

The
Rockefeller Foundation
Annual Report

1934

THE ROCKEFELLER
FOUNDATION

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1934

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THOMAS M. DEBEVOISE

Associate Counsel

CHAUNCEY BELKNAP

¹ Retired September 1, 1935.

² Appointed September 1, 1935.

To the Members of The Rockefeller Foundation,
New York.

Gentlemen:

I have the honor to transmit herewith an account of the work of The Rockefeller Foundation for the period January 1, 1934, to December 31, 1934, including the reports of the Secretary and the Treasurer of the Foundation, the Director of the International Health Division, and the Directors for the Medical Sciences, the Natural Sciences, the Social Sciences, and the Humanities.

The determination of sound Foundation procedure in the application of funds to the well-being of man becomes unusually difficult when increased opportunity and need coincide with diminished resources. Such a situation, at a time of rapid change in world conditions, demands the careful thought of those responsible for the selection of the fields and methods of work which promise to yield the most tangible and lasting benefits. These have been the preoccupying considerations for the trustees and executive officers of The Rockefeller Foundation during the past year.

The annual reports of the Foundation in recent years have traced developments since 1929

when the new Foundation was formed, with a program continuing most of the work previously done by the old Foundation, the Laura Spelman Rockefeller Memorial, and the International Education Board. In general terms the policy of the Foundation, as set forth in 1929, was to assist, without particular limitation, the advancement of knowledge in the fields of medical science, natural science, social science, and the humanities, while it continued its active operations in public health, through its International Health Division.

Year by year this program has been sharpened. A smaller proportion of the funds available has been appropriated for research over the whole field; a larger proportion has been devoted to the advancement of certain definite sub-fields of knowledge, where demands have been clearly indicated by existing conditions.

The decisions reached during the year 1934 as to program in the immediate future bring increased emphasis on special fields, and on realistic research designed to meet definite and clearly recognized needs.

The Foundation proposes to continue its traditional work in public health, studying, through its field and laboratory staffs, diseases and the control of diseases in their environments, and giving assistance to governmental activities and to the training of personnel.

In the field of medical science the major interest will continue to be mental health, and support will be given for research and its applications, as well as for the training of personnel. A secondary interest will be the training of medical students in hygiene and public health.

In the natural sciences support will be given, as in recent years, to studies in the broad field of modern analytic biology directed towards the correlation of physical and mental growth, and genetic development.

In the field of social science aid will be given for objective studies on selected problems of realistic importance in social control, through the methods of direct factual study, training of personnel, and basic research. In many such fields, the work is beset with great difficulties, the stakes are so large that their attainment is worthy of tremendous effort. International relations form a case in point. Objective studies in the problems relating to economic security will be fostered, both those relating to the business cycle and those arising from attempts to ameliorate the effects upon the individual of economic instability. A third general field of interest will be that of public administration. The field of criminology presents problems for combined attack from the angle of the behavior problems of the individual and problems of public administration.

The work in the humanities will consist of efforts in selected types of cultural activities permitting practical application, with the aim of extending the area of public appreciation and participation, and of fostering international cultural understanding. Opportunities of importance seem to exist through the plans of the public school system for adult community work in cultural subjects, through certain activities of museums and libraries, and through the work of a few important centers which are developing the drama as a school, college, and community activity. The vast general fields of the radio broadcast and the motion picture will also receive consideration since well-organized efforts for their greater cultural effectiveness appear to be valuable and in need of support.

During the year 1934, appropriations have been made in continuation, and in some cases in termination, of projects in the older program of the Foundation, but the emphasis has been on the various fields of concentration.

Respectfully submitted,

MAX MASON

President

REPORT OF THE SECRETARY

SECRETARY'S REPORT

The members and trustees of The Rockefeller Foundation during 1934 were:

John D. Rockefeller, Jr., *Chairman*

James R. Angell	John D. Rockefeller, 3rd
Trevor Arnett	Walter W. Stewart
John W. Davis	Harold H. Swift
David L. Edsall	George H. Whipple
Raymond B. Fosdick	William Allen White
Jerome D. Greene	Ray Lyman Wilbur
Ernest M. Hopkins	Arthur Woods
Max Mason	Owen D. Young

The following were members of the Executive Committee during the year:

