesota, which are concerned with the future of an area to the west of Lake Superior.

Nitrogen and phosphorus are two of the major nutrients involved in accelerated eutrophication of the nation's waterways and growing amounts of both can be attributed to wastes from industries, agriculture, and households. The University of Illinois is being assisted to study nitrogen usage in agriculture and ways by which amounts entering surface or ground waters can be reduced while protecting capabilities of farms to meet food requirements at reasonable cost. Meanwhile, with Foundation assistance, Case Western Reserve University is studying means of managing phosphorus as a pollutant on a regional basis. Cornell University is devoting particular attention to problems of agricultural wastes, particularly those associated with intensive animal and crop production.

It is clear that the fouling of waterways by sewage is a major national problem and most communities at least have plans for secondary treatment, which removes most objectionable materials but still leaves plant nutrients (such as nitrogen and phosphorus), and some toxic materials in the effluent. The Foundation in 1972 supported work at the City University of New York and the Woods Hole Oceanographic Institution in their studies of the use of shell fish to harvest algae produced from nutrient-rich effluent—one system of "tertiary" treatment. Attention is being given at Woods Hole to the fate of human viruses in such effluent—knowledge of which could be important either to the production and use of marine organisms or to the recycling of waste water for human use. At Michigan State University the Foundation has contributed to costs of a system of sewage management involving systematic purification of waters by means of a series of interconnected lakes in which natural systems effect purification.

One of the more urgent and controversial environmental problems has been the introduction into the environment and into the food chains of non-

biodegradable pesticides (such as DDT) used for crop, animal, and human protection. The Foundation is presently supporting work on four different approaches to solution of the pesticide problem. The universities of Illinois, Cornell, California at Davis, and California at Riverside, are working jointly on means of creating biodegradable insecticides. Studies at Harvard concentrate on the potential uses of juvenile hormones to interrupt the life cycle of destructive insect pests. Three universities—Cornell, California at Berkeley, and California at Riverside—are conducting research on pheromones or sex attractants in insects; these substances may be important in devising new systems of control by interfering with mating in troublesome species. Development of plant resistance would offer the safest approach but this requires long-term research by highly competent people and can be effected only with greatly increased financial commitments by state and federal agencies. The Foundation is helping to support efforts of Mississippi State University, Texas A & M, the University of California at Davis, and the U. S. Department of Agriculture to develop resistance of cotton to the boll worm.

A number of heavy metals and other toxic substances, like the non-biodegradable pesticides, constitute a substantial problem in efforts to clean up the nation's air and waterways. The University of Missouri is receiving support for the development of new techniques for measuring and evaluating concentrations of toxic materials in samples of air, water, or organic matter. Foundation funds assist the California Institute of Technology to study the distribution of heavy metals in the environment of the Los Angeles region—an attempt to trace certain of these materials from their sources to their ultimate fate in the land, the oceans, or food chains.

Basic to an understanding of the effects of nutrient or toxic substances on biological systems is an understanding of the functioning of ecosystems. An interdisciplinary group at the Academy of Natural Sciences of Philadelphia is, with Foundation support, studying in detail a small watershed. It is attempting to understand interactions of organisms, the flow of energy in the system, and the effects of nutrients or other substances on the delicate complex of organisms.

Several other ecological studies and training programs were supported by the Foundation during the last year. These were the Thorne Ecological Institute for work on two regions in Colorado, at the University of Colorado for a study of land development practices in nearby mountain areas and at Douglas Lake Biological Station of the University of Michigan.

There is increasing awareness of and substantial work on problems of some cities by public agencies and educational and research institutions. While some Foundation-supported work described in previous paragraphs has application in urban areas, the Foundation is contributing to several

more direct attempts to solve urban problems. During the past year the Administration and Management Research Association of the City of New York undertook an environmental intern program. The California Institute of Technology is working on control of automotive emissions as well as on the fate of heavy metals in an urban area. Columbia University's study of environmental pollution by its School of Engineering and Applied Sciences has received limited support by the Foundation for several years. The State University of New York at Stony Brook is involved in training minority group students for professional careers dealing with environmental problems in the public sector.

In New England, assistance in environmental planning is being given to a number of smaller communities by Harvard University, the University of Massachusetts, the Massachusetts Institute of Technology, and the Rhode Island School of Design.

Two other activities of national importance received support in 1972. The Institute on Man and Science in New York has undertaken an evaluation of federal guidelines for environmental impact studies, and the Scientists' Institute for Public Information in New York is concerned with research and publications to help the public assess problems of the environment.

While the initial focus of the Foundation's efforts has been on environmental problems of the United States, it has followed with interest recent international developments, particularly the Stockholm Conference. Because of the significance of this event, the Foundation provided funds to the Smithsonian Research Foundation in the District of Columbia toward costs of staff for an Advisory Committee on the Conference. And the National Public Radio of the District of Columbia was assisted in covering it.

GRANTS APPROVED IN 1972

UNITED STATES

ADMINISTRATION AND MANAGEMENT RESEARCH ASSOCIATION OF THE CITY OF NEW YORK:
environmental interns program, \$12,500.

ASPEN INSTITUTE FOR HUMANISTIC STUDIES: operations of the International Federation of Institutes for Advanced Study, \$14,500.

CALIFORNIA INSTITUTE OF TECHNOLOGY:

Research on heavy metal pollutants, \$150,000;
Research on control of automobile emissions, \$15,000.

CASE WESTERN RESERVE UNIVERSITY, Ohio: phosphorus studies, \$500,000.

CITY COLLEGE, CITY UNIVERSITY OF NEW YORK: research on effluent mariculture as a system of tertiary sewage treatment, \$25,000.

CLOAREMONT COLLEGES, California: faculty-student investigations of electric power, mass transit, and land use, \$10,000.

COLUMBIA UNIVERSITY, New York: studies of environmental pollution by its School of Engineering and Applied Sciences, \$25,000.

CORNELL UNIVERSITY, New York:

Research on pesticides, \$50,000;

Research on insect pheromones, \$25,000;

Research in the Department of Rural Sociology to obtain the knowledge and attitudes of public leaders concerning environmental issues of the Hudson River Basin, \$15,000.

HARVARD UNIVERSITY, Massachusetts: multi-university field service program centered in Harvard's School of Design for land-use planning in the New England region, \$103,000.

INSTITUTE ON MAN AND SCIENCE, New York: evaluation of federal guidelines for environmental impact studies, \$14,100.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY: investigation of alternative strategies for the management of critical environmental contaminants on national and global scales, \$15,000.

MISSISSIPPI STATE UNIVERSITY: research on plant resistance to insects, \$30,220.

NATIONAL PUBLIC RADIO, District of Columbia: coverage of the Stockholm conference on the environment, \$15,000.

PRINCETON UNIVERSITY, New Jersey:

Development of mass spectroscopic sensor for air quality measurements, \$15,000;

Research in ecology at its Center of International Studies, \$15,000.

SCIENTISTS' INSTITUTE FOR PUBLIC INFORMATION, New York: research and publications to help the public assess problems of the environment, \$25,000.

SMITHSONIAN RESEARCH FOUNDATION, District of Columbia: staff for an advisory committee on the 1972 Stockholm conference on the environment, \$25,000.

STATE UNIVERSITY OF NEW YORK AT STONY BROOK: training of minority-group students for professional careers in the public sector concerned with environmental problems, \$385,000.

TEXAS A & M UNIVERSITY: research on plant resistance to insects, \$116,300.

THORNE ECOLOGICAL INSTITUTE, Colorado: ecological studies of two regions in Colorado, \$10,000.

UNIVERSITY OF ARIZONA: for Mahmoud M. Shabandar to prepare a definitive report on the University's Power/Water/Food project supported by previous RF grants, \$8,000.

UNIVERSITY OF CALIFORNIA:

Berkeley

Research on pesticides, \$50,000;

Research on insect pheromones, \$25,000.

Davis

Study by its Division of Environmental Studies of natural ecosystems management, land-use planning, policy analysis, and delivery of information, \$190,000;

Research on plant resistance to insects, \$24,619.

Riverside

Research on insect pheromones, \$25,000;

Research in pesticides, \$50,000.

UNIVERSITY OF COLORADO: study of land development practices in the Colorado mountains, \$9,500.

UNIVERSITY OF FLORIDA: research on herbivorous fish useful in the biological control of aquatic plants, \$25,000.

UNIVERSITY OF ILLINOIS: research on pesticides, \$50,000.

UNIVERSITY OF MICHIGAN: environmental research at the Douglas Lake Biological Station, \$15,000.

UNIVERSITY OF MISSOURI: research on heavy metals and organic compounds in the environment, \$183,000.

UNIVERSITY OF WISCONSIN: improvement of environmental quality in the Lake Superior region, \$656,000.

WOODS HOLE OCEANOGRAPHIC INSTITUTION, Massachusetts:

Study of marine resource exploitation, \$14,455;

Workshop on the ecology of the coastal zone, \$5,175.

CULTURAL DEVELOPMENT

“How to Relate the
Artist to His Society
for the Good of All”

When Dr. John H. Knowles arrived at the Foundation, he began asking questions of us, and we began to ask ourselves questions. Why should the Foundation continue to have a program in the arts when giving at the national and state levels seemed to be increasing? If the Foundation should continue to work in the arts, what should its concentrations be? Are the arts a bottomless pit?

The answer to the last question is, Yes. But then so are the Long Island Railroad and interplanetary travel, and they may be necessary, too.

WHAT ARE THE ARTS?

Nicholas Berdyaev once wrote: "Everything begins in religion and ends in politics." No mention of the arts there, but let's see what happens in the transition.

Many of the nobler aspirations of a society or of an organization such as the Foundation have stemmed from the lives of persons who denied themselves to serve others. Many of those benefactors of mankind whose doctrines and lives were one are called saints. And while the bulk of their message has been in advocating a particular life style or discipline, their words and deeds have found their way into the arts and sciences, and, ultimately, from their simple lives into federal poverty programs or Medicare.

In A.D. 1213, St. Francis of Assisi paused on a road and told a flock of birds that they should praise God for the blessings of food, flight, and feathers. This simple sermon broke forever the line dividing the supersensual from the mundane. The arts reverberated to this new perception of nature. In painting, it changed the Byzantine formalism of depicting saints as flat images against gold backgrounds to the naturalism of the Renaissance, as Giotto and Cimabue depicted the occasion with realistic treatments of the birds and, of course, St. Francis. In poetry, St. Francis's song, "The Praises of the Creatures," was the first canticle in the Italian language, and was the source of inspiration and the direct model for the poems of Dante and Petrarch. Social historians speak of the great effect of this joyous song on the religious feelings of the masses of people during the late middle ages.

The arts were, therefore, communicators, purveyors of a message. In St. Francis's case it was a message of brotherhood of all creatures under the Fatherhood of God. Today, however, the arts may be communicators of bitter resentment or of desperate struggle. Spray-can painting. Is it an art or a desecration? Is it harmless, like carving initials in a tree? Or do we object to seeing buses and subways covered with brilliantly sprayed names merely because, unlike the whisky ads, or posters for lurid films, spray-can art is unpaid for, and therefore unsanctioned? Is it a pure art? More impor-

tant, is it communication? Whoever JOE 135 or RICO 128 are, they are voices trying to be heard in a society that may be turning a deaf ear to the cries of the poor, the needful. The first question should not be, how much money does it cost to scrub the subways clean, but what is being said.

It is a question of high art versus low art. Is art a commodity or an activity? Is it the private preserve of a priesthood, or is it a natural language of all people? These questions are not new, but are being newly asked.

The RF has undertaken a ten-year review of its program in Cultural Development, emphasizing work in the arts. The review points out that high and low art expanded dramatically in the 1960's both in terms of activity and levels of support. The arts became more visible than ever before and the people seemed to want more access to them. Lincoln Center was a bellwether of high art at its inception in 1956 and then in 1962 when it opened the first of its buildings, Philharmonic Hall. The concept of subsidy in the arts—long opposed for fear of censorship—was manifested with the creation, under Nelson Rockefeller, of the New York State Council on the Arts in 1960, and the creation five years later of the National Endowment for the Arts. And two important studies—the Rockefeller Panel Report and that by Princeton economists, Bowen and Baumol—told us that there was no real Arts Boom, but rather a depressed condition in the arts in which the very life of the arts was in danger.

The work of the Foundation-supported Business Committee on the Arts had stimulated giving to the arts on the part of corporations, and other major foundations were working with considerable sums in the field. It has been estimated that in 1971 there was some \$800 million available to the arts from all sources. What, therefore, could the RF do with its approximately \$3 million a year; its approximately \$28 million over the ten-year period beginning 1962?

The case for risk capital from foundations had been made by the Foundation's Trustees and this had in fact been a major use of funds in arts projects—risk capital was made available to help established institutions adapt to the stresses of a society in anguished transition and to help new organizations come into being when a need existed for them. A symphony orchestra could be helped to develop a program that would respond to composers, or a dance company could be created in Utah. The low arts, the public arts, were supported through commercial enterprises and they needed no protection or subsidy. So the Foundation worked with the high art institutions.

WHERE ARE WE NOW?

In the 1960's the arts were becoming democratized—people demanded more access to them. Museums sprang up in ghettos, dance companies toured

colleges, orchestras left their concert halls in search of audiences, and theatres conducted workshops in prisons. We began to learn that art, indeed, was not for a priesthood of initiates. But we have only just begun to learn this.

The democratization of the 1960's led to the "populism" of the 1970's. As the clamor for access to arts experiences increased, funding sources began looking more to socially oriented programs to justify their expenditures. Especially in federal and state subsidy agencies, the emphasis was to be away from "art for art's sake" and on "what can the arts do for people?" The charge of "elitism," which has now replaced the expression "irrelevance" and means roughly the same thing, was leveled against the long-established arts organizations, which were for the most part in deep financial trouble—orchestras, theatres, dance and ballet companies, opera companies, museums. And a fear has now grown up among the "elites" that future funding patterns, if rationalized on purely social grounds, may fail to take into account a primary reason for their existence: an allegiance to high standards of arts preservation. A symphony orchestra must still be able to rehearse the Beethoven Ninth Symphony if this great humanistic document is to survive in a "live" form. It takes just as long to rehearse and play the "Ode to Joy" today, but costs more than it did in 1822 or 1872.

WHAT SHOULD WE DO?

In narrowing down a vast problem regarding the future of the arts in America and the sources available for their development, four questions have emerged which tend to define the limits of a future program in the arts at the Foundation:

How can we continue to assist the source of art, the creative person, to develop and practice the craft? Should we continue to assist playwrights and devise new programs for composers and choreographers and other creative artists which will meet their needs to develop work and have it performed for people?

How can we help to make the arts more central to general education and schools more responsive to the arts as a stimulus to intellectual and practical creativity? It has been said that the public school child perceives his school as a prison. This is not surprising, considering the bleak corridors with tiled walls and ceilings, the rugless and curtainless classrooms of concrete, metal, and glass. Is there not a role for the arts in devising many more esthetically stimulating designs for school architecture? Classrooms with the *right* walls?

How can we encourage the cautious development of new nonprofit arts organizations which could fill needs not now met; and how can we help established organizations to be more responsive to their roles as agencies of cultural change?

How can we use television for the arts and for explication of and further exposure of RF programs? The recent National Endowment-sponsored Arts/Media show in Washington, D. C. made a mixed but positive case for the use of the arts in television, and relied heavily on RF supported work emanating from the National Center for Experiments in Television, the Southern Methodist University Television Workshop, the workshop at WGBH-TV Boston, and the new laboratory at WNET. Cable television is a tantalizing but tangled skein of promise in which pie in the sky is offered the arts. There are major issues here to be resolved, but also important areas of possible Foundation involvement: citizen feed-back concepts and social programs, for example. But the question might be should the RF back programs or help build institutions in this new field? And how to work in a field with apparent but perhaps illusory commercial possibilities?

In 1953, Albert Camus wrote: "the era of the chairbound artist is over. . . . One of the temptations of the artist is to believe himself solitary, and in truth he hears this shouted at him with a certain base delight. But this is not true. He stands in the midst of all, in the same rank, neither higher nor lower, with all those who are working and struggling. His very vocation, in the face of oppression, is to open the prisons and to give a voice to the sorrows and joys of all. This is where art, against its enemies, justifies itself by proving precisely that it is no one's enemy. By itself, art could probably not produce the renascence which implies justice and liberty. But without it, that renascence would be without forms, and consequently would be nothing. **Without culture, and the relative freedom it implies, society even when perfect, is but a jungle.** This is why any authentic creation is a gift to the future."

The arts are sources of perception, and communication of perceptions. Therefore they can be seen not as commodities—ends in themselves—but as conduits for Berdyaev's doctrine that "Everything begins in religion and ends in politics." Our question and task, therefore, is how to relate the artist to his society for the good of all.

GRANTS APPROVED IN 1972

AFRICAN CULTURAL CENTER, New York: residency of Charles Gordon, playwright, \$10,000.

AMERICAN UNIVERSITY, District of Columbia: scholarships to the National Youth Orchestra by the Wolf Trap American University, \$20,000.

AMERICAN UNIVERSITIES FIELD STAFF, New Hampshire: documentation by Lael Warren Morgan of current transitions in Eskimo life in Alaska, \$11,000.

ARIZONA STATE UNIVERSITY: internships in university administration, \$10,500.

BEREA COLLEGE, Kentucky: development of original drama from Appalachian sources and further development of its Puppetry Caravan, \$23,530.

BERKSHIRE THEATRE FESTIVAL, Massachusetts: creative and educational theatre programs in the New England area, \$25,000.

BROOKLYN COLLEGE OF THE CITY UNIVERSITY OF NEW YORK: Institute for Studies in American Music, \$25,000.

CELL BLOCK THEATRE WORKSHOPS, New York: workshops in prisons, \$23,980.

CENTER STAGE ASSOCIATES, Maryland: theatre program for children and young people involving the public schools, \$14,912.

CINCINNATI PLAYHOUSE IN THE PARK, Ohio: residency of Maria Irene Fornes, playwright, \$10,000.

CIRCLE IN THE SQUARE, New York: operations in its new theatre, \$25,000.

COLGATE UNIVERSITY, New York: internships in academic administration, \$15,000.

COLLEGE ENTRANCE EXAMINATION BOARD, New York: analyzing the results of a conference on academic policy co-sponsored by the Board and Harvard University, \$3,500.

CONNECTICUT COLLEGE: reconstructing some of the great American modern dances of the recent past, \$15,000.

DUKE UNIVERSITY, North Carolina: development of a new oral history multiracial research and teaching program concerning the South since 1890, \$230,000.

EDUCATIONAL BROADCASTING CORPORATION, New York: second phase of development of Station WNET's Experimental Television Laboratory, \$400,000.

ELMA LEWIS SCHOOL OF FINE ARTS, Boston: creative and performing work of its professional dance company, \$350,800.

EXPERIMENTAL ARTS AND CRAFTS CENTER ASSOCIATION, Alaska: first phase in the development of the Center, \$25,000.

FREE SOUTHERN THEATER, Louisiana: Ensemble and Drama Workshop, \$25,000.

HENRY STREET SETTLEMENT, New York: New Federal Theater, \$100,000.

HUNTER COLLEGE OF THE CITY UNIVERSITY OF NEW YORK: Arts Center, \$25,000.

INDIANA UNIVERSITY: William H. Wiggins, to do research on emancipation celebrations in the United States, \$7,000.

INSTITUTE FOR ADVANCED STUDY, New Jersey:

Kenneth R. Maxwell to study Caribbean slave unrest in relation to eighteenth-century democratic revolutions, \$15,840;

Review of modern Russian and Soviet studies in the United States, \$3,500.

INSTITUTE OF SOCIETY, ETHICS AND THE LIFE SCIENCES, New York: development of a research and teaching program in ethics, humanities, and the life sciences, \$46,666.

INTERNATIONAL FILM SEMINARS, Vermont: history of documentary film by Willard Van Dyke, \$4,000.

JOHNS HOPKINS UNIVERSITY, Maryland: appointment of two anthropologists and a historian to develop an interdisciplinary program relating the North American experience to that of Africa, Latin America, and the Caribbean, \$99,802.

LAMAMA EXPERIMENTAL THEATRE CLUB, New York: development of its resident troupes, \$225,000.

MAGIC THEATRE, California: residency of Jeffrey Mark Wanshel, playwright, \$10,000.

MANHATTAN SCHOOL OF MUSIC, New York: string training by its Preparatory Division in conjunction with a junior high school, and the creation of string training music for American children, \$25,000.

MANHATTAN THEATRE CLUB, New York: development of a new program in theatre, \$15,000.

MILLS COLLEGE, California: expansion and further development of its Center for Contemporary Music, \$75,000.

MINNEAPOLIS SOCIETY OF FINE ARTS, Minnesota: development of its Children's Theatre, \$500,000.

NATIONAL ENDOWMENT FOR THE HUMANITIES, District of Columbia: first Jefferson Lecture in the Humanities, \$6,000.

NATIONAL MUSIC COUNCIL, New York: study of pooling administrative facilities of New York offices of a number of nonprofit music organizations, \$1,800.

NEW ORLEANS PHILHARMONIC SYMPHONY ORCHESTRA, Louisiana: further development of its instrumental and orchestral youth-training program and of teaching materials designed for American children, \$22,129.

NEW SCHOOL FOR SOCIAL RESEARCH, New York: Professor Hans Morgenthau to continue research on an analysis of President Lincoln's political philosophy, \$9,800.

NEW THEATRE WORKSHOP, New York: toward the costs of establishing The Acting Company, \$20,000.

NEW YORK SHAKESPEARE FESTIVAL: program of experimental theatre for American playwrights, and the development of an American national theatre service agency, \$480,000.

OPERA ASSOCIATION OF NEW MEXICO: Apprentice Program for Technicians at the Santa Fe Opera, \$25,000.

PAPER BAG PLAYERS, New York: expansion of their activities in children's theatre, \$100,000.

PENNSYLVANIA STATE UNIVERSITY: to strengthen its program in Religion and the American Culture, \$30,000.

PRINCETON UNIVERSITY, New Jersey:

Development of a professional theatre program, \$200,000;

Princeton University Press, pre-publication costs of the quarterly *Philosophy & Public Affairs*, \$15,000.

RADCLIFFE COLLEGE, Massachusetts:

For use by the Radcliffe Institute for post-doctoral fellowships for women in university and college teaching, \$25,000;

Gail Thain Parker to do research on the papers of Charlotte Perkins Gilman, an early leader in the American women's movement, \$5,150.

REPERTORY THEATER OF LINCOLN CENTER, New York: toward costs of its 1972-73 season, \$25,000.

ST. FELIX STREET CORPORATION, New York: for the creative activities of the Brooklyn Academy of Music in the areas of music, dance, and drama, \$500,000.

ST. LOUIS SYMPHONY SOCIETY, Missouri: performance project involving experiments in acoustical technology, \$15,000.

ST. MARY'S CITY COMMISSION, Maryland: program to provide young historians with a practical introduction to the related discipline of archeology, \$25,000.

SAN FRANCISCO CONSERVATORY OF MUSIC: community music education project in cooperation with, and to effect a permanent affiliation with, the Community Music Center, \$181,000.

SARATOGA PERFORMING ARTS CENTER, New York: drama training program, and residency of the Juilliard acting company, \$10,000.

SOUTHEASTERN ACADEMY OF THEATRE AND MUSIC, Georgia: expansion of the program of the Academy Theatre, \$40,000.

STREET THEATER, New York: workshops in prisons, \$25,000.

THEATRE FOR THE FORGOTTEN, New York: workshops in prisons, \$23,200.

UNIVERSAL CHRISTIAN CHURCH, Maryland: expansion of educational programs at the Appalachian South Folklife Center, Pipestem, West Virginia, \$25,000.

UNIVERSITY OF CALIFORNIA:

Berkeley

George P. Capture to develop material related to the history of the Gros Ventre Indian tribe, \$3,000;

Los Angeles

Development of its Graduate Dance Center, \$80,000.

UNIVERSITY OF FLORIDA: completion of a film of Ruth St. Denis's dance work, "Radha," \$15,000.

UNIVERSITY OF IOWA:

Program to integrate film study with the University's American Civilization Program, \$90,000;

Darwin T. Turner, for research on poet-novelist Jean Toomer, \$615.

UNIVERSITY OF MINNESOTA: support for the Office for Advanced Drama Research to find new playwrights and obtain productions for them throughout the country, \$65,000.

UNIVERSITY OF TEXAS, Austin: workshop for playwrights, \$3,000.

WASHINGTON DRAMA SOCIETY, District of Columbia: the Living Stage, an improvisational program for young people, \$25,000.

WESTMINSTER CHOIR COLLEGE, New Jersey: exploration of contemporary and future directions in church music, \$15,000.

YALE UNIVERSITY: oral history project related to American music by Mrs. Vivian Perlis, \$24,000.

ALLIED INTERESTS

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There is finally one area of Foundation activity which focuses less on attacking clearly defined problems like world hunger, overpopulation, or social injustice, than on understanding the nature of the problems that confront us and formulating the questions we must ask in order to resolve them. Much of The Rockefeller Foundation's activity characterized as allied interests serves to lay a groundwork for action where both information and consensus are lacking. A corollary is providing support for other organizations dedicated to like ends and strengthening the framework within which private philanthropy can make a meaningful contribution to national goals.

Foundation support has gone to small and large undertakings that expand and test our information base and working assumptions in such areas as religion and ethics, international relations, economics, health care, education, and social welfare. Most of the programs in addition to exploration and evaluation undertake to foster liaison between estranged segments of our society —between specialists and laymen, scientists and policy-makers, business and the community, established authorities and the rising generation of scholars.

As such programs develop momentum, one or another may be singled out for long-term Foundation commitment, if opportunities to make a substantive contribution and provide leadership become clear. This was the case with the program in Quality of the Environment. Other grants classed as allied interests buttress the Foundation's major programs. In 1972 support went for research to develop means of health care delivery and studies of the special health problems of drug abuse and schistosomiasis; international relations and economic development were also of continuing concern.

HEALTH CARE PLANNING

The provision of health services to the public both in the United States and in developing countries is notoriously disorganized and inadequate. In the developing world there is little reliable data on which to base plans for medical care systems for an entire community, utilizing the financial, professional, and institutional resources at hand. One program aimed at designing such procedures is being carried out at the University of Valle in Colombia, under the auspices of a consortium of Colombian institutions, with the participation of Harvard University and the World Health Organization. A grant made by the Foundation this year will support this effort, which is expected to create a pattern for planning that will be useful to other nations in all stages of development.

Planning to provide health care for the poor in the United States is equally necessary. Evaluation of medical services in Nashville, Tennessee, is being

carried out by Meharry Medical College, a predominantly black institution. The Foundation made a grant this year to enable the College to expand an ongoing study of three comparable low-income populations, each having access to a different set of medical facilities, which range from a planned community program run by Meharry to use of the outpatient and emergency units of local hospitals and occasional private care. Effectiveness of the services provided, quality of medical care, costs, and other factors are being weighed in a long-range study that is expected to have nationwide significance.

DRUG DEPENDENCY

In cities all over this country drug abuse has reached epidemic proportions; its social causes and consequences are among our gravest problems. A pilot study on the use of low-dose methadone to rehabilitate adolescent heroin addicts is being conducted by Cornell University Medical College in collaboration with The Rockefeller University and with Rockefeller Foundation support. The epidemiological approach used in this research is providing insights into teen-age drug use and associated antisocial behavior. Other hopeful signs include the high rate of patients continuing in the program and returning to school or holding jobs, and a reported decrease in the number of drug pushers and addicts in the high school around which the study centers.

SCHISTOSOMIASIS

Schistosomiasis is a disease of tropical agricultural populations who live without modern sanitation. Besides spreading human misery it acts as a block to economic and social development. Because the blood parasite that causes the disease develops in freshwater snails, schistosomiasis can be a dangerous side-effect of water-basin projects or irrigation works in less-developed countries. It wastes manpower, saps health resources, lowers productivity. For a number of years The Rockefeller Foundation has been supporting a large-scale experimental project based on the island of St. Lucia in the West Indies, aimed at developing methods of controlling schistosomiasis. Using an interdisciplinary approach, the program has tested the effectiveness of various measures—medical treatment of the victims, provision of clean water, snail eradication, public education. Several studies supported this year, including an important research program at Brown University, are advancing this effort. Recent work at Brown and elsewhere suggests the possibility of an immunological approach to schistosomiasis, a solution that up to now has seemed beyond reach. A simple immunization procedure against the disease would eliminate an especially insidious public health hazard and open up enormous developmental opportunities for backward areas all over the tropics and subtropics.

INTERNATIONAL RELATIONS

Three important grants made in 1972 reflect the Foundation's continuing commitment to promoting understanding among nations and helping less-developed countries gain a firm economic footing at home and hold their own in the world community. In order to prepare future intellectual leaders who can deal with questions of foreign policy and international economics, substantial grants were made to the Brookings Institution and the School of Advanced International Studies of Johns Hopkins University to enable them to associate gifted younger scholars with ongoing research in international affairs. A grant to the Overseas Development Council will support its program of research, analysis, and public education devoted to the problems of the poorer countries and the role of the industrialized nations in their development. An award to Johns Hopkins continues support for its program of training for young diplomats from the developing world.

Other grants intended to foster the international exchange of ideas were made to the Ecumenical Institute for Advanced Theological Studies for the establishment of a world center for studies in religion and ethics, based in Jerusalem; to the National Academy of Sciences for investigation of the possibility of developing an international foundation for sciences; to the Institute for International Order, the United Nations Association of the United States of America, and still other organizations dedicated to studying international problems and promoting world cooperation.

GRANTS AND PROGRAMS APPROVED IN 1972

INTERNATIONAL COOPERATIVE PROGRAMS

Schistosomiasis Research and Control Project, St. Lucia	\$ 411,680
Field Staff	\$260,180
Project support	<u>151,500</u>
Yale Arbovirus Research Unit	138,780
Bellagio Study and Conference Center, Italy	352,520
Field Staff	\$ 46,450
Project support	<u>306,070</u>
Publications	7,900
International Conferences	11,840
Unallocated Contingency Reserve for International Programs	<u>250,000</u>
	<u>\$1,172,720</u>

INTERNATIONAL

1972 JOHN D. ROCKEFELLER 3RD YOUTH AWARD presented to Peggy Cooper of Washington, D. C., \$11,000.

CANADA

UNIVERSITY OF WATERLOO: research by Professor A. D. Harrison to document the absence of snail vectors of schistosomiasis and fascioliasis on selected Caribbean islands, particularly St. Vincent, \$25,000.

COLOMBIA

UNIVERSITY OF VALLE: collaboration with Harvard University and other institutions in studies of health care in Colombia, \$500,000.

ITALY

NATIONAL RESEARCH COUNCIL, schistosomiasis research, \$8,300.

NIGERIA

UNIVERSITY OF IBADAN: National Health Planning Symposium to be held in Ibadan in 1973, \$10,000.

UNITED KINGDOM

UNIVERSITY OF READING: conference on "Multinational Enterprise and Economic Analysis" held at the Bellagio Study and Conference Center, \$5,000.

UNITED STATES

AFRICAN-AMERICAN INSTITUTE, New York: operation of the Africa Policy Information Center, \$22,000.

AMERICAN ASSEMBLY, New York: meetings on the role of foundations in American society, \$25,000.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, District of Columbia: Office of International Scientific Affairs, \$25,000.

ASIA SOCIETY, New York: conference on prospects for Southeast Asia in the seventies, \$10,000.

BARNARD COLLEGE, New York: study on the ethics of using human subjects in biomedical research, \$25,000.

BROOKINGS INSTITUTION, District of Columbia: associating outstanding young scholars with its Foreign Policy Studies Program, \$200,000.

BROWN UNIVERSITY, Rhode Island: schistosomiasis research under the direction of Dr. Alfred W. Senft and Dr. Paul M. Knopf, associate professors of Medical Sciences, \$193,000.

CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE, New York: training programs for young foreign service officers from developing countries, \$7,900.

COLUMBIA UNIVERSITY, New York: study of social responsibility in management of investment portfolios, \$25,000.

CORNELL UNIVERSITY, New York:

Investigation of adolescent drug dependency, \$210,637;

Schistosomiasis research, \$10,000.

COUNCIL ON FOUNDATIONS, New York: Public Affairs and Education Program, \$100,000.

FLORIDA STATE UNIVERSITY: completion of research on economic aspects of increased grain production in less-developed countries, \$15,000.

HARVARD UNIVERSITY, Massachusetts:

Schistosomiasis research, \$54,000;

Study of surgeons and surgical care in the United States, \$25,000;

Graduate School of Business Administration for a study of social considerations in the corporate decision-making process, \$14,000;

Professor Marcelo Selowsky, Department of Economics, Development Research Group of the Center for International Affairs, for research on the effects of educational investment on economic growth in the less-developed countries, \$5,620.

INSTITUTE FOR INTERNATIONAL ORDER, New York: for use by its World Law Fund on its World Order Models Project, \$15,000.

INSTITUTE FOR THE STUDY OF HEALTH AND SOCIETY, District of Columbia: program development, \$15,000.

JOHNS HOPKINS UNIVERSITY, Maryland:

Associating outstanding young scholars with its Washington Center of Foreign Policy Research, \$100,000;

Seminars for young foreign service officers from developing countries stationed in the District of Columbia, \$75,000;

Schistosomiasis research, \$15,000.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY: research on inflation in Chile, by Dr. Vittorio Corbo of the Catholic University of Chile, \$5,937.

MEHARRY MEDICAL COLLEGE, Tennessee: studies on the quality of health care, \$500,000.

NATIONAL ACADEMY OF SCIENCES, District of Columbia:

Studies of possible establishment of an International Foundation for Science, \$25,000;

Visit of Chinese physicians to the United States, \$25,000;

Essays on Copernican-type revolutions in scientific thought, \$15,000.

NATIONAL AFFILIATION OF CONCERNED BUSINESS STUDENTS, Illinois: symposium on "Corporate Social Policy in a Dynamic Society," \$10,000.

NATIONAL ASSOCIATION FOR FOREIGN STUDENT AFFAIRS, District of Columbia: study of the visa and employment situation for foreign students in the United States, \$2,500.

NATIONAL BUREAU OF ECONOMIC RESEARCH, New York: research and training program of its Center for Economic Analysis of Human Behavior and Social Institutions, \$250,000.

NATIONAL COMMITTEE ON UNITED STATES-CHINA RELATIONS, New York: visit to China by a delegation from the committee, \$8,000.

OVERSEAS DEVELOPMENT COUNCIL, District of Columbia: continuing program of reappraisal and education on the problems of less-developed countries, \$125,000.

REGIONAL PLAN ASSOCIATION, New York: citizen mobilization effort of its Television Town Meetings, "Choices for '76," \$25,000.

ROCKEFELLER ARCHIVES AND RESEARCH CENTER, New York: planning, construction, and organization, \$133,500.

ROYAL SOCIETY OF MEDICINE FOUNDATION, New York: Anglo-American Conference on Drug Abuse, \$5,000.

SALK INSTITUTE FOR BIOLOGICAL STUDIES, California: study of societal features of repetitive drug use, \$10,000.

STUDENT (ADVISORY) COMMITTEE ON INTERNATIONAL AFFAIRS, District of Columbia: research, publication, and seminar programs bringing students and public leaders together to discuss U. S. involvement in international affairs, \$15,000.

UNITED NATIONS ASSOCIATION OF THE UNITED STATES OF AMERICA, New York: research by young scholars associated with its Policy Panel Studies Program on the future of international institutions, \$15,000.

U. S. CONFERENCE FOR THE WORLD COUNCIL OF CHURCHES, New York: study of nonviolent methods of achieving social change, \$15,000.

UNIVERSITY OF DENVER: Graduate School of International Studies for a study on external investment in South and South West Africa, \$10,000.

UNIVERSITY OF MICHIGAN: schistosomiasis research in Africa under the direction of Dr. John B. Burch, \$9,000.

UNIVERSITY OF NOTRE DAME, Indiana: Ecumenical Institute for Advanced Theological Studies, Jerusalem, \$500,000.

UNIVERSITY OF SOUTHERN CALIFORNIA: study of possible resource sharing with other universities, \$25,000.

WESTERN COLLEGE, Ohio: salary of a Coordinator of Multicultural Events, \$14,100.

STUDY AWARDS

The Foundation's study awards are closely integrated with its interest in the agricultural sciences, the biomedical sciences, the social sciences, and the arts and humanities. Awards are made internationally to outstanding men and women who have shown promise of making important contributions to their fields of study in their native countries. Today direct fellowship-scholarship awards are made principally for training selected individuals drawn from those developing institutions abroad in which the Foundation has an active program interest. For 1972 the Trustees approved a fund of \$3,200,000 for fellowships and scholarships. A fund of \$3,150,000 was approved for allocation during 1973. This fund by no means represents the full extent of the Foundation's commitment to training. Most grants to universities and research institutes, as well as to other types of organizations, include funds to permit the inclusion of graduate students or other trainees, as may be appropriate, in the enterprise.