The President, *Chairman*

James R. Angell	Jerome D. Greene
Trevor Arnett	John D. Rockefeller, 3rd
David L. Edsall	Walter W. Stewart
Raymond B. Fosdick	Arthur Woods

The officers of the Foundation during the year were:

John D. Rockefeller, Jr.	<i>Chairman, Board of Trustees</i>
Max Mason	<i>President</i>
Thomas B. Appleget	<i>Vice-President</i>
Selskar M. Gunn	<i>Vice-President</i>
Alan Gregg, M.D.	<i>Director for the Medical Sciences</i>
Warren Weaver	<i>Director for the Natural Sciences</i>
Edmund E. Day	<i>Director for the Social Sciences</i>
David H. Stevens	<i>Director for the Humanities</i>
Frederick F. Russell, M.D.	<i>Director, International Health Division</i>
Norma S. Thompson	<i>Secretary</i>
Lefferts M. Dashiell	<i>Treasurer</i>
George J. Beal	<i>Comptroller</i>
Thomas M. Debevoise	<i>Counsel</i>

The following served as scientific directors of the International Health Division of the Foundation during 1934:

John G. FitzGerald, M.D., *Chairman*
Albert J. Chesley, M.D. Alphonse R. Dochez, M.D.
Rufus Cole, M.D. Wilson G. Smillie, M.D.
Lewis R. Thompson, M.D.
Frederick F. Russell, M.D., *Director of the Division, Secretary*

Meetings

Regular meetings of The Rockefeller Foundation were held on April 11 and December 21, 1934. Ten meetings of the Executive Committee were held during the year to take actions within general policies approved by the trustees.

Financial Summary

The following is a summary of receipts and disbursements of the Foundation in 1934. Disbursements in many instances involved appropriations made in former years; on the other hand, in some cases payments represented but a portion of appropriations made during 1934, remainders of which are payable during succeeding years.

**Statement of Funds Available and Disbursements
During the Year 1934**

FUNDS AVAILABLE

Balance available December 31, 1933		
To meet appropriations, pledges, and authorizations.....	\$40,160,304.39	
Available for appropriation.....	<u>3,006,884.17</u>	
	\$43,167,188.56	
Authorizations allowed to lapse, re- verting to Principal Fund.....	<u>31,156.50</u>	
	\$43,136,032.06	
Income and refunds received during the year 1934.....	<u>8,207,622.56</u>	\$51,343,654.62

DISBURSEMENTS

Universities and other educational institutions		
Education		
Medical sciences.....	\$233,899.04	
Public health.....	3,813.10	
Nursing.....	35,713.15	
Social sciences.....	192,191.43	
Natural sciences.....	52,500.00	
Departmental development.....	1,478,781.23	
Research programs.....	2,205,310.23	
Land and buildings.....	437,481.41	
Research institutions and organiza- tions		
Education		
Medical sciences.....	4,119.83	
Social sciences.....	14,209.95	
Humanities.....	2,500.00	
General development.....	510,678.19	
Research programs.....	657,459.07	
Land and buildings.....	24,936.20	
Special committees and commissions	160,963.39	
Fellowships and grants in aid.....	1,735,817.22	
Studies of pressing economic prob- lems recommended by special trustee committee.....	481,334.66	
Miscellaneous.....	442,576.10	
Public health.....	2,799,296.79	
General.....	366,982.75	
Administration.....	<u>839,210.85</u>	<u>\$12,679,774.59</u>

BALANCE

To meet appropriations, pledges, and authorizations.....	\$33,666,635.62	
Available for appropriation.....	<u>4,997,244.41</u>	<u>\$38,663,880.03</u>

Summary of Expenditures in 1934

UNIVERSITIES AND OTHER EDUCATIONAL INSTITUTIONS

Medical Science Education

Albany Medical College, New York.....	\$5,000.00
Cheeloo University, Tsinan, China.....	12,318.75
China Medical Board, Inc., New York City....	175,152.65
Chulalongkorn University, Bangkok, Siam.....	6,024.97
National College of Medicine of Shanghai, China.	3,374.64
University of Colorado School of Medicine, Denver.....	5,000.00
University of Lyon, France.....	2,028.03
University of Montreal, Canada.....	25,000.00