During 1972 a total of 386 persons held Foundation fellowships and scholarships; 316 awards that began in previous years continued active in 1972, and 70 new awards became active during the year. Their distribution by program is as follows:

	STUDY AWARDS FROM PREVIOUS YEARS CONTINUED INTO 1972	NEW AWARDS IN 1972	NUMBER OF AWARDS ACTIVE IN 1972
Agricultural Sciences	107	30	137
Arts and Humanities	14	—	14
Biomedical Sciences	83	18	101
Social Sciences	112	21	133
Natural and Environmental Sciences	—	1	1
	<hr/> <u>316</u>	<hr/> <u>70</u>	<hr/> <u>386</u>

Rockefeller Foundation fellows and scholars in 1972 came from the following countries:

	PREVIOUS AWARDS	NEW AWARDS		PREVIOUS AWARDS	NEW AWARDS
Argentina	1		Ecuador	1	
Brazil	10		El Salvador		2
Chile	13		Ethiopia	3	5
Colombia	49	14	Guatemala	1	

Guyana	1		Sri Lanka (Ceylon)	1
India	10			
Kenya	19	3	Sudan	1
Korea	1		Tanzania	19
Malawi	1		Thailand	68
Mexico	12	1	Turkey	6
Nicaragua	1		Uganda	17
Nigeria	46	10	United Arab Republic	1
Pakistan	1		United States	2
Peru	8			4
Philippines	23	4	Zaire	1

FELLOWS AND SCHOLARS: 1972 AWARDS

*F: Fellow; S: Scholar; AGR: Agricultural Sciences;
BMS: Biomedical Sciences; AH: Arts and Humanities; SS: Social Sciences;
RB: Reproductive Biology; NES: Natural and Environmental Sciences.*

COLOMBIA

HECTOR BENITEZ M.S., University of Nebraska, 1971. Poultry Nutrition and Management. Appointed from Instituto Colombiano Agropecuario. Place of study: U.S.A. s-AGR

JAVIER BERNAL M.S., Cornell University, 1970. Agronomy. Appointed from Instituto Colombiano Agropecuario. Place of study: U.S.A. s-AGR

GERMAN A. CADAVID SCHWARZBAUER Ing. Agr., National University, 1970. Agricultural Engineering. Appointed from Universidad del Valle. Place of study: U.S.A. s-BMS

ALVARO CASTRO M.S., Texas A & M University, 1968. Beef Cattle Production. Appointed from Instituto Colombiano Agropecuario. Place of study: U.S.A. s-AGR

LUIS FAJARDO M.D., Universidad del Valle, 1966. Nutrition. Appointed from Universidad del Valle. Place of study: U.S.A. s-BMS

GUILLERMO GONZALEZ M.S., University of Wisconsin, 1971. Virology. Appointed from Instituto Colombiano Agropecuario. Place of study: U.S.A. s-AGR

CESAR LOBO M.S., University of Wisconsin, 1972. Veterinary Medicine. Appointed from Instituto Colombiano Agropecuario. Place of study: U.S.A. s-AGR

ALEJANDRO PALACIOS M.S., Stanford University, 1964. Civil Engineering. Appointed from Universidad del Valle. Place of study: U.S.A. s-BMS

RODRIGO PAREDES M.S., University of Florida, 1963. Chemistry. Appointed from Universidad del Valle. Place of study: U.S.A. s-BMS

EMIRO ROJAS M.S., University of Nebraska, 1970. Agronomy. Appointed from Instituto Colombiano Agropecuario; and National University. Place of study: U.S.A. s-AGR

CARLOS TRUJILLO Electromecánico Ing., Universidad del Valle, 1959. Electrical Engineering. Appointed from Universidad del Valle. Place of study: U.S.A. s-BMS

GUILLERMO VALDES Electromecánico Ing., Universidad del Valle, 1965. Applied Mathematics. Appointed from Universidad del Valle. Place of study: U.S.A. s-BMS

FERNANDO VILLAFANE M.S., Colorado State University, 1971. Veterinary Pathology. Appointed from Instituto Colombiano Agropecuario. Place of study: U.S.A. s-AGR

PEDRO VILLEGAS M.S., Texas A & M University, 1971. Veterinary Microbiology. Appointed from Instituto Colombiano Agropecuario. Place of study: U.S.A. s-AGR

EL SALVADOR

HUCH SALVADOR CORDOVA ORELLANA Ing. Agr., University of Coahuila, 1969. Plant Breeding. Appointed from Office of Agricultural Research and Extension. Place of study: Mexico. s-AGR

RAFAEL A. QUINTENO B.S., University of California, Davis, 1959. Animal Science. Appointed from Foundation for the Development of Cooperatives. Place of study: U.S.A. s-AGR

ETHIOPIA

BERHANE KIFLEWAHID M.S., University of Wisconsin, 1969. Animal Nutrition. Appointed from Haile Selassie I University. Place of study: U.S.A. s-AGR

DEREJE ASHAGARI M.S., Oklahoma State University, 1969. Plant Pathology. Appointed from Haile Selassie I University. Place of study: U.S.A. s-AGR

MELAK H. MENGECHA Ph.D., Purdue University, 1964. Plant Breeding and University Administration. Appointed from Haile Selassie I University. Place of study: U.S.A. f-AGR

MESFIN ABEBE M.S., University of California, Riverside, 1970. Agronomy. Appointed from Haile Selassie I University. Place of study: U.S.A. s-AGR

TAREKE BERHE B.Sc., Haile Selassie I University, 1969. Plant Breeding and Genetics. Appointed from Haile Selassie I University. Place of study: U.S.A. s-AGR

KENYA

SHELLEMIAH O. KEYA M.S., Cornell University, 1970. Agronomy. Appointed from University of Nairobi. Place of study: U.S.A. s-AGR

ANDREW K. MULLEI M.A., Howard University, 1969. Economics. Appointed from University of Nairobi. Place of study: U.S.A. s-ss

GEORGE M. RUIGU B.Sc., Makerere University, 1971. Agricultural Economics. Appointed from University of Nairobi. Place of study: U.S.A. s-ss

MEXICO

FRANCIS ROBERT BIDINGER M.S., University of California, Davis, 1968. Agronomy. Appointed from International Maize and Wheat Improvement Center. Place of study: U.S.A. s-AGR

NIGERIA

OLAJIDE ABE M.Phil., University of Ibadan, 1967. Statistics. Appointed from University of Ibadan. Place of study: U.S.A. s-BMS

ADELOLA ADELOYE M.B.B.S., University of Ibadan (London), 1960. Experimental Teratology. Appointed from University of Ibadan. Place of study: U.S.A. f-BMS

CYRIL I. D. CLARK B.Sc., University of Ibadan, 1970. Sociology. Appointed from University of Ibadan. Place of study: U.S.A. s-ss

ITA EKANEM-ITA B.A., University College, 1963. Higher Education. Appointed from University of Ibadan. Place of study: U.S.A. s-ss

JULIUS FAMILUSI M.B.B.S., University of London, 1962. Pediatric Neurology. Appointed from University of Ibadan. Place of study: U.S.A. F-BMS

ISAIAH I. IHIMODU B.S., Ahmadu Bello University, 1972. Economics. Appointed from Ahmadu Bello University. Place of study: U.S.A. s-ss

STEPHEN O. IMOAGENE Ph.D., University of Ibadan, 1971. Sociology. Appointed from University of Ibadan. Place of study: Sweden and U.S.A. F-ss

CYRIL C. IROEGBU B.Sc., University of Ibadan, 1965. Agricultural Economics. Appointed from University of Nigeria. Place of study: U.S.A. s-ss

MAMMAN Z. KANO M.A., Ohio State University, 1970. Anthropology. Appointed from Ahmadu Bello University. Place of study: U.S.A. s-ss

SAMUEL O. OLOFIN M.Sc., University of Ibadan, 1972. Economics. Appointed from University of Ibadan. Place of study: U.S.A. s-ss

PHILIPPINES

ELISEO P. CADAPAN M.Sc., University of the Philippines, 1971. Economic Entomology. Appointed from University of the Philippines. Place of study: U.S.A. s-AGR

PONCIANO HALOS M.S., University of the Philippines, 1970. Plant Pathology. Appointed from University of the Philippines. Place of study: U.S.A. S-AGR

IRENEO J. MANGUIAT M.S., University of the Philippines, 1970. Soil Microbiology. Appointed from International Rice Research Institute. Place of study: U.S.A. s-AGR

TOMAS MASAO M.S., University of the Philippines, 1971. Plant Breeding. Appointed from University of the Philippines. Place of study: U.S.A. s-AGR

SRI LANKA (CEYLON)

DHARMAWANSA SENADHIRA B.Sc., University of Ceylon, 1967. Plant Breeding and Genetics. Appointed from Department of Agriculture. Place of study: U.S.A. s-AGR

TANZANIA

CHRYSANTH L. A. KAMUZORA M.A., University of Dar es Salaam, 1972. Statistics. Appointed from University of Dar es Salaam. Place of study: Canada. s-ss

SHIRIN WALJI M.A., University of Wisconsin, 1969. History. Appointed from University of Dar es Salaam. Place of study: U.S.A. s-ss

THAILAND

APICHART ANUKULARMPHAI M.Sc., Technion, Israel Institute of Technology, 1968. Agricultural Engineering. Appointed from Kasetsart University. Place of study: U.S.A. s-AGR

AROON JUGSUJINDA M.Sc., West Pakistan Agricultural University, 1965. Soil Fertility. Appointed from Ministry of Agriculture. Place of study: U.S.A. s-AGR

ASCHAN SUKTHUMRONG M.Sc.Ag., Uttar Pradesh Agricultural University, 1969. Agronomy. Appointed from Kasetsart University. Place of study: U.S.A. s-AGR

CHAIWAT KONJING M.S., Michigan State University, 1970. Agricultural Economics. Appointed from Kasetsart University. Place of study: U.S.A. s-ss

CHAMNAN CHUTKAEW M.Sc., Uttar Pradesh Agricultural University, 1969. Agronomy. Appointed from Ministry of Agriculture. Place of study: U.S.A. s-AGR

CHAVALIT SIRIPIROM M.P.A., University of Pittsburgh, 1969. Social Science. Appointed from Mahidol University. Place of study: U.S.A. s-BMS

CHESADA LOOHAWENCHIT B.A., Thammasat University, 1972. Economics. Appointed from Thammasat University. Place of study: U.S.A. s-ss

CHULACHEEB CHINWANNO B.A., Swarthmore College, 1972. Political Science. Appointed from Mahidol University. Place of study: U.S.A. s-BMS

DOW MONGKOLSMAI M.A., Thammasat University, 1972. Economics. Appointed from Thammasat University. Place of study: U.S.A. s-ss

GOSAH ARYA M.A., Rutgers University, 1967. Economics. Appointed from Thammasat University. Place of study: U.S.A. s-ss

NORANIT SETABUTR M.A., Occidental College, 1970. Political Science. Appointed from Thammasat University. Place of study: U.S.A. s-ss

POONSA-NGA SOMBOONPANYA M.A., Thammasat University, 1972. Economics. Appointed from Kasetsart University. Place of study: U.S.A. s-ss

PRANEE TINAKORN B.A., Swarthmore College, 1972. Economics. Appointed from Thammasat University. Place of study: U.S.A. s-ss

PREEYA BHOLANIVAS B.Sc., University of Western Australia, 1971. Economics. Appointed from Thammasat University. Place of study: England. s-ss

SUPOT FAUNGFUPONG M.S., Iowa State University, 1971. Crop Physiology and Production. Appointed from Kasetsart University. Place of study: U.S.A. s-AGR

SURAPON OUPADISSAKOON M.S., Oregon State University, 1970. Agronomy. Appointed from Kasetsart University. Place of study: U.S.A. s-AGR

SUWANEE TANTIPATHANANANDH B.Sc., Mahidol University, 1967. Psychiatric Nursing. Appointed from Mahidol University. Place of study: U.S.A. s-BMS

THAVITONG HONGVIVATANA M.A., Thammasat University, 1972. Economics. Appointed from Mahidol University. Place of study: U.S.A. s-BMS

WATTANA SRISUKONTI B.Sc., Mahidol University, 1964. Reproductive Biology. Appointed from Mahidol University. Place of study: U.S.A. s-BMS

TURKEY

ERDOGAN INDELEN B.S., Ege University, 1963. Plant Breeding. Appointed from Agricultural Research Institute. Place of study: U.S.A. s-AGR

UGANDA

ROBIN D. KIBUKA B.A., Yale University, 1971. Economics. Appointed from Makerere University. Place of study: U.S.A. s-ss

JOSHUA MUGERWA M.D., University of East Africa, 1971. Medicine. Appointed from Makerere University. Place of study: England. s-BMS

JOSEPH OKELLO-OCULI M.A., University of Essex, 1968. Political Science. Appointed from Makerere University. Place of study: U.S.A. s-ss

EDISON W. RUGUMAYO B.Sc., Technion, Israel Institute of Technology, 1968. Agricultural Engineering. Appointed from Makerere University. Place of study: U.S.A. s-AGR

UNITED STATES

JOHN N. ARONSON Ph.D., Indiana University, 1959. Reproductive Biology. Appointed from State University of New York, Albany. Place of study: England. F-BMS-RB

JAMES VAUGHN Ph.D., University of New Hampshire, 1972. Environmental Virology. Appointed from Woods Hole Oceanographic Institute. Place of study: U.S.A. r-NES

PAUL M. WASSARMAN Ph.D., Brandeis University, 1968. Reproductive Biology. Appointed from Purdue University. Place of study: U.S.A. F-BMS-RB

DAVID LEE WILLIAMS Ph.D., University of Illinois, 1972. Reproductive Biology. Appointed from University of Illinois. Place of study: U.S.A. F-BMS-RB

ORGANIZATIONAL INFORMATION

MEETINGS

The annual meeting of the Corporation and a regular stated meeting of the Board of Trustees were held on April 5, and a stated meeting of the Board was held on December 4 and 5. Five regular meetings and three special meetings of the Executive Committee of the Trustees were held to take actions within the general policies approved by the Board.

TRUSTEES AND PRINCIPAL OFFICERS

J. George Harrar retired as President and a Trustee of the Foundation at the end of June. Dr. Harrar first joined the Foundation in 1943, at which time he initiated a cooperative agricultural operating program in Mexico. In 1952 he was transferred to the New York office to become Deputy Director for Agriculture. He was elected Director for Agricultural Sciences in 1955, Vice-President in 1959, and President in 1961. In April, in anticipation of his retirement, the Trustees appointed him a Life Fellow of the Foundation, beginning July 1. He will also serve as a part-time consultant for a three-year period.

Alberto Lleras Camargo, Chairman of the Editorial Board of *Vision* magazine, retired as a Trustee, effective June 30. He was elected in 1967.

Arthur A. Houghton, Jr., President of Steuben Glass, also retired from the Board on June 30. He was elected in 1958 and has served as a member of the Executive and Finance Committees, as Chairman of the Nominating Committee, and as Committee on Audit.

John H. Knowles, M.D., succeeded Dr. Harrar as Trustee and President on July 1. Dr. Knowles came to the Foundation from the Massachusetts General Hospital, where in ten years he had risen from intern to General Director—at thirty-five the youngest in the institution's 150-year history. During the following decade he made what was already one of the world's best teaching and patient-care hospitals even better, and increased annual donations sixteenfold by turning the hospital into one of Boston's most visible institutions. In the process, he captured the imagination of people everywhere. Dr. Knowles is the eighth President of the Foundation.

At the April meeting of the Corporation, Clifford M. Hardin, Vice-Chairman of the Ralston Purina Company, was elected a Trustee, effective July 1. Mr. Hardin, first elected in 1961, resigned in 1969 when he was appointed Secretary of Agriculture.

Also at the April meeting, Ben W. Heineman, President and Chief Executive of Northwest Industries, Inc., was elected a Trustee, effective July 1. Mr. Heineman has been active in civil rights, particularly in housing and urban development and in welfare.

Except for the retirement of Dr. J. George Harrar and the succession of

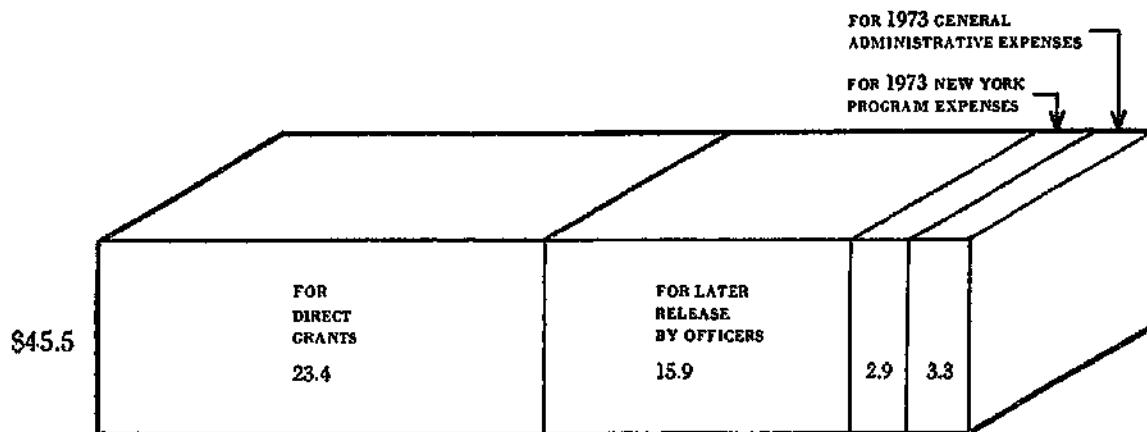
John H. Knowles, M.D., to the Presidency of the Foundation, there was only one change in the composition of the principal officer group during 1972. Norman Lloyd retired as Director for Arts and Humanities, effective December 31, and became a part-time consultant. He had been with the Foundation as a Director since 1964.

FINANCIAL STATEMENTS

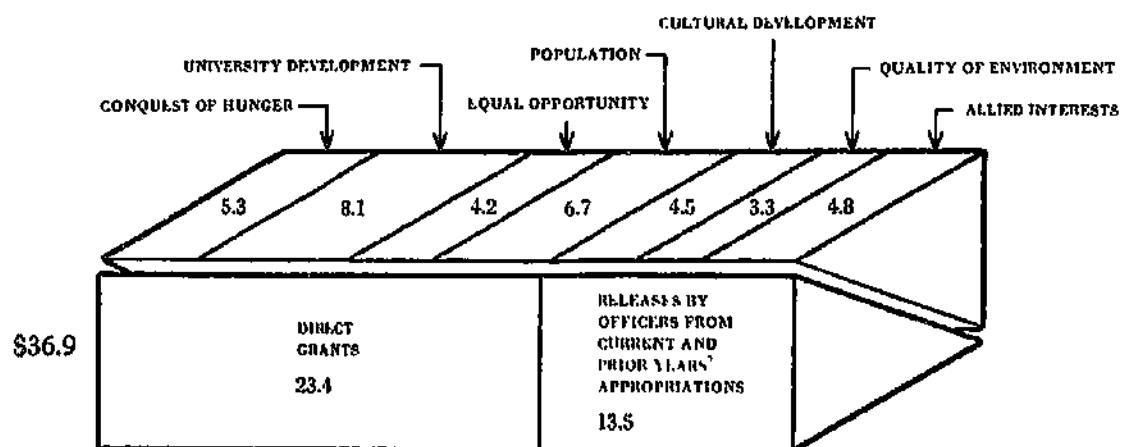
<i>Summary</i>	<i>88</i>
<i>Accountants' Opinion</i>	<i>90</i>
<i>Statement of Assets, Obligations and Principal Fund</i>	<i>91</i>
<i>Statement of Income, Appropriations and Changes in Principal Fund</i>	<i>92</i>
<i>Statement of Changes in Cash</i>	<i>93</i>
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<i>Schedule of Transactions in Marketable Securities</i>	<i>95</i>
<i>Schedule of Marketable Securities</i>	<i>104</i>

SUMMARY

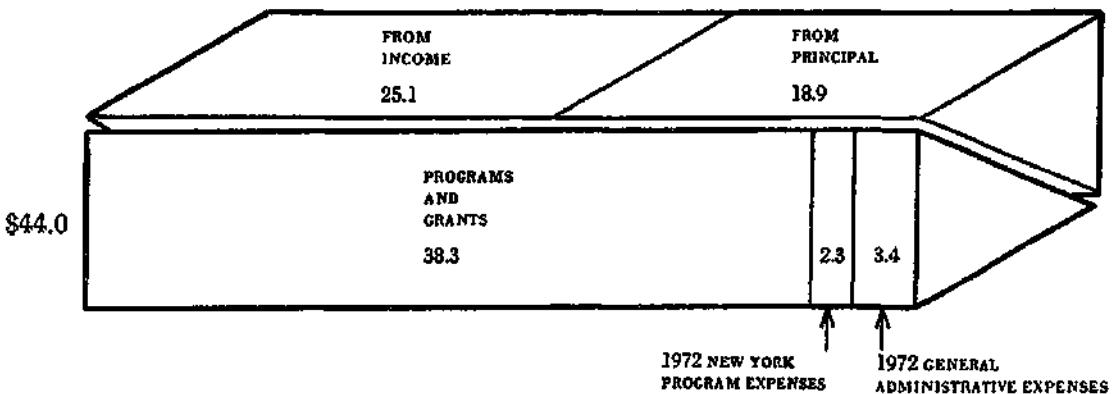
Appropriations: All expenditures of The Rockefeller Foundation are authorized through appropriations made by the Trustees. During 1972 the Trustees appropriated \$45.5 million (\$43.7 million after lapses and refunds) in three categories: \$23.4 million in direct grants, which were announced when made; \$15.9 million for later releases by the officers, which are not announced until released; and \$6.2 million (appropriated in December) for New York Program and General Administrative expenses during 1973.



Programs and Grants Announced: Total releases during the year, consisting of a portion of the \$15.9 million appropriated in 1972 and additional amounts from similar appropriations in prior years, came to \$13.5 million. With the inclusion of the \$23.4 million in direct grants, the total amount for programs and grants in 1972 came to \$36.9 million, in the categories shown below:



Payments: Some grants are paid almost as soon as made; others are paid over several years. Payments during the year on all programs and grants, and for 1972 New York Program and General Administrative expenses, totaled \$44 million. Of this amount, \$25.1 million came from income and \$18.9 million from principal. In addition, the Foundation paid approximately \$1.2 million in excise taxes on income received in 1971.



Since its founding in 1913, The Rockefeller Foundation has paid out a total of \$1 billion 85 million, of which \$874 million came from income, and \$211 million from principal.

Distribution Requirements: The Tax Reform Act of 1969 requires the Foundation to pay out all of its ordinary investment income including short-term capital gains, or (beginning with the tax year 1972) a specific percentage of its market value each year, whichever is greater. During the three years since passage of the Act, the Foundation has already paid out \$43.5 million more than it will be required to pay out by the end of 1973. From its founding in 1913 through the end of 1969 (when the Tax Reform Act took effect) the Foundation spent \$158 million in excess of ordinary investment income.

Investment Managers: On January 1, 1972 the Foundation entrusted approximately \$200 million of its securities, in equal amounts, to four investment managers on a discretionary basis. The managers were chosen after careful study to achieve several objectives. The Foundation is seeking to determine whether outside professional management on a discretionary basis and with a smaller size of holding can achieve a total return higher than that achieved in a unitary portfolio. The four managers received identical portfolios (1/15 of the stocks held by the Foundation). Having been chosen for diverse investment philosophies, they made many changes in the holdings during the first year, increasing the number and variety of issues held. The objective in engaging outside managers is a long-term one, and the Foundation believes one year of operation is too short a time for conclusive evaluation.

Diversification: The Foundation has continued to reduce the concentration in oil stocks, and has in many cases reinvested the proceeds in issues which are expected to appreciate more rapidly but which yield lower current income.

The financial statements for 1972 and the opinion of Arthur Young & Company, certified public accountants, are presented on the following pages.

ACCOUNTANTS' OPINION

ARTHUR YOUNG & COMPANY

277 PARK AVENUE
NEW YORK, N.Y. 10017

The Board of Trustees
The Rockefeller Foundation

We have examined the accompanying statement of assets, obligations and principal fund of The Rockefeller Foundation at December 31, 1972 and the related statements of income, appropriations and changes in principal fund and changes in cash for the year then ended, and the supplemental schedules of marketable securities at December 31, 1972 and transactions therein 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 statements mentioned above present fairly the assets, obligations, principal fund and marketable securities of The Rockefeller Foundation at December 31, 1972 and its income, appropriations, changes in principal fund, changes in cash, and transactions in marketable securities for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

The financial statements for the prior year were examined by other independent public accountants.

Arthur Young & Company

January 31, 1973

STATEMENT OF ASSETS, OBLIGATIONS AND PRINCIPAL FUND
DECEMBER 31, 1972 AND 1971

ASSETS	1972	1971
Marketable Securities, at cost or fair market value at date of gift (quoted market value 1972: \$967,972,327; 1971: \$830,569,466)	\$463,582,121	\$387,577,635
Cash	795,986	746,374
Advances and accounts receivable	467,096	469,704
Property—at nominal or depreciated amount	<u>93,878</u>	<u>101,930</u>
Total assets	<u>\$464,939,081</u>	<u>\$388,895,643</u>

OBLIGATIONS AND PRINCIPAL FUND

Accounts payable	\$ 172,671	\$ 219,063
Federal excise tax payable (Note 2)	2,024,109	1,166,450
Unpaid appropriations for grants, program expenses and general administrative expenses (Note 4)	89,204,660	89,488,969
Principal fund (including property fund)	<u>373,537,641</u>	<u>298,021,161</u>
Total obligations and principal fund	<u>\$464,939,081</u>	<u>\$388,895,643</u>

See accompanying notes.

**STATEMENT OF INCOME,
APPROPRIATIONS AND CHANGES IN PRINCIPAL FUND
YEARS ENDED DECEMBER 31, 1972 AND 1971**

	1972	1971
Investment income received:		
Dividends	\$ 25,583,179	\$ 27,952,315
Interest	1,282,006	1,375,662
Royaalties on investment received by bequest	<u>99,038</u>	<u>111,437</u>
	26,964,223	29,439,414
Less: Investment expenses	<u>711,771</u>	<u>278,163</u>
Investment income before federal excise tax	26,252,452	29,161,251
Less: Provision for federal excise tax (Note 2)	<u>1,050,098</u>	<u>1,166,450</u>
Net investment income	25,202,354	27,994,801
 Appropriations by trustees (net of lapses and refunds of unexpended balances 1972: \$1,761,894; 1971: \$849,828)	 <u>43,743,006</u>	 <u>41,084,552</u>
 Excess of appropriations over income (to be deducted from principal fund)	 (18,540,652)	 (13,089,751)
 Principal fund (including property fund) at beginning of year	 298,021,161	 285,811,681
 Contributions to the Foundation	 367,510	 427,528
 Net increase (decrease) in property account	 (8,052)	 29,466
 Gain on disposition of securities	 94,671,685	 24,842,237
Less: Provision for federal excise tax on taxable gain (1972: \$24,350,297; 1971: None) (Note 2)	 <u>(974,011)</u>	 —
 Principal fund (including property fund) at end of year	 <u>\$373,537,641</u>	 <u>\$298,021,161</u>

See accompanying notes.

STATEMENT OF CHANGES IN CASH
YEARS ENDED DECEMBER 31, 1972 AND 1971

	1972	1971
Sources of cash:		
Investment income before federal excise tax	\$ 26,252,452	\$ 29,161,251
Proceeds from the disposition of securities	314,788,984	151,073,506
Net increase (decrease) in advances, accounts receivable, and accounts payable	(43,784)	541,361
Cash contributions to the Foundation	20,100	427,528
Amortization of bond premiums	13,706	26,508
	<u>341,031,458</u>	<u>181,230,154</u>
Uses of cash:		
Payments on programs and grants for		
Conquest of Hunger	7,428,223	8,964,620
University Development	7,253,780	7,526,815
Equal Opportunity for All	4,875,362	6,166,265
Population	6,624,497	5,980,590
Cultural Development	4,146,250	3,976,956
Quality of the Environment	3,444,117	2,053,326
Allied Interests	4,496,936	3,713,763
New York Program Costs	2,344,089	2,259,940
	<u>40,613,254</u>	<u>40,642,275</u>
General administrative expenses	3,414,061	3,243,044
Cost of securities purchased	295,788,081	136,291,200
Federal excise taxes paid	1,166,450	1,214,146
	<u>340,981,846</u>	<u>181,390,665</u>
Increase (decrease) in cash	49,612	(160,511)
Cash balance at beginning of year	<u>746,374</u>	<u>906,885</u>
Cash balance at end of year	<u>\$ 795,986</u>	<u>\$ 746,374</u>

NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 1972

1. Summary of significant accounting policies

The Foundation maintains its accounting on a modified cash basis, which in effect is not materially different from the accrual basis of accounting.

Dividend and interest income is recorded as received. Investment expenses are recorded as paid.

Investments are recorded at average cost or fair market value at date of gift. Gains and losses from the sale of securities are recorded at the trade date and represent the difference between net sales proceeds and average cost of securities sold.

Appropriations for grants, program expenses and general administrative expenses are charged against income when made by the Trustees. The excess of appropriations over income for the year is deducted from the principal fund.

Federal excise tax is accrued as incurred.

2. Federal excise tax

The Foundation qualifies as a tax-exempt organization under Section 501(c)(3) of the Internal Revenue Code and accordingly is not subject to Federal income tax. However, the Foundation is classified as a private foundation and as such, under the Tax Reform Act of 1969, is subject to a 4% excise tax on net investment income including dividends, interest, and net realized gains on securities transactions, reduced by related expenses. Not less than the fair market value at December 31, 1969 of securities owned at that date shall be used as the basis for determining taxable gains on subsequent sales of such securities. Accordingly, \$24,350,297 of the 1972 and none of the 1971 gain on disposition of securities recorded in the accompanying financial statements is subject to Federal excise tax. The basis for calculating taxable gains of securities held at December 31, 1972 is \$747,898,084.

3. Pension plan

The Foundation has a non-contributory pension plan for all full-time salaried employees who have attained the age of 40 or are at least 25 years old and have had one year's service. It is the Foundation's policy to fund all current pension obligations as incurred and to amortize unfunded past service costs over a period of ten years. Plan costs, including charges for current service and amortization of unfunded prior service costs, amounted to \$787,115 in 1972 and \$783,492 in 1971.

At December 31, 1972 the present value of premiums payable through March 1, 1979 to complete the purchase of annuities for personnel who retired prior to July 1, 1966 was approximately \$1,000,000.

NOTES TO FINANCIAL STATEMENTS concluded
DECEMBER 31, 1972

4. Appropriations and payments

Appropriations and payments, for the years ended December 31, are summarized as follows:

	1972	1971
Unpaid appropriations at beginning of year	\$ 89,488,969	\$ 92,289,736
Appropriations (net of lapses and refunds of unexpended balances 1972: \$1,761,894; 1971: \$849,828)	<u>43,743,006</u>	<u>41,084,552</u>
	<u>133,231,975</u>	<u>133,374,288</u>
Payments on appropriations:		
Grants and program expenses (net of refunds on closed appropriations—1972: \$15,137; 1971: \$36,515)	40,613,254	40,642,275
General administrative expenses	<u>3,414,061</u>	<u>3,243,044</u>
Total	<u>44,027,315</u>	<u>43,885,319</u>
Unpaid appropriations at end of year	<u>\$ 89,204,660</u>	<u>\$ 89,488,969</u>

Of the balance of unpaid appropriations at December 31, 1972, approximately \$43,800,000 represents appropriations by the Trustees not yet released for commitment to specific grantees, and appropriations for program and administrative expenses for the following year.

**SCHEDULE OF TRANSACTIONS IN MARKETABLE SECURITIES
FOR THE PERIOD JANUARY 1 TO DECEMBER 31, 1972**

SUMMARY

Ledger amount of securities, January 1, 1972		\$387,577,635
Purchased	\$295,788,081	
Otherwise acquired	<u>3,948,233</u>	<u>299,736,314</u>
		<u>687,813,949</u>
Sold	179,431,803	
Redeemed at maturity	40,685,496	
Otherwise disposed of	3,600,823	
Amortization of bond premiums	<u>13,706</u>	<u>223,731,828</u>
Ledger amount of securities, December 31, 1972		<u>\$169,582,121</u>

SCHEDULE OF TRANSACTIONS IN MARKETABLE SECURITIES

FOR THE PERIOD JANUARY 1 TO DECEMBER 31, 1972

PURCHASED:	LEDGER AMOUNT
U. S. Government Obligations:	
\$ 76,493,000	Treasury Obligations (under Repurchase Agreements) \$ 76,493,000
9,255,000	Treasury Bills 9,241,495
Certificates of Deposit:	
5,595,000	Bankers Trust Company 5,692,485
11,461,000	The Chase Manhattan Bank 11,463,404
840,000	Chemical Bank 840,000
4,905,000	First National City Bank 4,956,931
1,380,000	Franklin National Bank 1,380,000
1,310,000	Irving Trust Company 1,360,172
500,000	Manufacturers Hanover Trust Company 500,000
360,000	Marine Midland Bank 360,000
1,000,000	Morgan Guaranty Trust Company 1,006,963
930,000	National Bank of North America 930,000
1,445,000	Security National Bank 1,445,000
Notes:	
586,000	American Express Company—9-1-72 586,000
500,000	Boston Edison Company 7-26-72 498,104
200,000	9-12-72 199,125
500,000	Central Hudson Gas & Electric Company 7-28-72 498,587
200,000	10-12-72 199,630
300,000	10-19-72 299,350
250,000	Commonwealth Edison Company—9-28-72 248,641
400,000	Florida Power & Light Company—1-17-72 398,440
500,000	General Telephone of California—10-3-72 497,163
350,000	Hawaiian Telephone Company 9- 5-72 348,469
300,000	10-11-72 299,367
50,000	10-18-72 49,868
400,000	1- 5-73 398,292
300,000	1- 9-73 298,847
600,000	Illinois Bell Telephone Company—2-14-72 599,635
300,000	Long Island Lighting Company—9-25-72 298,689
400,000	New England Telephone Company—12-6-72 398,375
300,000	Northeast Utilities—12-13-72 297,865
1,000,000	Pacific Northwest Bell Telephone Company—5-4-72 994,653
300,000	Pennsylvania Power & Light Company—10-11-72 297,880
50,000	Public Service of Colorado—10-16-72 49,912
1,000,000	South Central Bell Telephone Company—3-20-72 999,097
500,000	Southern Bell Telephone & Telegraph Company—3-28-72 499,188
900,000	Virginia Electric & Power Company—1-9-73 895,000
Convertible Bonds:	
1,500,000	Federal National Mortgage Association 4 $\frac{3}{4}$ %—10-1-96 1,770,625
800,000	Fischbach & Moore 4 $\frac{3}{4}$ %—4-3-97 840,062

SCHEDULE OF TRANSACTIONS IN MARKETABLE SECURITIES *continued*

FOR THE PERIOD JANUARY 1 TO DECEMBER 31, 1972

PURCHASED: *continued*

LEDGER AMOUNT

Common Stocks:	
12,500	shares Air Products & Chemicals, Inc. \$ 815,753
25,000	" Allied Maintenance Corporation 841,626
51,500	" American Airlines, Inc. 2,209,411
5,000	" American Broadcasting Companies, Inc. 360,659
38,500	" American Cyanamid Company 1,328,890
20,000	" American District Telegraph Company 1,156,006
148,200	" American Electric Power Company, Inc. 4,115,935
6,000	" American Express Company 834,250
14,400	" American Home Products Corporation 1,502,245
9,500	" AMP, Inc. 763,154
5,300	" ARA Services 870,362
10,300	" Avon Products, Inc. 1,047,687
125,000	" BankAmerica Corporation 6,310,375
100,000	" Beatrice Foods Company 4,989,666
11,000	" Black & Decker Manufacturing Company 1,038,838
50,000	" Block (H&R), Inc. 958,534
79,000	" Bristol-Myers Company 4,649,185
200,000	" Burlington Industries, Inc. 7,601,479
205,500	" Carolina Power & Light Company 6,442,848
31,000	" Central & South West Corporation 1,296,850
4,000	" Chicago Bridge & Iron Company 560,850
22,900	" Clorox Company 1,480,172
15,000	" CMI Investment Corporation 977,618
15,000	" Coastal States Gas Producing Company 763,763
9,500	" Coca-Cola Company (The) 1,150,299
5,000	" Coleco Industries 243,404
9,300	" Colonial Penn Group 623,787
39,400	" Columbia Broadcasting System, Inc. 2,119,936
20,000	" Commonwealth Edison Company 698,644
7,000	" Corning Glass Works 1,412,920
40,000	" Crown Cork & Seal Company, Inc. 908,357
35,000	" Dexter Corporation 774,216
12,000	" Disney (Walt) Productions 1,861,523
35,000	" Dreyfus Third Century Fund Inc. 394,450
13,000	" Dun & Bradstreet, Inc. 910,396
6,900	" DuPont (E. I.) de Nemours and Company 1,142,593
8,000	" ERC Corporation 807,287
40,000	" Evans Products Company 1,046,019
6,200	" Ford Motor Company 464,479
30,000	" Gannett Company, Inc. 1,052,845
1,900	" General Motors Corporation 148,200
15,000	" Grainger (W. W.), Inc. 760,238
13,000	" Hall (Frank B.) & Company Inc. 576,125

SCHEDULE OF TRANSACTIONS IN MARKETABLE SECURITIES *continued*

FOR THE PERIOD JANUARY 1 TO DECEMBER 31, 1972

PURCHASED: *continued*

LEDGER AMOUNT

Common Stocks: <i>continued</i>		
20,000	shares Heublein, Inc.	\$ 1,059,149
7,900	" Hewlett-Packard Company	376,228
25,000	" Household Finance Corporation	1,298,215
27,500	" Houston Lighting & Power Company	1,213,646
200,000	" Howard Johnson Company	5,192,659
24,000	" I.M.S. International Inc.	759,000
2,200	" International Business Machines Corporation	905,205
233,400	" International Harvester Company	7,527,156
41,800	" International Paper Company	1,453,836
30,000	" International Telephone & Telegraph Corporation	1,774,802
20,000	" Johnson & Johnson	2,170,340
30,200	" Joy Manufacturing Company	1,640,385
97,000	" Kaufman & Broad Inc.	4,721,394
20,000	" Kendall Company	862,655
8,000	" Kerr-McGee Corporation	464,317
21,000	" Kresge (S. S.) Company	1,772,286
25,000	" Lenox, Inc.	775,957
20,000	" Louisiana Land & Exploration Company	903,237
35,000	" Malone & Hyde, Inc.	1,121,484
20,000	" MAPCO, Inc.	833,191
45,000	" Marlennan Corporation	2,567,499
25,000	" Marriott Corporation	1,353,058
49,211	" McDonnell Douglas Corporation	1,982,782
30,000	" Melville Shoe Corporation	876,002
6,600	" Merck & Company, Inc.	859,019
7,500	" Minnesota Mining & Manufacturing Company	605,286
20,000	" Mogul Corporation	715,500
16,600	" Morgan (J. P.) & Company, Inc.	1,225,797
24,500	" Morton-Norwich Products, Inc.	750,182
10,000	" Nashua Corporation	493,183
15,000	" Norton Simon, Inc.	1,013,566
25,000	" Owens-Corning Fiberglas Corporation	1,141,510
37,500	" Pacific Gas & Electric Company	1,120,903
30,500	" Perkin-Elmer Corporation	1,419,970
15,000	" Pinkerton's, Inc. Class "B"	1,196,404
23,900	" Polaroid Corporation	2,851,048
81,100	" PPG Industries, Inc.	3,708,198
20,000	" Procter & Gamble Company (The)	1,861,208
10,000	" Purolator, Inc.	885,240
20,000	" Ralston Purina Company	773,703
20,000	" Reece Corporation	600,152
2,000	" Research-Cottrell Inc.	131,534
20,000	" Reynolds (R. J.) Industries Inc.	1,403,421

SCHEDULE OF TRANSACTIONS IN MARKETABLE SECURITIES *continued*
 FOR THE PERIOD JANUARY 1 TO DECEMBER 31, 1972

PURCHASED: concluded

LEDGER AMOUNT

Common Stocks: concluded

14,600	shares Reynolds & Reynolds Company	\$ 699,601
25,000	" Robins (A. H.) Company, Inc.	1,178,125
20,000	" Rouse Company	605,000
13,000	" Safeco Corporation	556,303
15,000	" Schering-Plough Corporation	1,428,214
15,900	" Sears, Roebuck & Company	1,678,797
11,000	" SEDCO, Inc.	602,922
4,400	" Snap-On Tools Corporation	417,395
249,200	" Southern Company (The)	4,918,557
30,000	" Sperry & Hutchinson Company	1,347,918
25,000	" Standard Brands Paint Company	1,153,874
12,000	" Stanley Home Products	549,000
24,600	" Stauffer Chemical Company	1,083,421
12,000	" Stride-Rite Corporation	544,887
28,100	" Tandy Corporation	1,201,591
800	" Texas Instruments Inc.	130,395
30,000	" Texas Utilities Company	1,430,531
40,000	" UAL, Inc.	1,836,308
20,000	" U. S. Leasing International Inc.	925,370
9,100	" Upjohn Company (The)	909,657
38,100	" Warner-Lambert Company	3,365,106
25,000	" Western Union Corporation	1,541,434
9,800	" Xerox Corporation	1,261,440
40,000	" Zale Corporation	1,619,740
		<u>\$295,788.081</u>

OTHERWISE ACQUIRED:

Stock Splits:

<u>Shares</u>	<u>Issue</u>	<u>RATIO</u>	<u>RECORD DATE</u>
12,000	American Express Company	3-for-1	4-25-72
100,000	Beatrice Foods Company	2-for-1	11-14-72
12,000	Chicago Bridge & Iron Company	4-for-1	5-15-72
8,300	Clorox Company	2-for-1	10-25-72
8,000	ERC Corporation	2-for-1	9-18-72
7,000	Hall (Frank B.) & Company Inc.	2-for-1	5-19-72
12,500	Household Finance Corporation	3-for-2	9-29-72
171,800	Kresge (S. S.) Company	3-for-1	6-29-72
20,000	Marriott Corporation	2-for-1	3-24-72
106,600	Merck & Company, Inc.	2-for-1	5-5-72
100,225	Minnesota Mining & Manufacturing Company	2-for-1	5-23-72
15,000	Norton Simon, Inc.	2-for-1	5-9-72
13,000	Perkin-Elmer Corporation	2-for-1	4-11-72
6,000	Reynolds & Reynolds Company	2-for-1	2-28-72