\$233,899.04

Public Health Education

Dalhousie University, Halifax, Nova Scotia.....	\$3,813.10
---	------------

Nursing Education

University of Lyon, France.....	\$8,000.00
University of Toronto, Canada.....	24,263.84
Miscellaneous.....	3,449.31

\$35,713.15

Social Science Education

American University of Beirut, Republic of Lebanon.....	\$13,000.00
National Catholic School of Social Service, Washington, D.C.....	7,500.00
New York School of Social Work, New York City.....	30,000.00
Tulane University of Louisiana, New Orleans...	12,000.00
University of Chicago, Illinois.....	51,191.43
Western Reserve University, Cleveland, Ohio...	31,250.00
Yenching University, Peiping, China.....	42,500.00
Miscellaneous.....	4,750.00

\$192,191.43

Natural Science Education

Fukien Christian University, Foochow, China...	\$5,000.00
Lingnan University, Canton, China.....	20,000.00
University of Nanking, China.....	5,000.00
Yenching University, Peiping, China.....	12,500.00
Miscellaneous.....	10,000.00

\$52,500.00

SECRETARY'S REPORT

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Departmental Development

American University of Beirut, Republic of Lebanon.....	\$49,999.92
Harvard University, Cambridge, Massachusetts.....	51,062.70
Institute of the Pennsylvania Hospital, Philadelphia.....	9,000.00
Johns Hopkins University School of Medicine, Baltimore, Maryland.....	7,300.00
Keio Gijuku University, Tokyo, Japan.....	5,032.37
London School of Economics and Political Science, England.....	39,350.01
Massachusetts General Hospital, Boston.....	23,000.00
McGill University, Montreal, Canada.....	1,004,670.61
Nankai University, Tientsin, China.....	8,273.07
Syracuse University, New York.....	10,000.00
University of California, Berkeley.....	20,000.00
University of Chicago, Illinois.....	26,000.00
University of Cincinnati, Ohio.....	20,000.00
University of Leipzig, Germany.....	10,825.00
University of Michigan, Ann Arbor.....	7,500.00
University of Stockholm, Sweden.....	5,000.00
University of Szeged, Hungary.....	22,729.95
University of Washington, Seattle.....	5,098.81
Yale University, New Haven, Connecticut.....	140,000.02
Miscellaneous.....	13,938.77

 \$1,478,781.23

Research Programs

Brown University, Providence, Rhode Island....	\$7,849.73
California Institute of Technology, Pasadena....	35,000.00
China Medical Board, Inc., New York City....	14,231.84
Columbia University, New York City.....	150,788.50
Cornell University Medical College, New York City.....	24,990.40
Dartmouth College, Hanover, New Hampshire...	10,000.00
Harvard University, Cambridge, Massachusetts.	267,277.60
Harvard University and Radcliffe College, Cambridge, Massachusetts.....	42,610.60
Iowa State College of Agriculture and Mechanic Arts, Ames.....	6,250.00
Johns Hopkins University, Baltimore, Maryland.	99,854.60
Leland Stanford, Jr., University, Stanford University, California.....	87,000.00
London School of Economics and Political Science, England.....	26,494.41
Massachusetts Institute of Technology, Cambridge.....	38,300.00
McGill University, Montreal, Canada.....	32,500.00