SCHEDULE OF TRANSACTIONS IN MARKETABLE SECURITIES *continued*

FOR THE PERIOD JANUARY 1 TO DECEMBER 31, 1972

OTHERWISE ACQUIRED: *concluded*

Stock Splits: *concluded*

<u>Shares</u>	<u>Issue</u>	<u>RATIO</u>	<u>RECORD DATE</u>
8,800	Snap-On Tools Corporation	3-for-1	6-16-72
20,000	Texas Utilities Company	2-for-1	5-19-72
10,000	U. S. Leasing International Inc.	3-for-2	5-17-72

Stock Dividends:

320	Black & Decker Manufacturing Company	4%	9-8-72
5,000	Coleco Industries	100%	6-30-72
9,300	Colonial Penn Group	100%	3-14-72
1,600	Evans Products Company	4%	4-28-72
15,000	Grainger (W. W.), Inc.	100%	10-27-72
500	Lenox, Inc.	2%	11-24-72
20,000	MAPCO, Inc.	100%	8-25-72
789	McDonnell Douglas Corporation	3%	3-6-72
750	Norton Simon, Inc.	2½%	11-13-72
10,000	Purolator, Inc.	100%	4-21-72
12,000	Stride-Rite Corporation	100%	4-7-72

Exchanged:

<u>Shares</u>	<u>Issue</u>	<u>RATIO</u>	<u>RECORD DATE</u>	<u>LEDGER AMOUNT</u>
20,000	Colgate-Palmolive Company received in exchange for Kendall Company	1-for-1	6-22-72	\$ 862,654
192,500	International Telephone & Telegraph Corporation Common converted from Preferred Series "N"	1.25-for-1		2,738,169

By Contribution:

750	Aetna Life & Casualty Company	32,700
600	Atlantic Richfield Company	38,550
645	Boise Cascade Corporation	44,217
825	Continental Corporation	30,133
750	Eastman Kodak Company	56,647
360	International Business Machines Corporation	127,665
300	International Telephone & Telegraph Corporation	17,498
		<u>\$ 3,948,233</u>

SOLD:

		<u>PROCEEDS</u>	<u>LEDGER AMOUNT</u>
U. S. Government Obligations:			
\$ 70,718,000	Treasury Obligations (under Repurchase Agreements)	\$ 70,718,000	\$ 70,718,000
2,870,000	Treasury Bills	2,865,575	2,865,575
1,500,000	Treasury Bonds 4%—2-15-72	1,503,047	1,436,250
Certificates of Deposit:			
300,000	Bankers Trust Company	299,957	300,000
7,400,000	The Chase Manhattan Bank	7,397,287	7,402,405
150,000	Chemical Bank	150,000	150,000

SCHEDULE OF TRANSACTIONS IN MARKETABLE SECURITIES *continued*

FOR THE PERIOD JANUARY 1 TO DECEMBER 31, 1972

SOLD: <i>continued</i>		PROCEEDS	LEDGER AMOUNT
Certificates of Deposit: concluded			
\$ 1,800,000	First National City Bank	\$ 1,804,074	\$ 1,806,484
500,000	Manufacturers Hanover Trust Company	499,804	500,000
2,000,000	Morgan Guaranty Trust Company	2,003,904	2,006,963
Notes:			
1,000,000	Commonwealth Edison Company—1-12-72	995,990	995,990
1,000,000	Mountain States Telephone & Telegraph Company —1-5-72	996,840	996,840
502,600	American Telephone & Telegraph Company 8½% Debentures—5-15-2000	559,394	384,260
Common Stocks:			
750	shares Aetna Life & Casualty Company	46,688	32,700
39,900	" American Cyanamid Company	1,400,550	1,446,686
36,600	" American Electric Power Company, Inc.	1,016,348	608,691
7,100	" American Home Products Corporation	684,973	242,606
68,000	" American Telephone & Telegraph Company	2,965,610	2,212,562
74,800	" Armstrong Cork Company	3,023,570	2,733,540
5,300	" ARA Services	737,015	870,362
600	" Atlantic Richfield Company	37,950	38,550
128,145	" Boise Cascade Corporation	1,608,717	5,544,544
20,000	" Bristol-Myers Company	1,190,674	1,202,876
1,700	" Burroughs Corporation	275,089	167,372
280,000	" Carrier Corporation	13,286,028	10,383,158
6,000	" Central & South West Corporation	298,392	251,003
74,800	" Champion International Corporation	1,957,384	2,711,141
16,000	" Chicago Bridge & Iron Company	746,563	560,850
10,000	" Clorox Company	692,198	595,317
10,000	" Coleco Industries	325,551	243,404
18,600	" Colonial Penn Group	1,012,588	623,788
825	" Continental Corporation	32,811	30,133
100,000	" Control Data Corporation	6,376,618	6,288,599
53,200	" Diamond International Corporation	1,949,920	2,420,183
3,500	" DuPont (E. I.) de Nemours and Company	582,777	653,667
1,800	" Eastman Kodak Company	244,185	59,184
762,000	" Exxon Corporation	59,689,130	3,797,705
110,800	" Firestone Tire & Rubber Company (The)	2,772,330	2,577,863
60,300	" Ford Motor Company	4,304,943	2,821,592
25,300	" General Electric Company	1,611,206	778,868
16,100	" General Motors Corporation	1,201,161	863,660
30,000	" Hanna Mining Company	1,528,319	802,141
21,900	" Hewlett-Packard Company	1,088,137	929,668
4,500	" Houston Lighting & Power Company	248,367	198,597
316,800	" International Nickel Company of Canada, Ltd.	10,040,057	6,164,202

SCHEDULE OF TRANSACTIONS IN MARKETABLE SECURITIES *continued*

FOR THE PERIOD JANUARY 1 TO DECEMBER 31, 1972

SOLD: concluded		PROCEEDS	LEDGER AMOUNT
Common Stocks: concluded			
60,000	shares International Paper Company	\$ 2,128,103	\$ 986,371
10,450	" International Telephone & Telegraph Corporation	616,287	431,609
4,000	" International Telephone & Telegraph Corporation Convertible Preferred Series "K"	379,462	373,678
11,000	" International Telephone & Telegraph Corporation Convertible Preferred Series "N"	712,228	195,584
200	" Joy Manufacturing Company	7,869	13,027
4,100	" Kresge (S. S.) Company	194,288	86,719
113,200	" Marathon Oil Company	3,651,815	988,944
15,000	" MarJennan Corporation	781,169	865,643
13,400	" Merck & Company, Inc.	1,092,642	611,252
103,000	" Mobil Oil Corporation	5,555,325	1,335,249
10,000	" Morgan (J. P.) & Company, Inc.	765,604	665,125
21,700	" Polaroid Corporation	2,430,685	2,327,203
5,000	" Robins (A. H.) Company, Inc.	324,521	235,625
5,000	" Schering-Plough Corporation	589,071	445,151
68,400	" Southern Company (The)	1,405,300	1,770,619
30,000	" Sperry & Hutchinson Company	870,100	1,347,918
185,000	" Sperry Rand Corporation	7,671,185	8,508,106
275,800	" Standard Oil Company (Indiana)	19,834,738	1,956,073
24,000	" Stride-Rite Corporation	441,436	544,887
20,100	" Texas Instruments Inc.	2,852,346	2,005,171
11,500	" Texas Utilities Company	403,920	329,022
82,600	" Upjohn Company (The)	8,625,629	4,990,804
	Fractional Interest	44	44
		<u>\$274,103.488</u>	<u>\$179,431.803</u>

REDEEMED AT MATURITY:

		PROCEEDS	LEDGER AMOUNT
\$ 7,385,000	U. S. Treasury Bills	\$ 7,353,194	\$ 7,353,194
1,000,000	Federal Land Banks 5.70% Bonds—2-15-72	1,000,000	1,000,000
3,000,000	Federal National Mortgage Association 5.20% Participation Certificates—1-19-72	3,000,000	3,000,000
Certificates of Deposit:			
2,295,000	Bankers Trust Company	2,315,084	2,315,084
4,162,000	The Chase Manhattan Bank	4,162,000	4,162,000
690,000	Chemical Bank	690,000	690,000
4,105,000	First National City Bank	4,150,447	4,150,447
1,380,000	Franklin National Bank	1,380,000	1,380,000
1,310,000	Irving Trust Company	1,360,172	1,360,172
360,000	Marine Midland Bank	360,000	360,000
5,000,000	Morgan Guaranty Trust Company	5,000,000	5,000,000

SCHEDULE OF TRANSACTIONS IN MARKETABLE SECURITIES *concluded*

FOR THE PERIOD JANUARY 1 TO DECEMBER 31, 1972

REDEEMED AT MATURITY: <i>concluded</i>		PROCEEDS	LEDGER AMOUNT
Certificates of Deposit: <i>concluded</i>			
\$ 930,000	National Bank of North America	\$ 930,000	\$ 930,000
825,000	Security National Bank	825,000	825,000
Notes:			
586,000	American Express Company—9-1-72	586,000	586,000
	Boston Edison Company		
500,000	7-26-72	498,104	498,104
200,000	9-12-72	199,125	199,125
	Central Hudson Gas & Electric Company		
500,000	7-28-72	498,587	498,587
200,000	10-12-72	199,630	199,630
300,000	10-19-72	299,350	299,350
250,000	Commonwealth Edison Company—9-28-72	248,641	248,641
500,000	General Telephone of California—10-3-72	497,163	497,163
	Hawaiian Telephone Company		
350,000	9-5-72	348,469	348,469
300,000	10-11-72	299,367	299,367
50,000	10-18-72	49,868	49,868
600,000	Illinois Bell Telephone Company—2-14-72	599,635	599,635
300,000	Long Island Lighting Company—9-25-72	298,690	298,690
400,000	New England Telephone Company—12-6-72	398,375	398,375
300,000	Northeast Utilities—12-13-72	297,865	297,865
1,000,000	Pacific Northwest Bell Telephone Company—5-4-72	994,653	994,653
300,000	Pennsylvania Power & Light Company—10-11-72	297,880	297,880
50,000	Public Service of Colorado—10-16-72	49,912	49,912
1,000,000	South Central Bell Telephone Company—3-20-72	999,097	999,097
500,000	Southern Bell Telephone & Telegraph Company—3-28-72	499,188	499,188
		<u>\$ 40,685,496</u>	<u>\$ 40,685,496</u>

OTHERWISE DISPOSED OF:

Exchanged:

<u>Shares</u>	<u>Issue</u>	<u>RATIO</u>	<u>RECORD DATE</u>	<u>LEDGER AMOUNT</u>
154,000	International Telephone & Telegraph Corporation Preferred Series "N" converted to Common	1-for-1.25		\$ 2,738,169
20,000	Kendall Company exchanged for Colgate-Palmolive Company	1-for-1	6-22-72	862,654
				<u>\$ 3,600,823</u>

SCHEDULE OF MARKETABLE SECURITIES

DECEMBER 31, 1972

FIXED INCOME SECURITIES	LEDGER AMOUNT	QUOTED MARKET VALUE
U. S. Government Obligations	\$ 6,727,813	\$ 6,762,813
Certificates of Deposit	20,096,401	20,019,000
Corporate Obligations	<u>2,965,579</u>	<u>2,938,750</u>
	29,789,793	29,720,563
CONVERTIBLE BONDS	5,249,671	4,770,875
OTHER INVESTMENT	862,500	862,500
PREFERRED STOCK	1,027,616	1,083,500
COMMON STOCKS	<u>426,652,541</u>	<u>931,534,889</u>
TOTAL	<u>\$463,582,121</u>	<u>\$967,972,327</u>

FIXED INCOME SECURITIES	PAR	LEDGER AMOUNT	QUOTED MARKET VALUE
<i>U. S. Government Obligations:</i>			
Repurchase Agreements			
Notes			
U. S. Treasury—8-15-74	\$ 1,900,000	\$ 1,900,000	\$ 1,900,000
U. S. Treasury—11-15-74	1,646,000	1,646,000	1,646,000
Bonds			
U. S. Treasury—8-15-73	2,029,000	2,029,000	2,029,000
Export-Import—2-1-78	200,000	200,000	200,000
Bonds			
U. S. Treasury—4½%—11-15-73	1,000,000	<u>952,813</u>	<u>987,813</u>
		<u>6,727,813</u>	<u>6,762,813</u>

Certificates of Deposit:

Bankers Trust Company			
5.1%—1-23-73	1,000,000	1,013,810	1,000,000
4½%—2-15-73	2,000,000	2,063,591	2,000,000
<i>The Chase Manhattan Bank</i>			
4½%—1-4-73	500,000	500,000	500,000
5%—1-15-73	1,115,000	1,115,000	1,115,000
5.20%—1-15-73	1,500,000	1,500,000	1,500,000
5.35%—1-19-73	600,000	600,000	600,000
5½%—1-24-73	114,000	114,000	114,000
5½%—2-1-73	370,000	370,000	370,000
5½%—2-5-73	200,000	200,000	200,000
5½%—4-6-73	1,500,000	1,500,000	1,500,000
5½%—8-12-73	3,000,000	3,000,000	3,000,000
5½%—9-7-73	2,000,000	2,000,000	2,000,000
5½%—10-4-73	2,500,000	2,500,000	2,500,000

SCHEDULE OF MARKETABLE SECURITIES *continued*

DECEMBER 31, 1972

FIXED INCOME SECURITIES: concluded	PAR	LEDGER AMOUNT	QUOTED MARKET VALUE
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Certificates of Deposit: concluded

First National City Bank

5 1/4%—5-8-73	\$ 3,000,000	\$ 3,000,000	\$ 3,000,000
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Security National Bank

5 1/8%—1-4-73	120,000	120,000	120,000
5.40%—1-26-73	500,000	500,000	500,000
		<u>20,096,401</u>	<u>20,019,000</u>

Corporate Obligations:

Notes

Florida Power & Light Company			
5.4%—1-17-73	400,000	398,440	400,000
Hawaiian Telephone Company 5 1/8%—1-5-73	400,000	398,292	400,000
Hawaiian Telephone Company 5 1/8%—1-9-73	300,000	298,847	300,000
Virginia Electric & Power Company			
5%—1-9-73	900,000	895,000	900,000

Bond

General Motors Acceptance Corp.			
5%—1-15-77	1,000,000	975,000	938,750
		<u>2,965,579</u>	<u>2,938,750</u>

TOTAL FIXED INCOME SECURITIES

<u>\$ 29,789,793</u>	<u>\$ 29,720,563</u>
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CONVERTIBLE BONDS

	PAR	LEDGER AMOUNT	QUOTED MARKET VALUE
Federal National Mortgage Association			
4 3/4%—10-1-96	\$ 1,500,000	\$ 1,765,212	\$ 1,627,500
Fischbach & Moore 4 3/4%—4-3-97	800,000	839,260	1,004,000
W. T. Grant Company 4 3/4%—4-15-96	2,300,000	2,423,199	1,750,875
Xerox Corporation 6%—11-1-95	222,000	222,000	388,500
TOTAL CONVERTIBLE BONDS		<u>\$ 5,249,671</u>	<u>\$ 4,770,875</u>

OTHER INVESTMENT

	LEDGER AMOUNT	ESTIMATED FAIR VALUE
1.725% of "Lambert Contract" covering royalties on sales of Listerine	<u>\$ 862,500</u>	<u>\$ 862,500</u>

SCHEDULE OF MARKETABLE SECURITIES *continued*

DECEMBER 31, 1972

PREFERRED STOCK	SHARES	LEDGER AMOUNT	QUOTED MARKET VALUE
International Telephone & Telegraph Corporation Convertible Series "K"	11,000	\$ 1,027,616	\$ 1,083,500
COMMON STOCKS			
Air Products & Chemicals, Inc.	12,500	815,753	857,813
Allied Maintenance Corporation	25,000	841,626	984,375
American Airlines, Inc.	51,500	2,209,411	1,293,938
American Broadcasting Companies, Inc.	5,000	360,659	381,250
American Cyanamid Company	198,600	7,133,763	6,355,200
American District Telegraph Company	20,000	1,156,006	1,060,000
American Electric Power Company, Inc.	386,600	8,080,744	11,598,000
American Express Company	18,000	834,250	1,167,750
American Home Products Corporation	113,500	4,888,480	13,847,000
American Telephone & Telegraph Company	187,000	6,084,547	9,864,250
AMP, Inc.	9,500	763,154	1,216,000
Armstrong Cork Company	205,200	7,498,961	6,771,600
Armstrong Rubber Company	15,000	615,320	551,250
Avon Products, Inc.	110,300	10,182,045	15,083,525
BankAmerica Corporation	125,000	6,310,375	6,000,000
Beatrice Foods Company	200,000	4,989,666	5,550,000
Black & Decker Manufacturing Company	11,320	1,038,838	1,222,560
Block (H & R), Inc.	50,000	958,534	831,250
Bristol-Myers Company	209,000	12,467,878	14,421,000
Burlington Industries, Inc.	200,000	7,601,479	7,350,000
Burroughs Corporation	98,300	9,678,066	21,355,675
Carolina Power & Light Company	205,500	6,442,848	6,113,625
Central & South West Corporation	25,000	1,045,847	1,275,000
Champion International Corporation	205,200	7,437,517	4,565,700
Clorox Company	21,200	884,855	983,150
CMI Investment Corporation	15,000	977,618	1,380,000
Coastal States Gas Producing Company	15,000	763,763	519,375
Coca-Cola Company (The)	59,500	5,971,056	8,835,750
Colgate-Palmolive Company	20,000	862,654	1,882,500
Columbia Broadcasting System, Inc.	245,841	11,617,995	12,322,780
Commonwealth Edison Company	20,000	698,644	717,500
Corning Glass Works	7,000	1,412,920	1,909,250
Crown Cork & Seal Company, Inc.	40,000	908,357	1,060,000
Dexter Corporation (The)	35,000	774,217	756,875
Diamond International Corporation	146,800	6,678,248	4,771,000
Disney (Walt) Productions	12,000	1,861,523	2,841,000
Dreyfus Third Century Fund, Inc.	35,000	394,450	398,300
Dun & Bradstreet, Inc.	13,000	910,396	991,250
DuPont (E. I.) de Nemours and Company	56,400	10,528,894	10,011,000
Eastman Kodak Company	236,150	7,787,726	35,038,752
ERC Corporation	16,000	807,287	844,000
Evans Products Company	41,600	1,046,019	998,100
Exxon Corporation	2,238,000	11,153,889	195,825,000

SCHEDULE OF MARKETABLE SECURITIES *continued*

DECEMBER 31, 1972

COMMON STOCKS: <i>continued</i>	SHARES	LEDGER AMOUNT	QUOTED MARKET VALUE
Firestone Tire & Rubber Company (The)	305,000	\$ 7,096,102	\$ 7,739,375
Ford Motor Company	303,600	14,296,863	24,174,150
Gannett Company, Inc.	30,000	1,052,845	1,155,000
General Electric Company	353,900	10,894,916	25,790,463
General Motors Corporation	181,782	9,797,692	14,747,065
Grainger (W. W.), Inc.	30,000	760,238	1,117,500
Hall (Frank B.) & Company Inc.	20,000	576,125	502,500
Hanna Mining Company	120,000	3,208,562	7,185,000
Heublein, Inc.	20,000	1,059,149	1,160,000
Hewlett-Packard Company	96,000	4,101,237	8,304,000
Household Finance Corporation	37,500	1,298,215	1,317,188
Houston Lighting & Power Company	23,000	1,015,049	1,175,875
Howard Johnson Company	200,000	5,192,659	6,650,000
I.M.S. International Inc.	24,000	759,000	813,000
International Business Machines Corporation	107,366	11,440,556	43,161,132
International Harvester Company	233,400	7,527,156	8,956,725
International Nickel Company of Canada, Ltd.	121,450	2,363,139	3,871,219
International Paper Company	281,800	5,087,504	11,800,375
International Telephone & Telegraph Corporation	283,350	8,127,431	17,071,838
Johnson & Johnson	20,000	2,170,340	2,610,000
Joy Manufacturing Company	30,000	1,627,358	1,061,250
Kaufman & Broad Inc.	97,000	4,721,394	4,292,250
Kerr-McGee Corporation	8,000	464,317	527,000
Kresge (S. S.) Company	259,100	5,480,229	12,663,513
Lenox, Inc.	25,500	775,957	1,112,438
Louisiana Land & Exploration Company	20,000	903,237	865,000
Malone & Hyde, Inc.	35,000	1,121,484	1,168,125
MAPCO, Inc.	40,000	833,191	1,460,000
Marathon Oil Company	311,282	2,719,440	11,089,421
Marlennan Corporation	30,000	1,701,856	1,387,500
Marriott Corporation	45,000	1,353,058	1,642,500
McDonnell Douglas Corporation	50,000	1,982,782	1,737,500
Melville Shoe Corporation	30,000	876,002	993,750
Merck & Company, Inc.	199,800	9,114,035	17,807,175
Minnesota Mining & Manufacturing Company	207,950	6,943,442	17,805,719
Mobil Oil Corporation	497,000	6,442,903	36,778,000
Mogul Corporation	20,000	715,500	725,000
Morgan (J. P.) & Company, Inc.	156,600	10,467,473	16,443,000
Morton-Norwich Products, Inc.	24,500	750,182	753,375
Nashua Corporation	10,000	493,183	571,250
Norton Simon, Inc.	30,750	1,013,566	1,287,656
Owens-Corning Fiberglas Corporation	25,000	1,141,510	1,371,875
Pacific Gas & Electric Company	37,500	1,120,903	1,223,438
Perkin-Elmer Corporation	43,500	1,419,970	1,663,875
Pinkerton's, Inc. Class "B"	15,000	1,196,404	963,750
Polaroid Corporation	102,200	11,072,944	12,889,975
PPG Industries, Inc.	81,100	3,708,198	3,811,700

SCHEDULE OF MARKETABLE SECURITIES *concluded*

DECEMBER 31, 1972

COMMON STOCKS: concluded	SHARES	LEDGER AMOUNT	QUOTED MARKET VALUE
Procter & Gamble Company (The)	20,000	\$ 1,861,208	\$ 2,230,000
Purolator, Inc.	20,000	885,240	1,200,000
Ralston Purina Company	20,000	773,703	892,500
Reece Corporation	20,000	600,152	720,000
Research-Cottrell Inc.	2,000	131,534	136,500
Reynolds (R. J.) Industries Inc.	20,000	1,403,421	1,032,500
Reynolds & Reynolds Company	20,600	699,601	970,775
Robins (A. H.) Company, Inc.	20,000	942,500	1,507,500
Roht Industries, Inc.	40,000	1,077,272	905,000
Rouse Company	20,000	605,000	472,500
Safeco Corporation	13,000	556,303	732,875
Sav-A-Stop Inc.	45,000	893,250	483,750
Schering-Plough Corporation	10,000	983,063	1,370,000
Sears, Roebuck & Company	100,000	7,691,776	11,600,000
SEDCO, Inc.	11,000	602,922	679,250
Snap-On Tools Corporation	13,200	417,395	702,900
Southern Company (The)	522,800	12,001,033	10,521,350
Standard Brands Paint Company	25,000	1,153,874	1,350,000
Standard Oil Company (Indiana)	924,200	6,554,757	80,867,500
Stanley Home Products	12,000	549,000	600,000
Stauffer Chemical Company	24,600	1,083,421	1,137,750
Tandy Corporation	28,100	1,201,591	1,292,600
Texas Instruments Inc.	81,150	8,132,039	14,759,156
Texas Utilities Company	38,500	1,101,509	1,309,000
UAL, Inc.	40,000	1,836,308	1,310,000
U. S. Leasing International Inc.	30,000	925,370	945,000
Upjohn Company (The)	15,000	916,206	1,923,750
Warner-Lambert Company	38,100	3,365,106	3,714,750
Western Union Corporation	25,000	1,541,434	1,212,500
Xerox Corporation	120,800	11,085,239	18,029,400
Zale Corporation	40,000	1,619,740	1,725,000
TOTAL COMMON STOCKS		426,652,541	931,534,889
TOTAL STOCKS		\$427,680,157	\$932,618,389

1972 APPROPRIATIONS AND PAYMENTS

APPROPRIATIONS AND PAYMENTS IN 1972

The first column lists all grants and programs announced in 1972. The second column lists all payments made in 1972 including payments on prior years' grants. Appropriations made in 1972 but not released during the year are shown in a summary at the end.

	GRANTS & PROGRAMS	PAYMENTS
International Cooperative Programs		
Conquest of Hunger—field staff	\$ 883,640	\$ 842,269
University Development—field staff	1,547,620	1,652,544
Arbovirus Research—field staff	138,780	221,246
Biomedical Sciences Research—field staff	260,180	235,165
Population Program—field staff	48,090	
Bellagio Study and Conference Center—field staff	46,450	53,780
International Conferences	67,690	7,988
Preparation and distribution of publications	54,180	71,536
Unallocated contingency reserve	250,000	
ARGENTINA		
National University of Cordoba		
Research in reproductive biology		1,861
Torcuato di Tella Institute		
Research on unemployment in Latin America	258,000	
University of Cuyo, Mendoza		
Fellowships and scholarships		1,413
AUSTRALIA		
Australian National University, Canberra		
Development of high-lysine rice and wheat	14,720	14,270
BAHAMAS		
Ministry of External Affairs		
Library acquisitions in international relations		1,158
BELGIUM		
International Union for the Scientific Study of Population		
Research on population policies	15,000	
BERMUDA		
Bermuda Biological Station for Research		
Laboratory seawater system		15,000
BOLIVIA		
Fellowships and scholarships		532

APPROPRIATIONS AND PAYMENTS IN 1972

BRAZIL

Cooperative programs

Federal University of Bahia		
University Development Program Center	61,150	16,113
Visiting faculty	56,690	
University of São Paulo		
Special institutional grant	750	750
Fellowships and scholarships	48,622	68,305

CANADA

McGill University

Special institutional grant	3,000	3,000
Visiting faculty assignments in Africa, Asia, and Latin America		4,153

Queen's University

Research in reproductive biology	47,800	
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University of Manitoba

Special institutional grant	750	750
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University of Toronto

Research on population policies	14,058	14,058
Special institutional grant	5,250	5,250
Visiting faculty assignments in Africa, Asia, and Latin America	15,000	26,291

University of Waterloo

Schistosomiasis and fascioliasis research	25,000	35,443
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CEYLON

Fellowships and scholarships	9,024	2,578
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CHILE

Catholic University of Chile

Studies in reproductive biology		9,132
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Latin American Center of Demography

Research on population policies	8,195	10,345
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University of Chile

Study of protein malnutrition	7,500	7,500
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Fellowships and scholarships

	51,200	83,600
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COLOMBIA

Cooperative programs

Cali Microbiology Laboratory		39,669
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APPROPRIATIONS AND PAYMENTS IN 1972

COLOMBIA (*cont'd*)

Cooperative programs (*cont'd*)

University of Valle

University Development Program Center	56,360	46,332
Visiting faculty	43,800	105,175

Colombian Institute of Agriculture (ICA)

Animal husbandry and animal health programs	7,255
General support	2,820
Seed storage research	1,630
Special institutional grant	3,000

International Center of Tropical Agriculture (CIAT)

Completion of headquarters facilities	2,075,195	807,195
General support	720,000	

University of the Andes

Support of the Department of Biology and the premedical program	22,554
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University of Valle

Central Administration, equipment	635
Division of Economics and Social Sciences, faculty development	20,020
Division of Engineering, equipment	2,966
Division of Health Sciences	18,788
Equipment	36,060
Personnel	136,126
Research	6,319
Division of Humanities	4,365
Equipment	10,000
Research	906
Teaching staff	906
Division of Sciences	10,605
Equipment	34,000
Research	1,662

Faculty of Economics, equipment

General support	57,000	57,323
Health care studies	500,000	215,200
Library acquisitions	55,600	55,600
Population studies		581
Research in food crops in cooperation with ICA and the Palmira experiment station	33,000	19,772
Research on production and farm management in the Cauca Valley		1,300

Fellowships and scholarships

339,220

334,699

COSTA RICA

Inter-American Institute of Agricultural Sciences

Latin American Association of Plant Science, Secretariat support	15,000	7,500
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APPROPRIATIONS AND PAYMENTS IN 1972

ECUADOR

Cooperative program

Ecuador Agricultural Project 17,057

National Agricultural Research Institute

Experiment stations and research and training programs 17,408

Laboratory equipment 11,080

Programs in crop and animal improvement 14,198

Fellowships and scholarships

5,161

10,039

EL SALVADOR

Foundation for the Development of Cooperatives

Increase of agricultural productivity of small farmers 97,415 97,262

Fellowships and scholarships

15,547

7,925

ETHIOPIA

Association for the Advancement of Agricultural Sciences in Africa

Operating costs 15,000 15,000

Fellowships and scholarships

57,838

38,052

GHANA

Association of African Universities

Participation in the Association for the Advancement of Agricultural Sciences in Africa—refund (1,731)

Workshop on issues confronting African universities 15,000 15,000

University of Ghana

Study of cyclical labor migration in West Africa 2,500 2,000

GUATEMALA

Fellowships and scholarships

8,234

2,792

GUYANA

Fellowships and scholarships

1,624

1,759

INDIA

Cooperative program

Indian Agricultural Program 135,000 236,282

Indian Council of Medical Research

Virus Research Center, equipment 2,947

Fellowships and scholarships

29,560

61,738

APPROPRIATIONS AND PAYMENTS IN 1972

INDONESIA

Cooperative programs

University Development Program Center (Gadjah Mada University)	114,290	24,574
Visiting faculty (Gadjah Mada University)	19,420	

Gadjah Mada University

Conference of Asian universities on population	15,000	15,000
English language training	13,000	13,907
Faculty of Forestry, laboratory equipment	20,000	
Participation by staff in developmental programs conducted by national and international institutions	20,000	
Staff housing	60,000	55,841
Study of problems of university development in Asia, Africa, and Latin America	5,000	3,305
Symposium on crop protection in Southeast Asia	2,000	2,000

University of Indonesia, Djakarta

Teaching program in family planning	15,000	7,500
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IRAN

Pahlavi University

Teaching program in population and family planning	15,000	13,745
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ITALY

Bellagio Study and Conference Center

Activities of the Center	306,070	320,455
Conference support	14,000	7,385

National Research Council

Schistosomiasis research	8,300	8,300
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JAMAICA

University of the West Indies

Trinidad Regional Virus Laboratory--refund	(975)	
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JAPAN

Kihara Institute for Biological Research

Wheat and rice research	9,480	
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KENYA

Cooperative programs

University Development Program Center (Universities in East Africa)	64,120	67,235
Visiting faculty (University of Nairobi)	51,650	71,779

APPROPRIATIONS AND PAYMENTS IN 1972

East African Agriculture and Forestry Research Organization		
General support		1,680
Sorghum research	45,000	33,312
Animal disease laboratory		5,259
University of Nairobi		
Department of Geography—refund		(587)
Department of Government, research and teaching materials	13,625	13,625
Department of Linguistics and African Studies	5,600	
Department of Sociology	5,260	3,878
Faculty of Veterinary Science, clinical studies		42,750
Graduate assistantships in economics	15,125	8,405
Increasing protein quality in fish	7,900	7,900
Institute for Development Studies		
Activities of the Institute	75,000	89,368
Basic research collection		696
Research on pneumonia of cattle, sheep, and goats		4,650
Social Science Council of the Universities of East Africa	9,980	9,980
Staff development	5,000	
Study of political development in Kenya	6,517	6,517
Workshops in music and dance	5,600	5,600
Fellowships and scholarships	118,850	125,270
KOREA		
LEBANON		
American University of Beirut		
Strengthening the academic program		304,522
MALAWI		
MEXICO		
Colegio de Mexico		
Demographic research		40,000
Research on population policies in Latin America	100,000	
International Maize and Wheat Improvement Center (CIMMYT)		
Bibliographies on corn and wheat—refund		(2,972)
General support		750,000
Genetic improvement of maize and wheat—refund		(744)
Inauguration of new headquarters		24,162
Installation of greenhouses at headquarters		51,913

APPROPRIATIONS AND PAYMENTS IN 1972

MEXICO (*cont'd*)

International Maize and Wheat Improvement Center (CIMMYT) (*cont'd*)

International Potato Improvement Program	17,200	5,000
Potato program in West Pakistan and related training in Mexico	16,200	20,760
Potato research	10,000	10,000
Puebla Project	73,326	73,326
Spring-Winter Wheat Breeding Project		21,493
Staff assigned to the Middle East Wheat Improvement Project	71,600	89,191
Two conferences on the Puebla Project—refund		(4,755)

National School of Agriculture

Graduate program	60,000	60,000
Research in cooperation with the International Potato Project		13,150
Special institutional grant	4,500	4,500

University of Sonora

Research on agricultural systems and crop yields		61,198
Fellowships and scholarships	94,878	76,870

NICARAGUA

Fellowships and scholarships		620
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NIGERIA

Ahmadu Bello University

Program in agricultural marketing	6,500	6,500
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Cooperative programs

University of Ibadan

University Development Program Center	41,900	42,067
Visiting faculty	60,700	17,265

International Institute of Tropical Agriculture (IITA)

General support		750,000
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University of Ibadan

Acting Director, Computer Centre	8,525	4,263
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Arbovirus research	45,000	26,177
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Department of Animal Sciences, staff development	4,500	
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Department of Agricultural Economics and Extension		
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Study award	9,580	9,580
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Staff development	5,050	
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Department of Economics, staff development	11,600	
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Departments of Geography, Economics, and Sociology, research projects		20,659
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Department of Political Science, staff development	9,620	9,620
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APPROPRIATIONS AND PAYMENTS IN 1972

Establishment of West African Association of Agricultural Economists	8,736	4,368
Faculty of Agriculture, Forestry, and Veterinary Science		
Graduate training	36,850	36,850
Visiting professorship		26,654
Faculty of Social Sciences		
Study award	6,865	6,865
Postgraduate training	43,000	43,000
National Health Planning Symposium to be held in 1973	10,000	10,000
Pasture and fodder research		11,943
Research on employment of graduates	24,383	24,383
Research on employment opportunities in Nigerian agriculture	60,482	60,482
Research on hemoglobins	6,500	4,600
Special institutional grant	1,500	1,500
Study of trypanosomiasis in animals		14,500
 University of Lagos		
Research on unemployment	30,000	30,000
 Fellowships and scholarships	309,122	339,007
 PAKISTAN		
Fellowships and scholarships		1,877
 PARAGUAY		
Fellowships and scholarships		553
 PERU		
Cayetano Heredia University of Peru		
Research and teaching in agricultural economics and rural sociology		12,115
International Potato Center		
Operating costs of Mexican Regional Program	137,625	82,000
Peruvian University		
Research in reproductive endocrinology	15,000	15,000
 Fellowships and scholarships	32,460	39,185
 PHILIPPINES		
Children's Medical Center		
Family planning program	15,000	15,000
Cooperative program		
University Development Program Center (University of the Philippines)	4,120	2,389

APPROPRIATIONS AND PAYMENTS IN 1972

PHILIPPINES (*cont'd*)

International Rice Research Institute (IRRI)

General support		750,000
Improving productivity of marginal rice farmers	23,400	23,400
Ph.D. training with the Indian Agricultural Research Institute	17,725	17,725
World collection of rice germplasm	28,620	19,620

National Science Development Board

Study of effectiveness of extension agents	12,500	12,500
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University of the Philippines

College of Agriculture

Corn and sorghum research		5,285
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College of Medicine

Equipment		4,217
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Maternal and child health program	69,783	69,783
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Rural community health teaching service		5,198
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School of Economics

Scholarship, research, and library support	40,950	21,790
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Social Sciences and Humanities Center, equipment	1,222	
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Special institutional grant	3,000	3,000
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Xavier University

Studies in demography and population	15,000	929
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Fellowships and scholarships

	164,297	177,590
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ST. LUCIA

Cooperative program in schistosomiasis research and control

	151,500	184,392
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SUDAN

Agricultural Research Corporation

Wheat improvement program		5,700
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Fellowships and scholarships

	274	7,487
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SWEDEN

University of Uppsala

Special institutional grant	750	750
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SWITZERLAND

Geneva Graduate Institute of International Studies

Training for students from Africa, Asia, and Latin America		25,000
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APPROPRIATIONS AND PAYMENTS IN 1972

TAIWAN

Joint Commission on Rural Reconstruction

Fish culture research		26,631
Fish ecology	25,000	25,000

TANZANIA

Cooperative program

Visiting faculty (University of Dar es Salaam)	47,160	16,049
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University of Dar es Salaam

Departments of Economics and Sociology		
Teaching-through-research programs	9,450	9,450
Departments of Political Science and History		8,425
Economics staff training	14,850	14,850
Research and teaching in geography	18,403	30,100
Research in economics	25,000	12,500
Social Science Council—refund		(1,572)
Staff development in the Faculty of Arts and Social Science	14,900	14,900
Support of three issues of the <i>African Review</i>	8,400	8,400
Visits by staff to other universities—refund		(972)

Fellowships and scholarships	151,240	110,202
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THAILAND

Cooperative programs

Agricultural projects in Thailand	174,900	110,129
Inter-Asian Corn Program		23,571
Universities in Bangkok		
University Development Program Center	174,130	208,755
Visiting faculty	69,080	42,796

International School		2,947
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Kasetsart University

Consultations and travel	5,000	4,778
Experiment station development		31,591
Farm Suwan training facility		5,412
Graduate assistantships	37,800	17,216
Research leadership positions	5,000	11,000
Study of the quality of rice	1,400	1,400

Mahidol University

Applied nutrition research		8,462
Community health program		21,222
Development of full-time faculty system in Thai universities		2,456
Faculty of Medical Sciences		6,235
Faculty of Science, equipment	169,050	215,292

APPROPRIATIONS AND PAYMENTS IN 1972

THAILAND (cont'd)

Mahidol University (cont'd)

Nutrition research	14,000	12,898
Program in pharmacology	12,670	12,670
Ramathibodi Faculty of Medicine		
Equipment	85,000	3,318
Teaching materials		675
Research in reproductive biology	15,000	19,674
Research in reproductive immunology	13,500	13,500
Research on aflatoxin producing molds	13,700	7,500
Research on relationships between malnutrition and resistance to infection	10,000	9,058
Special institutional grant	1,500	1,500
Symposium on bladder stone disease—refund		(1,079)

Thammasat University

Faculty of Economics		
Graduate scholarship	9,690	9,690
Library development		3,128
Research project	6,000	6,000
Faculty of Science, library acquisitions		852
Research in Asian drama	10,755	6,450
Research on income distribution in Thailand	2,650	2,650
Research on cultural development in Thailand	3,000	3,000
Social science textbooks in Thai	45,589	45,589

Fellowships and scholarships

562,278 501,173

TURKEY

Cooperative program

Wheat Improvement Project in the Middle East	96,640	65,904
Fellowships and scholarships	36,615	31,684

UGANDA

Cooperative program

Visiting faculty (Makerere University)	26,100	96,244
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Makerere University