THE ROCKEFELLER FOUNDATION

Princeton University, New Jersey.....	7,500.00
State University of Iowa, Iowa City.....	5,000.00
Tulane University of Louisiana, New Orleans..	17,500.00
University of California, Berkeley.....	41,000.94
University of Chicago, Illinois.....	591,444.29
University of Hawaii, Honolulu.....	16,666.68
University of London, England.....	7,165.00
University of Michigan, Ann Arbor.....	36,900.00
University of Minnesota, Minneapolis.....	52,500.00
University of North Carolina, Chapel Hill.....	35,000.00
University of Oslo, Norway.....	8,914.12
University of Paris, France.....	19,258.02
University of Pennsylvania, Philadelphia.....	56,230.62
University of Rochester, New York.....	50,374.51
University of Stockholm, Sweden.....	9,372.08
University of Texas, Austin.....	28,750.00
University of Virginia, Charlottesville.....	12,500.00
Vanderbilt University, Nashville, Tennessee....	45,000.00
Washington University, St. Louis, Missouri.....	46,511.77
Western Reserve University, Cleveland, Ohio....	6,000.00
Yale University, New Haven, Connecticut.....	241,250.00
Miscellaneous.....	27,324.52
	<hr/>
	\$2,205,310.23
Land and Buildings	
Chulalongkorn University, Bangkok, Siam.....	\$11,656.22
London School of Economics and Political Science, England.....	33,274.04
McGill University, Montreal, Canada.....	112,853.87
Shanghai, China. Expenses in connection with transfer of land to Shanghai Medical Center... ..	622.23
University College, London, England.....	7,187.06
University of Geneva, Switzerland.....	16,426.45
University of Göttingen, Germany.....	8,295.00
University of Lyon, France.....	64,532.36
University of Oslo, Norway.....	32,957.02
University of Oxford, England.....	109,708.66
University of Utrecht, Netherlands.....	39,968.50
	<hr/>
	\$437,481.41
RESEARCH INSTITUTIONS AND ORGANIZATIONS	
Medical Science Education	
Chinese Medical Association, Shanghai.....	\$4,119.83
Social Science Education	
Laboratory of Anthropology, Sante Fe, New Mexico.....	\$8,749.95
Social Science Research Council, New York City..	5,460.00
	<hr/>
	\$14,209.95

Humanities Education

Institute of Pacific Relations. American Council, New York City.....	\$2,500.00
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General Development

American Schools of Oriental Research, Baghdad and Jerusalem.....	\$44,385.92
Brookings Institution, Washington, D.C.....	75,000.00
Canton of Geneva, Switzerland. Postgraduate Institute of International Studies.....	69,102.43
Institute of Economic and Social Research, Paris, France.....	33,690.48
Institute of Economics and History, Copenhagen, Denmark.....	5,365.00
Institute of Pacific Relations. American Coun- cil, New York City.....	25,000.00
International Institute of African Languages and Cultures, London, England.....	31,228.36
Long Island Biological Association, Cold Spring Harbor, New York.....	20,000.00
National Bureau of Economic Research, New York City.....	83,851.80
Social Science Research Council, New York City.	50,000.00
Woods Hole Oceanographic Institution, Massa- chusetts.....	55,000.00
Zoological Station of Naples, Italy.....	9,462.00
Miscellaneous.....	8,592.20

\$510,678.19

Research Programs

American Council of Learned Societies, Washing- ton, D.C.....	\$16,093.23
Australian National Research Council, Sydney...	13,540.29
Austrian Institute for Trade Cycle Research, Vienna.....	5,132.71
Behavior Research Fund, Chicago, Illinois.....	9,533.98
Canadian National Committee for Mental Hy- giene, Toronto.....	9,415.06
Chicago Area Project, Illinois.....	7,097.84
Community Council of Philadelphia, Pennsyl- vania.....	7,500.00
Council on Foreign Relations, New York City....	25,000.00
Dutch Economic Institute, Rotterdam, Nether- lands.....	5,000.00
Economic Foundation, New York City.....	51,123.05
Foreign Policy Association, New York City....	45,701.23
Geneva Research Center, Switzerland.....	9,901.53
Institute of International Economics and Mari- time Trade, Kiel, Germany.....	5,000.00

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Institute of Pacific Relations, Honolulu, Hawaii..	50,000.00
Institute for Psychiatric Research, Munich, Germany.....	15,369.94
International Institute of Public Law, Paris, France.....	6,119.59
Massachusetts Department of Mental Diseases, Boston.....	5,980.78
Medical Research Council, London, England....	19,664.93
National Research Council, Washington, D.C....	73,327.90
New Hampshire Foundation, Concord.....	13,500.00
Notgemeinschaft der Deutschen Wissenschaft, Berlin, Germany.....	31,199.18
Orthological Institute, London, England.....	12,500.00
Roscoe B. Jackson Memorial Laboratory, Bar Harbor, Maine.....	11,000.00
Royal Institute of International Affairs, London, England.....	41,397.52
Rumanian Institute of Social Science, Bucharest.	12,500.00
Social Science Research Council, New York City.	60,892.30
Trudeau Foundation, Trudeau, New York.....	10,000.03
Welfare Council of New York City.....	47,500.00
Worcester State Hospital, Massachusetts.....	12,000.00
Miscellaneous.....	24,467.98
	<hr/>
	\$657,459.07
Land and Buildings	
Jungfrauoch Scientific Station, Switzerland.....	\$24,936.20
SPECIAL COMMITTEES AND COMMISSIONS	
Committee on the Grading of Nursing Schools, New York City.....	\$4,989.08
International Committee of Historical Sciences, Zurich, Switzerland.....	14,000.00
National Research Council, Washington, D.C.	
Committees on Drug Addiction and Effects of Radiation on Living Organisms.....	54,792.26
Research Committee on Social Trends, Washington, D.C.....	9,094.28
Science Advisory Board, Washington, D.C.....	27,000.00
Social Science Research Council, New York City	
Committee on Government Statistics and Information Services.....	51,087.77
	<hr/>
	\$160,963.39
FELLOWSHIPS AND GRANTS IN AID	
American Council of Learned Societies, Washington, D.C.....	\$211,231.03
American School of Classical Studies at Athens, Greece.....	16,650.00