Conference of East African university administrators	3,040	2,685
Faculty of Agriculture		
Development and research	52,000	41,214
Equipment	3,000	16,362
Faculty of Social Sciences		
Teaching and research	10,500	27,850
Research on retail and service centers in Kampala	3,674	3,674
Research, teaching, and graduate studies in political science	13,140	33,440
Fellowships and scholarships	121,268	123,222

APPROPRIATIONS AND PAYMENTS IN 1972

UNITED ARAB REPUBLIC

Fellowships and scholarships	5,099	7,706
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UNITED KINGDOM

England

London School of Economics and Political Science

Demographic training	10,656
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Overseas Development Institute

Joint project with University of Reading to improve agricultural development institutions	15,000
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University of Birmingham

Special institutional grant	1,500	1,500
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University of Bristol

Research in reproductive immunology	300,000	41,725
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University of Cambridge

Special institutional grant	2,250	2,250
International survey of crime control		5,000

University of Essex

Special institutional grant	1,500	1,500
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University of London

Special institutional grant	7,500	7,500
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University of Oxford

Special institutional grant	1,500	1,500
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University of Reading

Conference on "Multi-national Enterprise and Economic Analysis"	5,000	5,000
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University of Sussex

Assignment of scholars to universities abroad	40,468
British Committee on the Theory of International Politics	1,327
Institution for the Study of International Organization	15,000
Preparation of a study of states systems	6,516

University of Warwick

Special institutional grant	1,500	1,500
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Victoria University of Manchester

Special institutional grant	3,000	3,000
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Scotland

University of Glasgow

Special institutional grant	1,500	1,500
Trypanosomiasis research	15,000	15,000

APPROPRIATIONS AND PAYMENTS IN 1972

UNITED NATIONS

Food and Agriculture Organization

Pilot for a Computerized Agricultural Research Information System	15,000	15,000
Symposium on nutritional improvement of food legumes	2,500	2,392

UNITED STATES

Alabama

University of Alabama

Research on reproductive biology	136,500	136,500
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Alaska

Experimental Arts and Crafts Center Association

Experimental Arts and Crafts Center Association	25,000	25,000
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Arizona

Arizona State University

Internships in university administration	10,500	27,500
Research on parent involvement in pre-school education of minority-group children		15,000

University of Arizona

Industrial gases detoxification	31,335	
Report on the University's Power/Water/Food Project	8,000	
Research on agricultural systems and crop yields		66,550

California

Bay Area Educational Television Association

Training programs of the National Center for Experiments in Television	50,000	
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Berkeley Unified School District

Internship for a school administrator	31,752	31,752
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California Institute of Technology

Research on control of automobile emissions	15,000	15,000
Research on heavy-metal pollutants	150,000	101,000
Special institutional grant	1,500	1,500

California State College at Los Angeles

Cooperative program with Locke High School	15,423	
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Center Theatre Group of Los Angeles

Programs of the Mark Taper Forum	100,000	
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Claremont Colleges

Faculty-student investigations of electric power, mass transit, and land use	10,000	10,000
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Claremont Graduate School

Special institutional grant	3,000	3,000
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APPROPRIATIONS AND PAYMENTS IN 1972

Los Angeles City Unified School District			
Curriculum development		25,000	
School-community advisory councils	300,000	150,000	
Magic Theatre			
Playwright in residence	10,000	10,000	
Mills College			
Center for Contemporary Music	75,000		
Multi-Culture Institute			
Training for teachers and administrators		60,975	
Oakland Unified School District			
Integrated school program		87,357	
Occidental College			
Discovery and support of talented students		24,760	
Office of the Los Angeles County Superintendent of Schools			
Leadership training program for school administrators	300,000	75,000	
Rand Corporation			
Environmental quality research		25,000	
Ravenswood City School District			
Internship for a school administrator	33,519	33,519	
San Diego City Schools			
Community education	100,000	150,000	
Internship for a school administrator	31,569	31,546	
San Francisco Conservatory of Music			
Awards to talented students		28,670	
Community music education	181,000	37,000	
San Francisco Unified School District			
Internship for a school administrator	26,607	26,574	
Salk Institute for Biological Studies			
Research in reproductive biology		120,970	
Study of repetitive drug use	10,000	10,000	
Soquel Elementary School District			
Internship for a school administrator	33,799	33,799	
Stanford University			
Assignment of scholars to universities abroad		35,939	
Research on determinants of change in tropical African agriculture	14,600		
Research on economic returns from farmer education in Kenya	11,500		
Special institutional grant	7,500	7,500	

APPROPRIATIONS AND PAYMENTS IN 1972

UNITED STATES (*cont'd*)

University of California

Berkeley

Research on pesticides	50,000	50,000
Research on pheromones	25,000	30,338
Research on population policy	4,125	4,125
Research on population and land use	19,133	
Special institutional grant	9,750	9,750
Study of the Gros Ventre Indian tribe	3,000	3,000

Davis

Assignment of scholars to universities abroad	280,000	52,579
Division of Environmental Studies	490,000	197,638
Research and training programs in environmental studies		71,220
Research on hybridization of plants	14,940	14,940
Special institutional grant	16,500	16,500
Study of plant resistance to insects	24,619	24,619

Los Angeles

Educational opportunities for Mexican-American students		56,734
Graduate Dance Center	80,000	
Special institutional grant	9,750	9,750

Riverside

Research on pesticides	50,000	49,901
Research on pheromones	25,000	25,000
Special institutional grant	8,250	8,250
Wheat production research	40,000	12,500

San Diego

Center for Music Experiment and Related Research		167,490
Special institutional grant	1,500	1,500
Training and research in reproductive biology		293,678

Santa Barbara

Research on crime in West Africa		7,497
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University of Southern California

Special institutional grant	3,000	3,000
Study of resource sharing with other universities	25,000	25,000
Training for music critics		42,073

Watts Labor Community Action Committee

Paramedical training program	200,000	183,018
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APPROPRIATIONS AND PAYMENTS IN 1972

Colorado

Colorado State University

Research in reproductive biology of animals		19,000
Special institutional grant	6,000	6,000
Study of mercury content of the environment		24,983

Music Associates of Aspen

Advanced teacher training		25,000
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Thorne Ecological Institute

Ecological studies of two regions in Colorado	10,000	10,000
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University of Colorado

Cooperative program with the Autonomous University of Guadalajara		10,000
Study of land development practices in the Colorado mountains	9,500	9,500

University of Denver

Assignment of scholars to universities abroad		15,441
Professional program in theatre		120,000
Research on external investment in South and South West Africa	10,000	

Young Life Campaign

Urban leadership training on New York's Lower East Side		38,635
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Connecticut

Connecticut College

Reconstruction of important American dance works of the past	15,000	15,000
Summer program for talented disadvantaged high school students		15,000

Eugene O'Neill Memorial Theatre Center

Establishment of the National Theater Institute		100,000
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Revitalization Corps

Tutorial training programs		75,000
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University of Connecticut

Special institutional grant	1,500	1,500
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Yale University

Advanced training program for African students at the Law School		7,200
Assignment of scholars to universities abroad	280,000	69,535
Computer analysis of data from Belem Virus Laboratory in Brazil		13,421
Educational and training program in family planning	10,000	10,000
Oral history interviews with musicians	24,000	
Research on methods of increasing public participation in community housing programs	35,000	15,000
School of Drama		5,483
Special institutional grants	6,000	6,000

APPROPRIATIONS AND PAYMENTS IN 1972

UNITED STATES (*cont'd*)

Delaware

Wilmington Public Schools

Internship for a school administrator	31,720	31,720
Training program for school administrators	23,500	

District of Columbia

American Association for the Advancement of Science

Office of International Scientific Affairs	25,000	5,000
Study of television as a means of enhancing public understanding of science		15,000

American Historical Association

Proper use of films in teaching and research	988
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American University

Scholarships to National Youth Orchestra	20,000	20,000
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Americans for Indian Opportunity

American Indian Theatre Ensemble	25,000
Development of Indian programs in schools	15,000

Association of American Medical Colleges

Family health conference in Uganda	9,257
Regional seminars in Africa on family health	7,500

Atlantic Council of the United States

Study "U.S. Agriculture in a World Context"	25,000	25,000
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Brookings Institution

Associating young scholars with its Foreign Policy Studies Program	200,000	200,000
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Citizens Committee on Population and the American Future

Operating costs	25,000	25,000
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Education for Involvement Corporation

Training high school students in social action skills	15,000	15,000
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George Washington University

Special institutional grant	1,500	1,500
Workshop for careers in the arts	25,000	24,767

Georgetown University

Population studies	16,163
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Howard University

Planning for a National Commission on Higher Education for Black Americans	5,000	5,000
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APPROPRIATIONS AND PAYMENTS IN 1972

Institute for the Study of Health and Society		
Program development	15,000	15,000
John D. Rockefeller 3rd Youth Award for 1972	11,000	
Lawyer's Committee for Civil Rights Under Law		
Assistance in implementation of the decentralization law of 1969 in New York City schools		15,000
National Academy of Sciences		
Essays on revolutions in scientific thought	15,000	15,000
Study of agricultural efficiency in the United States	50,000	25,000
Study of establishing an International Foundation for Science	25,000	12,500
Visit of Chinese physicians to the United States	25,000	25,000
Study on the foreign student visa and employment situation in the United States	2,500	2,500
National Endowment for the Humanities		
Jefferson Lecture in the Humanities	6,000	6,000
National Public Radio		
Coverage of the Stockholm conference on the environment	15,000	13,358
Overseas Development Council		
Study of problems of less-developed countries	125,000	125,000
Pan American Health Organization		
Population-nutrition studies in the Caribbean area		36,893
People-to-People Health Foundation		
Project HOPE health programs in Laredo, Texas		50,000
Population Crisis Committee		
Educational programs	25,000	25,000
Public Schools of the District of Columbia		
Internships for school administrators	23,680	123,830
Resources for the Future		
Research on management of residuals		268,764
Smithsonian Research Foundation		
Staff for an advisory committee on the Stockholm conference on the environment	25,000	25,000
Social Development Corporation		
Development of a strategy for ameliorating unemployment resulting from tobacco farm mechanization		15,000
Student Advisory Committee on International Affairs		
Dialogue program	15,000	10,000

APPROPRIATIONS AND PAYMENTS IN 1972

UNITED STATES (*cont'd*)

Urban Institute

Study of cost differentials among school districts 15,000 15,000

Washington Drama Society

Children's theatre program	25,000	25,000
Experimental workshops		10,000

Florida

Dade County Public Schools

Training for school administrators in a multi-ethnic environment	15,000	15,000
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Florida State University

Playwright in residence		10,000
Research on economic aspects of increased grain production in less-developed countries	15,000	

University of Florida

Filming of a dance work	15,000	15,000
Preparation of black students for graduate study in agriculture		60,434
Research on south Florida ecosystem		15,000
Research on use of herbivorous fish to control aquatic vegetation	25,000	
Special institutional grant	4,500	4,500

University of Miami

Management internship program		49,995
Research in reproductive immunology	15,000	15,000
Special institutional grant	1,500	1,500

Georgia

Emory University

Student assistance programs		54,287
Summer program in teaching family planning	5,900	5,900

Rural Development Center (University System of Georgia)

Meeting on rural development	500	500
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Southeastern Academy of Theatre and Music

Development of its theatre program	40,000	70,000
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Hawaii

East-West Center

Study of fisheries-related problems of the Pacific region	4,800	
Pilot study of the generation and diffusion of adaptive technology in a developing country	14,620	14,620

APPROPRIATIONS AND PAYMENTS IN 1972

University of Hawaii			
Assignment of scholars to universities abroad	280,000	111,932	
Research on population and economics in Korea		13,857	
Special institutional grant	3,000	3,000	
 Illinois			
American Bar Foundation			
Study of Tax Reform Act of 1969		15,000	
Art Institute of Chicago			
Goodman Theatre and School of Drama		27,100	
Better Boys Foundation			
Leadership training program for preadolescents and their families		25,000	
Chicago Commons Association			
Program with Spanish Coalition for Jobs to aid Latino communities	15,000	15,000	
Chicago Urban League			
West Side projects		25,000	
Community Consolidated School District No. 65. Cook County			
Internship for a school administrator	600	2,200	
Community Renewal Society			
Leadership training program		72,710	
Training program in urban affairs for journalists		15,000	
National Affiliation of Concerned Business Students			
Symposium on "Corporate Social Policy in a Dynamic Society"	10,000	10,000	
Northwestern University			
Fellowship operations		79,223	
Research in reproductive biology		195,000	
Special institutional grant	3,000	3,000	
 University of Chicago			
Family planning service—refund		(8,294)	
Research on economic effects of agricultural policies		17,738	
Research on the relationships between poverty and behavior		40,000	
Special institutional grant	10,500	10,500	
Study of the economic factors influencing population growth		27,716	
 University of Illinois			
Collection of world germplasm of sorghum and millets	13,500	13,500	
Research on pesticides	50,000	50,000	
Special institutional grant	19,500	19,500	
Studies of nitrogen in the pollution of waterways		250,000	
Travel costs for a graduate of the Indian Agricultural University to the United States for study		(3,004)	

APPROPRIATIONS AND PAYMENTS IN 1972

UNITED STATES (*cont'd*)

Indiana

Ball State University

Community use of school facilities 53,917

Board of Education of the School City of East Chicago

Superintendent's Task Force—refund (3,033)

Indiana State University

Internship training program for minority group school administrators	157,000	34,500
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Indiana University

Research on infant mortality in underdeveloped countries	12,150	
Special institutional grant	5,250	5,250
Study of annual emancipation celebrations	7,000	7,000

Purdue University

Special institutional grant	14,250	14,250
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University of Notre Dame

Assignment of scholars to universities abroad	275,000	67,989
Ecumenical Institute for Advanced Studies	500,000	100,000
Special institutional grant	1,500	1,500

Iowa

Grinnell College

Discovery and support of talented students	72,897	
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Iowa State University

Research on removing nonferrous metals from scrap steel	14,918	
Special institutional grant	15,750	15,750

University of Iowa

Assignment of scholars to universities abroad	39,093	
American Civilization Program	90,000	30,000
Expansion of its Center for the New Performing Arts		94,000
Research on poet-novelist Jean Toomer	615	615
Visiting fellow at the University of Nairobi		9,106

Kansas

Kansas State University

Research on broad cereal crosses	12,000	
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Kentucky

Berea College

Puppetry Caravan for Appalachia	23,530	23,530
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APPROPRIATIONS AND PAYMENTS IN 1972

Louisiana

Free Southern Theatre		
Ensemble and Drama Workshop	25,000	25,000
New Orleans Philharmonic Symphony Orchestra		
Instrumental and orchestral training program for young people	22,129	22,129
The Louisiana State University and Agricultural and Mechanical College System		
Special institutional grant	6,750	6,750
Tulane University		
Family planning programs	66,000	
Student assistance program	10,700	

Maine

Bowdoin College		
Recruitment and support of talented minority group students		17,600

Maryland

Associates of the National Agricultural Library		
Assistance for students and trainees from abroad	5,000	5,000
Baltimore City Public Schools		
Internship for a school administrator	28,014	28,014
On-the-job training for high-school seniors—refund		(10,132)
Center Stage Associates		
Theatre program for young people involving the public schools	14,912	14,086
Johns Hopkins University		
Graduate training in international relations		21,902
Program integrating the North American heritage with that of Africa, Latin America, and the Caribbean	99,802	48,460
Research on health care		66,768
Research on population policies		6,532
Research on the psychological factors associated with therapeutic termination of pregnancy		6,000
Schistosomiasis research	15,000	30,000
Seminars for young diplomats	175,000	36,425
Special institutional grant	8,250	8,250
Peabody Institute of the City of Baltimore		
Awards to talented music students		56,668
Planned Parenthood Association of Maryland		
Population education in Baltimore schools	86,000	86,000
St. Mary's City Commission		
Introduction to archeology for young historians	25,000	25,000

APPROPRIATIONS AND PAYMENTS IN 1972

UNITED STATES (*cont'd*)

Universal Christian Church

Workshops in the performing arts in Pipestem, West Virginia 25,000 25,000

Massachusetts

Berkshire Theatre Festival

Theatre programs in New England 25,000 25,000

Boston University

Program of early childhood language training 5,000

Brandeis University

Special institutional grant 3,000 3,000

Clark University

Special institutional grant 1,500 1,500

Elma Lewis School of Fine Arts

Dance programs 350,800 90,000

Harvard University

Center for Population Studies 34,541

Community health programs 275,000

Coordination with other universities in environmental
programs in New England 10,000 10,000

Educational models relating human fertility and fertility control 14,500

Environmental planning in New England 93,000 15,000

Health careers summer program for minority-group students 50,000

Health planning systems at the University of Valle 15,000

International legal studies and advanced training for Africans 11,988

Laboratory of Human Reproduction and Reproductive Biology 500,000 72,750

Participation of a scholar in the ILO Mission to
Kenya on Employment 1,000 1,000

Program in family planning and child health care in Haiti 21,000 24,000

Research on educational investment and economic growth 5,620

Research on insect control 74,268

Research on racial attitudes in the United States 70,000 27,200

Research training program in the Laboratory of Human
Reproduction and Reproductive Biology 5,000 5,000

Schistosomiasis research 54,000 26,056

Scholarships for disadvantaged medical students 25,000 25,000

Special institutional grant 12,000 12,000

Study of social considerations in the corporate
decision-making process 14,000

Study of surgical intervention in the United States 25,000 10,000

Training program for potential leaders in education 20,000

Massachusetts Institute of Technology

Assignment of scholars to universities abroad 275,000

Establishment of an international nutrition planning and
training center 230,000 37,200

APPROPRIATIONS AND PAYMENTS IN 1972

Investigation of contaminants in the environment and their control	15,000	
Special institutional grant	7,500	7,500
Study of inflation in Chile	5,937	5,000
Study of politicization and demand-making behavior among low-income migrants to large cities	30,690	20,460
 New England Conservatory of Music		
Awards to talented students		67,000
 New England Hospital		
Health vocational training program	500,000	250,000
Training for health careers	450,000	200,000
 Radcliffe College		
American Heritage Project	5,150	5,150
Post-doctoral fellowship program for women in college teaching	25,000	25,000
 Student Competitions on Relevant Engineering		
Urban Vehicle Design Competition		20,000
 Tufts University		
Research on the economic development of the Republic of Zaire	5,000	5,000
 University of Massachusetts		
Special institutional grant	3,000	3,000
 WGBH Educational Foundation		
Exploration of the history of the American people using the skills of artists and scientists in other fields as well as broadcast professionals		100,000
 Williams College		
Assignment of scholars to universities abroad		120,860
Center for Environmental Studies		37,661
 Woods Hole Oceanographic Institution		
Research on marine resource exploitation	14,455	
Workshop on critical problems of the coastal zone	5,175	
 Michigan		
 Board of Education of the School District of the City of Detroit		
Guidance counseling for high school students		106,461
Research on the disparity between schools in Detroit		60,000
 Detroit Public Schools		
Internship for a school administrator	985	
 Flint Community Schools		
Internship for a school administrator	30,422	30,422

APPROPRIATIONS AND PAYMENTS IN 1972

UNITED STATES (*cont'd*)

Higher Education Opportunities Committee

Student counseling and pre-college assistance in inner-city schools 30,000

Merrill-Palmer Institute

Urban family programs 5,000

Metropolitan Detroit Youth Foundation

Leadership development 72,000 72,000

Michigan State University

Internships in university administration 30,000

Special institutional grant 12,000 12,000

Studies in protein quality of grains 16,500 16,500

Monroe County Community College

Training environmental technicians 3,402

University of Michigan

Assignment of scholars to universities abroad 31,497

Contemporary Performance Project of the School of Music 14,868

Environmental quality programs 302,500

Environmental research at the Douglas Lake Biological Station 15,000 15,000

Medical malacology program 112,048

Population research study 3,696

Schistosomiasis studies 9,000 9,000

Special institutional grant 6,000 6,000

Study of family planning programs of multilateral agencies 15,000 15,000

Research associate in the Population Studies Center—refund (954)