SECRETARY'S REPORT

II

Fellowships administered by The Rockefeller Foundation.....	502,307.80
Grants in aid under medical and natural sciences and the humanities.....	91,554.65
Medical Research Council, London, England.....	16,011.33
National Research Council, Washington, D.C.....	371,773.02
Notgemeinschaft der Deutschen Wissenschaft, Berlin, Germany.....	8,375.73
Peiping Union Medical College, China.....	26,878.32
Research aid funds in the medical, natural, and social sciences and the humanities.....	355,987.39
Research and developmental aid in the medical and natural sciences in China.....	8,181.26
Social Science Research Council, New York City..	112,656.26
Miscellaneous.....	14,210.43
	<hr/>
	\$1,735,817.22

STUDIES OF PRESSING ECONOMIC PROBLEMS

Appraisal and Planning Projects	
Brookings Institution, Washington, D.C.....	\$158,777.38
Social Science Research Council, New York City.	76,948.99
Direct Grants to Operating Government Agencies	
Federal Emergency Relief Administration, Washington, D.C.....	35,000.00
Subventions to Cooperating Private Agencies	
American Municipal Association, Chicago, Illinois	90,331.92
American Public Welfare Association, Chicago, Illinois.....	35,000.00
Commission on Interracial Cooperation, Atlanta, Georgia.....	28,298.98
Foreign Policy Association, New York City....	6,074.60
Industrial Relations Counselors, New York City	16,223.32
National Association of Housing Officials, Chicago, Illinois.....	7,501.85
New York Adult Education Council, New York City.....	10,000.00
Slum Clearance Committee of New York, New York City.....	5,000.00
Miscellaneous.....	12,177.62
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	\$481,334.66

MISCELLANEOUS

Abraham Lincoln Foundation, Dresden, Germany..	\$5,000.00
American Geographical Society, New York City...	23,000.00
American Mathematical Society, New York City..	13,750.00

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American Psychological Association, Princeton, New Jersey.....	6,577.06
American Society of Naturalists. <i>Drosophila</i> stock center, Cold Spring Harbor, New York.....	9,000.00
Bibliographical Society of America, Buffalo, New York.....	8,500.00
Citizens Family Welfare Committee of New York City.....	150,000.00
<i>Encyclopaedia of the Social Sciences</i> , New York City.	38,000.00
Library of Congress, Washington, D.C.....	20,000.00
Medical literature for Russia.....	14,939.32
National Academy of Sciences, Washington, D.C..	18,310.00
National Research Council, Washington, D.C....	80,754.66
New York State College of Agriculture, Cornell University, Ithaca.....	5,000.00
Prussian State Library, Berlin, Germany.....	10,000.00
University of Chicago, Illinois.....	6,250.00
University of North Carolina, Chapel Hill.....	7,500.00
Virginia Historical Society, Richmond.....	7,500.00
Miscellaneous.....	18,495.06
	<hr/>
	\$442,576.10

PUBLIC HEALTH

Regular program of the International Health Division in state and local health work, public health education, control and investigations of specific diseases.....	\$2,317,692.86
Central Medical School for Native Medical Students, Suva, Fiji.....	2,227.50
League of Nations. Health Organization, Geneva, Switzerland.....	143,425.15
Nervous and Mental Diseases Hospital, "Socola," Jassy, Rumania.....	6,377.26
Schools and institutes of hygiene and public health	
Bulgaria. Sofia.....	30,367.66
Italy. Rome.....	262,084.96
Rumania. Bucharest.....	37,121.40
	<hr/>
	\$2,799,296.79

GENERAL*

Agricultural club work, Finland and Sweden.....	\$5,049.06
Commission on Interracial Cooperation, Atlanta, Georgia.....	38,946.06
East Harlem Nursing and Health Service, New York City.....	29,166.66

* These appropriations, while administered by The Rockefeller Foundation under terms of the consolidation agreement, represent items which would not, in general, be included in the present program of the Foundation.

SECRETARY'S REPORT

Institute of International Education, New York City.....	31,000.00
Jean Jacques Rousseau Institute, Geneva, Switzerland.....	7,000.00
Playground and Recreation Association of America, New York City.....	50,000.00
Regents of the University of the State of New York, Albany.....	10,000.00
State University of Iowa, Iowa City.....	86,383.05
Teachers College, Columbia University, New York City.....	25,000.00
University of Minnesota, Minneapolis.....	49,767.80
University of Toronto, Canada.....	27,378.63
Miscellaneous.....	7,291.49
	<hr/>
	\$366,982.75

ADMINISTRATION

Maintenance of New York, European, and Shanghai offices.....	\$839,210.85
	<hr/>
Total.....	\$12,679,774.59

Funds and Property

As of December 31, 1934

PRINCIPAL FUND

Balance in The Rockefeller Foundation Principal Fund as of December 31, 1933.....	\$153,578,785.59
Funds reverting to the Principal Fund	
Authorization allowed to lapse.....	31,156.50
	<hr/>
Balance, December 31, 1934.....	\$153,609,942.09
	<hr/>

BUILDINGS AND EQUIPMENT

In New York	
Furniture and equipment of offices.....	\$52,446.74
In Paris	
Part interest in building occupied by the Paris office.....	65,307.94
	<hr/>
	\$117,754.68
	<hr/>

Note: By action of the trustees at meeting of April 11, 1934, land in Shanghai owned by the Foundation was conveyed to the Chase Bank, Shanghai, for the sole and exclusive benefit of the Board of Directors of the Shanghai Medical Center.

Land, December 31, 1933.....	\$298,331.95
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INTERNATIONAL HEALTH DIVISION

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INTERNATIONAL HEALTH DIVISION

Summary of Activities

Operating on a budget of \$2,200,000 for public health activities, The Rockefeller Foundation in 1934 engaged in field research on yellow fever, malaria, hookworm disease, tuberculosis, undulant fever, yaws, and diphtheria; conducted yellow fever surveys and control campaigns; carried out projects in malaria control, supported numerous demonstrations of complete public health programs; gave aid to the organization or maintenance of essential services of state and national health departments; and continued its contribution to the training of public health personnel through aid to schools and institutes of hygiene and public health as well as by support of a fellowship program.

The various projects provided for in the budget fall under general headings to which the following amounts were allocated: aid to state and local health services, \$283,422; public health education, \$286,499; control of specific diseases and investigations, \$649,069; laboratory and field service, \$812,500; and general fund, \$168,510.

Among the institutions receiving grants in 1934 were the Health Organization of the League of Nations; the Johns Hopkins School of Hygiene

and Public Health; the Vanderbilt University School of Nursing, Nashville, Tennessee; the Skidmore College School of Nursing, Saratoga Springs, New York; the Central Medical School for Native Medical Students, Suva, Fiji; the State Hygienic Institute, Budapest, Hungary; and the State Institute and School of Hygiene, Warsaw, Poland. Opportunities were offered for the training of health workers in connection with health demonstrations and through travel. The number of persons studying under public health fellowships in 1934 was 218 (including nurse visitors). As an essential outgrowth of field activities a large amount of research work was done during the year by members of the public health staff. Direct references to 116 articles appearing in the medical press and reporting the results of this research and a detailed description of all public health work, with data on finances and geographical distribution, are published in a separate report for 1934 of the International Health Division of The Rockefeller Foundation, which is available on request. The account which follows is a summary of that report.

The Public Health Program

The public health work carried out by The Rockefeller Foundation continues to be a composite of research and application. Research

work and applied knowledge must advance hand in hand; either alone may be sterile; joined, the possibilities of achievement in the field of public health are greatly increased.