Wayne State University

Publication of *Human Reproduction: Conception and Contraception* 5,000 5,000

Special institutional grant 1,500 1,500

Minnesota

Carleton College

Discovery and support of talented minority group students 39,173

Mayo Foundation

Special institutional grant 1,500 1,500

Minneapolis Public Schools, Special School District No. 1

Use of schools as community centers 9,780

Minneapolis Society of Fine Arts

Development of works by the Children's Theatre Company 98,032

Development of the Children's Theatre Company 500,000 500,000

APPROPRIATIONS AND PAYMENTS IN 1972

St. Olaf College			
Higher education program for American Indians		15,000	
University of Minnesota			
Assignment of scholars to universities abroad	275,000	30,322	
Office for Advanced Drama Research to obtain productions for new playwrights throughout the country	65,000		
Research in applied crop physiology and breeding of small grains		40,000	
Research on frost resistance in basic food crops		21,510	
Research on Minnesota agriculture, 1880-1970	13,000	6,500	
Research on small farming in Japan	12,900	11,578	
Special institutional grant	6,750	6,750	
Mississippi			
Alcorn Agricultural and Mechanical College			
Rural development program in cooperation with Mississippi State University	79,500	79,500	
Jackson State College			
Film study of traditions in the Mississippi Delta		7,068	
Mississippi State University			
Study of plant resistance to insects	30,220	30,220	
Missouri			
Central Missouri State College			
Environmental study		10,924	
Saint Louis Symphony Society			
Experiments in acoustical technology	15,000	15,000	
Saint Louis University			
Development of the Anemia and Malnutrition Research Center, Chiang Mai, Thailand	31,700	122,211	
University of Missouri			
Environmental Trace Substances Center	183,000	99,785	
Special institutional grant	1,500	1,500	
Washington University			
Special institutional grant	3,000	3,000	
Study of teaching of family planning in medical schools of the United States	22,000	22,000	
Work-study program for high-school graduates		34,911	
Nebraska			
University of Nebraska			
Research on modification of tropical corn germplasm		14,077	
Sorghum research		33,190	
Special institutional grant	6,000	6,000	

APPROPRIATIONS AND PAYMENTS IN 1972

UNITED STATES (*cont'd*)

New Hampshire

American Universities Field Staff

Study of contemporary youth movements in the western world	13,500
Study of Eskimo life in Alaska	11,000

Dartmouth College

Preparation of students for admission to college on scholarships	26,199
Special institutional grant	1,500

New Jersey

Boy Scouts of America

Leadership development	150,000	25,120
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Institute for Advanced Study

Review of state of Soviet studies in the United States	3,500	3,500
Study of impact of Haitian slave revolt of 1792 on other revolutions	15,840	

National Council on Crime and Delinquency

Course materials for training of correctional administrators	25,000
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Princeton University

Afro-American Studies Program	54,933
Assignment of scholars to universities abroad	19,975
Community work program for university students	40,153
Development of mass spectroscopic sensor for air quality measurements	15,000
Interdisciplinary research in ecology	8,532
Population research study	4,291
Professional theatre program	200,000
Research in ecology by its Center of International Studies	15,000
Special institutional grant	3,750
Summer program for talented high-school minority-group students—refund	(2,098)

Princeton University Press

Pre-publication costs of the journal <i>Philosophy & Public Affairs</i>	15,000
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Rutgers, the State University

Special institutional grant	1,500	1,500
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Trenton Board of Education

Internship for a school administrator	25,731	25,731
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Westminster Choir College

Exploration of new directions in church music	15,000	15,000
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APPROPRIATIONS AND PAYMENTS IN 1972

New Mexico

Opera Association of New Mexico		
Apprentice program for technicians	25,000	25,000

New York

Actors Studio		
Playwright in residence	9,500	

Adelphi University		
Special institutional grant	1,500	1,500

African-American Institute		
Operation of information center	22,000	22,000

African Cultural Center		
Playwright in residence	10,000	10,000

Agnes de Mille Dance Theatre		
American heritage project	25,000	

Albany Medical College		
Family planning program	300,000	50,000

American Assembly		
Program on the role of foundations	25,000	25,000

American Bureau for Medical Aid to China		
Population and family planning teaching program in Taiwan	25,000	25,000

American Place Theater		
Playwright in residence	9,500	
Writers' program	50,000	

Asia Society		
Conference on Prospects for Southeast Asia in the Seventies	10,000	

Aspen Institute for Humanistic Studies		
Operations of the International Federation of Institutes for Advanced Study	14,500	14,500

ASPIRA		
Guidance program for Spanish-speaking students and their parents	17,688	

Association for the Study of Abortion		
Evaluation of its activities	15,000	15,000

Ballet Theatre Foundation		
Artistic staff	50,000	

Bank Street College of Education		
Division of Field Action	80,510	

APPROPRIATIONS AND PAYMENTS IN 1972

UNITED STATES (*cont'd*)

Barnard College

Study on the ethics of using human subjects in biomedical research 25,000

Board of Education of the City of New York

Open Classroom Program 325,000 87,250

Boyce Thompson Institute for Plant Research

Research on plant life and ecosystem of the Hudson River Basin 115,085

Brooklyn College of the City University of New York

Training for theatre technicians 32,835

Institute for Studies in American Music 25,000 12,500

Carnegie Endowment for International Peace

Training programs for foreign service officers from developing countries 7,960 24,500

Cell Block Theatre Workshops

Workshops in prisons 23,980 23,980

Circle in the Square

Operations in new theatre 25,000 25,000

City Center of Music and Drama

Establishment of a permanent children's theatre 37,500

City College, City University of New York

Research on effluent mariculture as a system of tertiary sewage treatment 25,000 25,000

Colgate University

Internships in academic administration 15,000 15,000

College Entrance Examination Board

Conference on academic policy 3,500 3,500

Columbia University

Community health programs 166,666

Harlem Hospital Center
Research in family planning 65,575

Library Development Center 15,760

Research in reproductive biology 45,468

Research in the United States and Europe on modern treaties—refund (3,203)

Research on population policies 22,485 22,072

School of Journalism
To improve reporting of urban racial problems 21,374

Special institutional grant 8,250 8,250

Study of social responsibility in management of investment portfolios 25,000 25,000

Studies of pollution in cooperation with the New York City Science and Technology Advisory Council 25,000 25,000

APPROPRIATIONS AND PAYMENTS IN 1972

Committee for Economic Development

Nationwide research report on improving the quality of the environment 60,000

Cornell University

Agricultural waste and nutrient management program	146,500	
Cooperative work with the University of the Philippines in the humanities and social sciences	84,833	
Family planning clinic including teaching and research	123,160	
Initiation of a program to identify environmental concerns of the public in the Hudson Basin	15,000	
Investigation of adolescent drug dependency	210,637	248,920
Primary research in Negro history by graduate students	25,000	
Research and teaching in biology at the University of Valle by two graduate students—refund	(538)	
Research on cold tolerance in maize	15,000	7,500
Research on pesticides	50,000	25,000
Research on pheromones	25,000	25,000
Schistosomiasis research	10,000	10,000
Special institutional grant	28,500	28,500

Council on Foundations

Public Affairs and Education Program 100,000 100,000

Council on the Environment of New York City

Environmental Intern Program 12,500 12,500

Economic Development Council

Cooperative programs with inner-city schools 48,639

Educational Broadcasting Corporation

Experimental television laboratory 400,000 75,000

Foundation Center

General support 250,000

Henry Street Settlement

Multi-ethnic theatre activities of its New Federal Theater	100,000	100,000
Playwright in residence		9,500

Hunter College of the City University of New York

Inter-college internship experience for senior students of Hunter College High School	12,500	12,500
Programs of the Arts Center	25,000	25,000

Institute for International Order

World Order Models Project	15,000	15,000
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Institute of International Education

Study of graduate agricultural education in Latin America—refund	(909)
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APPROPRIATIONS AND PAYMENTS IN 1972

UNITED STATES (*cont'd*)

Institute of Society, Ethics and the Life Sciences		
Research and teaching	46,666	46,666
Institute on Man and Science		
Evaluation of Federal guidelines for environmental impact studies	14,100	14,100
International Planned Parenthood Federation--Western Hemisphere Region		
Education in family planning in Latin America and the Caribbean	50,000	
Interracial Council for Business Opportunity		
Expansion of its programs in education for business leadership	300,000	125,000
James Madison Constitutional Law Institute		
Program in population law	50,000	50,000
Juilliard School of Music		
American Opera Center for Advanced Training	50,000	
Awards to talented students	84,500	
LaMama Experimental Theatre Club		
Resident troupes	225,000	100,000
Manhattan School of Music		
Awards to talented students	29,874	
Experimental program of string training with Eleanor Roosevelt Junior High School	25,000	25,000
Manhattan Theatre Club		
Development of a new program in theatre	15,000	15,000
Mount Sinai School of Medicine		
Post-partum follow-up	120,672	
NAACP Legal Defense and Educational Fund		
Division of Legal Information and Community Service	75,000	
NAACP Special Contribution Fund		
Leadership Development Program	30,571	
National Bureau of Economic Research		
Center for Economic Analysis of Human Behavior and Social Institutions	250,000	
Training and research program with institutions in the Foundation's University Development Program	40,025	
National Committee on United States-China Relations		
1973 visit to China by a Committee delegation	8,000	8,000

APPROPRIATIONS AND PAYMENTS IN 1972

National Music Council

Study of possibility of pooling administrative facilities of New York offices of certain nonprofit music organizations	1,800	1,800
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National Urban League

Leadership development	150,000	
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New School for Social Research

Analysis of Lincoln's political philosophy	9,800	9,800
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New Theatre Workshop

Toward establishing The Acting Company	20,000	20,000
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New York Public Library

Cataloguing of dance collection	24,000	
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Establishing an index of new musical notation	15,205	
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New York Shakespeare Festival

Playwright in residence	9,500	
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Public Theater	480,000	125,000
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New York University

Graduate performing ensembles in theatre	50,000	
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Special institutional grant	1,500	1,500
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Training in theatre arts	22,974	
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Paper Bag Players

Educational theatre for children	100,000	50,000
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Planned Parenthood Federation of America

Center for Family Planning	247,950	
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Planned Parenthood of New York City

Family Planning Resources Center	97,966	
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Population Council

International Committee for Contraceptive Development	500,000	500,000
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General support	400,000	
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Technical Assistance Division and Fellowship Program	3,000,000	600,000
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Regional Plan Association

Television town meetings	25,000	25,000
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Repertory Theater of Lincoln Center

Forum Theater	50,000	
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Support of 1972-73 season	25,000	
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Research Foundation of The State University of New York

Special institutional grant	3,000	3,000
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APPROPRIATIONS AND PAYMENTS IN 1972

UNITED STATES (*cont'd*)

Rochester City School District

Experimental project in elementary and secondary education		80,000
Internship for a school administrator	461	461

Rockefeller Foundation

Planning and organization of archives	133,500	66,069
Preparation of a Study Awards directory		20,766

Rockefeller Foundation—New York program costs

Agricultural Sciences	443,300	426,378
Arts and Humanities	235,400	206,105
Biomedical Sciences	486,100	383,535
Natural and Environmental Sciences	328,100	229,515
Social Sciences	564,400	464,877
Interdisciplinary Activities	800,000	633,679

Rockefeller University

Researchers in reproductive biology		1,494,000
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Royal Society of Medicine Foundation

Anglo-American Conference on Drug Abuse held in London	5,000
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St. Felix Street Corporation

Brooklyn Academy of Music's activities in music, dance, and drama	500,000	155,000
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Saratoga Performing Arts Center

Residency of Juilliard acting company, and drama training program	10,000	10,000
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Scientists' Institute for Public Information

Improvement of public understanding of environmental issues	25,000	25,000
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State University of New York at Binghamton

Research on trace metals in the Upper Susquehanna River Basin		5,117
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State University of New York at Stony Brook

Study of computerizing admissions at the University of Ibadan, Nigeria	42,424	21,212
Urban and Policy Sciences Program	385,000	

Street Theater

Workshops in prisons	25,000	25,000
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Syracuse University

Special institutional grant	4,500	4,500
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Theatre for the Forgotten

Workshops in prisons	29,200	29,200
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APPROPRIATIONS AND PAYMENTS IN 1972

United Nations Association of the United States of America

Research by young scholars associated with its Policy Panel
Studies Program on the future of international institutions 15,000

United States Conference for the World Council of Churches

Study of nonviolent methods of social change 15,000 15,000

United Way of America

Implementation of uniform standards of accounting
in affiliate organizations 25,000

University of Rochester

Special institutional grant 4,500 4,500

Yeshiva University

Programs in community health 13,493

North Carolina

College of the Albemarle

Education and development in a depressed rural area 200,000 139,824

Duke University

Oral history research on the South since 1890	230,000
Special institutional grant	3,000
Student assistance programs	27,062
Symposium on redevelopment of the rural South	6,000
Training of physicians' assistants and establishment of health service programs in rural areas	50,000
Visiting faculty assignments in Africa, Asia, and Latin America	54,191

North Carolina School of the Arts

Piedmont Chamber Players	12,000
Resident professional dance company	50,000

North Carolina State University

Rice blast disease research	10,000
Special institutional grant	6,750

University of North Carolina

Carolina Population Center	35,341
Center for research in reproductive biology	241,846
Cooperative program in population studies with Mahidol University, Thailand	60,000
Family planning unit	36,549
Participation of a Shaw University social scientist in the School of Journalism's study of the 1972 presidential election	15,000
Population educational services	50,390
Special institutional grant	6,750
Study of function of university population centers	34,000
	17,000

APPROPRIATIONS AND PAYMENTS IN 1972

Oregon

Oregon State University

Air pollution studies in the Willamette River Basin	247,600
Research and training program in wheat improvement for the Near East and North Africa	37,010
Special institutional grant	12,000 12,000

Reed College

Discovery and support of talented minority-group students	63,456
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University of Oregon

Research on urban behavior in Kenya	5,900	5,900
Special institutional grant	3,000	3,000

Pennsylvania

Academy of Natural Sciences of Philadelphia

Research and teaching in fresh water ecology	121,427
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American Friends Service Committee

Family planning programs	54,000	54,000
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Carnegie-Mellon University

Special institutional grant	1,500	1,500
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Chatham College

Study of faculty employment policies in 12 Pennsylvania colleges	15,000
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Haverford College

Post-baccalaureate program	28,983
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Pennsylvania State University

Analysis of a Colombian family planning program	20,570	10,285
Equipment for research in reproductive biology		15,000
Preparation of black students for graduate work in agriculture		12,500
Programs in religion and the American Heritage	30,000	15,000
Research and training in environmental studies		200,000
Research on economic factors in family-size decisions		14,000
Research position in reproductive biology	210,000	105,000

School District of Philadelphia

Internship for a school administrator	33,173	33,173
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Temple University

Administrator for the teaching fellowship program with the Settlement Music School of Philadelphia	8,000
Cooperation between the University community and some public schools	25,387
Special institutional grant	3,000 3,000
Teaching fellowships in music	20,066

APPROPRIATIONS AND PAYMENTS IN 1972

UNITED STATES (*cont'd*)

University of Pennsylvania

Population Studies Center	265,000	
Research in reproductive biology in Monell Chemical Senses Center	350,000	100,000
Research in reproductive endocrinology		23,030
Research position in reproductive biology		34,000
Special institutional grant	9,750	9,750
Training for family planning workers	7,900	

University of Pittsburgh

Special institutional grant	11,250	11,250
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Puerto Rico

University of Puerto Rico

Special institutional grant	1,500	1,500
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Rhode Island

Brown University

Schistosomiasis research	193,000	
Special institutional grant	3,750	3,750

Gordon Research Conferences

Conference on plant culture to be held in June, 1973 at the Bellagio Study and Conference Center	4,000	
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University of Rhode Island

Special institutional grant	1,500	1,500
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South Carolina

Benedict College

Experimental program in liberal arts education	25,000	
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Converse College

Summer training in music for high-school students	37,300	
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South Dakota

Oglala Sioux Community College

Appointment of a development officer	15,000	15,000
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Tennessee

Fisk University

Honors Program	134,500	30,987
Program in sociology in cooperation with Vanderbilt University		35,840
Salary supplements for faculty members		31,362
Staff recruitment costs and student assistance grants		31,550

Meharry Medical College

Studies on quality of health care programs in three areas near Nashville	500,000	100,000
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APPROPRIATIONS AND PAYMENTS IN 1972

The Sequatchie Valley Planning and Development Agency		
Director's salary	14,400	14,400
Rural development program	6,000	5,898
 University of Tennessee		
Special institutional grant	1,500	1,500
 Vanderbilt University		
Special institutional grant	1,500	1,500
 <i>Texas</i>		
 Baylor College of Medicine		
Family planning program	50,000	52,960
 Houston Baptist College		
Scholarships for nursing candidates	3,750	3,750
 Rice University		
Special institutional grant	1,500	1,500
 Southern Methodist University		
Special institutional grant	3,000	3,000
 Texas A & M University System		
Special institutional grant	4,500	4,500
Study of plant resistance to insects	116,300	116,300
 University of Texas at Austin		
Workshop for playwrights	3,000	3,000
Research position in reproductive biology		59,870
Special institutional grant	3,000	3,000
 <i>Utah</i>		
 University of Utah		
Modern Dance Repertory Company		25,000
 Utah State University		
Livestock research projects in the State of Zacatecas, Mexico	2,500	
Research and training in environmental studies		119,181
 <i>Vermont</i>		
 International Film Seminars		
Preparation of a book on the history of documentary film	4,000	
 Marlboro School of Music		
Contemporary music program		16,666

APPROPRIATIONS AND PAYMENTS IN 1972

UNITED STATES (*cont'd*)

Middlebury College

Evaluation of the performance of the college	12,000
Music education project	14,850

Virginia

Virginia Polytechnic Institute

Discovery and support of talented disadvantaged students	47,160
Special institutional grant	4,500

Virginia Union University

Community work program for university students	20,000
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University of Virginia

Assignment of scholars to universities abroad	15,067
International conference on "The Open Society" held at the Bellagio Conference and Study Center	15,000

Washington

Washington State University

Research on nutritional quality in cereal crops and legumes	15,000	15,000
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Western Washington State College

Program for junior high school students	18,453
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University of Washington

Assignment of scholars to universities abroad	23,166
Division of Family Planning and Education	40,639
Special institutional grant	4,500
Training for staff members of the School of Fisheries, Catholic University of Valparaiso, Chile	8,200

West Virginia

Kanawha County School System

Community Schools Program	150,000	25,000
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West Virginia University

Program to increase animal production among small farmers in the Appalachian region	107,945
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Wisconsin

University of Wisconsin

Assignment of scholars to universities abroad	43,950
Potato research	15,000
Improvement of environmental quality in Lake Superior region	656,000
Research on fertility, land and income distribution	19,979
Research study, "Microeconomic Decisions and the Long-run Development of Agriculture"	5,965
Special institutional grant	17,250

APPROPRIATIONS AND PAYMENTS IN 1972

United States—General

Internship for training at the superintendent level for minority-group administrators

Orientation conferences	40,000	16,339
Fellowships	79,068	50,513

ZAIRE

Cooperative programs

National University of Zaïre

University Development Program Center	66,530	87,381
Visiting faculty	70,900	

National University of Zaïre

Faculty of Economics	23,244	8,346
Fellowships and scholarships	4,274	4,545

Miscellaneous small payments and refunds each under \$500 (4,046)

TOTALS \$39,775,228 \$40,613,254

SUMMARY OF FUNDS APPROPRIATED IN 1972

Grants and Programs

Total announced in 1972—as above	\$39,775,228
Deduct releases from prior years' appropriations announced in 1972	<u>12,480,746</u>
Approved and announced in 1972	27,294,482

Appropriations in 1972 not released during the year 14,873,718

Appropriation for 1973 general administrative expenses 3,336,700

TOTAL APPROPRIATIONS DURING THE YEAR \$45,504,900

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