The trend of Foundation public health work has been in the direction of increased emphasis on investigation of the needs of representative communities and of obscure points in the prevention of disease. Intensive use has been made of central laboratories located either in the United States or outside the country. Each year there is a closer interweaving of the interests of laboratory work and field activities, and each year definite concrete problems are more clearly outlined.

The pioneer workers in public health aimed at the control of infectious diseases by quarantine and terminal disinfection. They strove to improve sanitation by attending to complaints of nuisances. For the building up of mortality statistics, which after all constitute the index of progress, in some countries the health officer rather than the attending physician was relied upon to declare the cause of death. In general, programs centered on interest in the environment rather than on interest in the individual, and of necessity there was an attempt to do many different things at one and the same time, in the light of the knowledge then available.

In many countries progress has been made through the introduction of competent specialized personnel. In this work the Foundation has played a rôle through its fellowship program. All systems are built around persons and the provision of well trained leaders is the first step toward the application of modern procedures in public health.

There have been established, in some cases with Foundation aid, at strategic centers throughout the world, well equipped schools of public health and schools of public health nursing. Experimental work has led to carefully controlled public health demonstrations illustrating the advantages of a more efficient public health service. In the development of a reawakened universal interest in the improvement of public health the Foundation has been of assistance through its programs of aid to state and local health services, and support to all the main branches of public health education, and through its long continued activities in the investigation and control of certain specific diseases.

The activities with regard to state and local health services and public health education are by no means endless. It is possible that certain definite objectives well ahead of present standards may be gained within relatively few years. However, fruitful study and effective control of

specific diseases involve a program that can progress *pari passu* with our increase in knowledge of the history and methods of spread of various diseases.

In the selection of areas in which to investigate specific diseases the only question asked has been: what country or what area offers conditions most favorable to the study of any given problem? Where can malaria, hookworm disease, undulant fever, scarlet fever, or yellow fever be studied in a manner that is most likely to lead to the solution of some of the problems associated with these diseases? The study of hookworm disease began in the United States and was extended to many parts of the world. The study of yellow fever was begun by a United States Army commission in Cuba. From there the work spread to important seaports of the new world and at this point there followed a period of intensive investigation in Africa and more recently in the interior of Brazil.

Progress in Yellow Fever Control

In the fight against yellow fever it seems likely that a stage has now been reached where the old-time devastating epidemics are a thing of the past whose recurrence can be controlled. Long ago the predilection of recognized yellow fever for dogging the pathways of commerce was

clearly recognized. The chief centers of havoc were the tropical seaports and river ports. In temperate zones yellow fever appeared as a warm weather epidemic in cities visited by infected ships. The outstanding epidemics of the past occurred when wooden sailing ships carried crews part of whom were suffering from yellow fever and at the same time not only transported the yellow fever mosquito but also gave it a chance to breed in the ships' water casks.

As soon as there was clear recognition of the relationship of the mosquito to yellow fever, both in seaports and on ships, as the result of the brilliant work by Reed and his U. S. Army associates in 1900, a relentless war was waged upon the yellow fever mosquito. This war broke the chain of infection between the mosquito and man, and world seaports no longer had to dread recurrent waves of yellow fever. The entire campaign against yellow fever in the early days centered on an attack against the stegomyia mosquito (*Aedes aegypti*), recognized as the carrier of that disease.

A further advance in the war against yellow fever was initiated by an attempt to determine the extent and nature of the yellow fever of Africa, where the disease is believed to have originated. The Rockefeller Foundation, from July 1925 to April 1934, maintained a field

laboratory for yellow fever at Lagos, Nigeria. As a result of work originating in this laboratory it was confirmed that the black races of Africa had a type of yellow fever in which only a very small proportion of the infected persons suffered severe, clinically recognizable attacks. It was recognized that the widespread immunity of natives was probably due to the presence of yellow fever in a mild form. A clear understanding was obtained of the fact that yellow fever occurs not only in the severe form, which has long been known, but also in all degrees of mildness. These milder cases could not be recognized until suitable diagnostic laboratory tests had been elaborated. It has now become clear that the great majority of cases, among both black and white races, may be quite mild, but that they nevertheless give immunity to the person attacked. Moreover, these mild cases are capable of infecting the mosquito, and the mosquito in turn can infect additional persons.

There was for a time unavoidable confusion with other affections which sometimes take on the appearance of yellow fever. Much patient investigative work was done in order gradually to rule out diseases resembling yellow fever.

Formerly it was not a simple matter to diagnose correctly mild cases of yellow fever, and it is still difficult to do so during the illness. The

availability of the mouse for use in tests for acquired immunity has now made it a comparatively simple matter to ascertain whether a person has had yellow fever or not. If he has had the disease at any time, a small sample of his blood will protect a mouse against yellow fever.

This so-called protection test has been applied not only to retrospective diagnosis, but also to the larger task of discovering areas in which yellow fever has occurred or is likely to occur. By taking random blood samples from the population it is possible to ascertain whether yellow fever has in recent times been present within that community. By limiting the test to young people and children, some notion can be gained as to how long ago yellow fever was present. The protection tests are therefore somewhat similar in a vague way to the astronomical calculations which enable astronomers to locate hitherto undiscovered heavenly bodies.

As a general result of these technical methods, which we owe to the laboratory, it has now become evident that there are two great endemic areas of yellow fever in the world. The boundaries of these areas have been approximately established. One of them occurs in Africa and extends from Senegal in West Africa to the upper reaches of the Nile. The other occurs in South America, and occupies practically the whole of

the Amazon Valley, reaching for short distances into other watersheds. Thus for the first time in history we can envisage with a certain degree of exactness just how large these endemic regions are and exactly where they are located. It is something to know where we must look for the enemy. To continue to the end the hitherto brilliantly successful campaign against yellow fever by tracking the disease to its lair in the jungle constitutes an inspiring challenge to workers in tropical medicine.

Jungle Yellow Fever

One ready rule in the early days was to ascertain first of all whether the stegomyia mosquito was present in a given area where men were suffering from yellow fever. If that mosquito was not present, yellow fever was ruled out. It now appears that this rule is not universally applicable. It has come to be recognized that yellow fever may exist, not only in a mild and almost unrecognizable form, but also in forms not associated with its recognized carrier, the stegomyia mosquito. The disease is transmitted and perpetuated in certain endemic areas by vectors different from the single one (stegomyia mosquito) encountered in Habana, Panama, and epidemic cities in general. Within these endemic areas, large parts of which are covered by jungle,

there occurs yellow fever not carried by that mosquito and therefore offering to the scientific investigator new and as yet unsolved problems.

Among other things this means that in these areas the control of yellow fever through the customary attack on the stegomyia mosquito is inapplicable. It does not, however, mean that former methods of control were erroneous, because in coastal areas and in the large cities which were formerly threatened by yellow fever the disease is carried by the stegomyia, and measures against this mosquito continue to be both cogent and necessary.

Since the strict correlation between the yellow fever mosquito—*Aedes aegypti*, or stegomyia—and yellow fever can no longer be maintained, we now have some inkling of the reason why complete elimination of yellow fever from the large cities through destruction of mosquitoes was not necessarily followed by the disappearance of the disease from tributary rural areas. These rural areas themselves constitute a new and different problem. As the result of antistegomyia measures the disease has disappeared so far as urban outbreaks are concerned, and the next step will be to concentrate on the comparatively unknown jungle yellow fever.

The first clear outbreak of yellow fever without stegomyia occurred in the state of Espirito

Santo, Brazil, on March 3, 1932. The theory that yellow fever could be controlled by work in the cities alone received another blow when about the middle of March in that year there were discovered in Santa Cruz de la Sierra, Bolivia, two suspected yellow fever cases. Liver tissues from one of them, examined at the Rio de Janeiro laboratory on April 27, resulted in a confirmation of the clinical diagnosis. This entirely unforeseen outbreak of the disease took place in territory hundreds of leagues away from all known recent foci of the disease. The Santa Cruz outbreak was related to the general endemicity of the Amazon Valley.

Later, a further outbreak was observed in the comparatively nearby small village of San Ramón, where yellow fever virus was maintained for many months in the complete absence of stegomyia. Then the presence of yellow fever in the famous emerald mine district at Muzo, Colombia, was clearly demonstrated. Here, too, there was at first confusion because no stegomyia were found. A climax in the epidemiology of the disease was reached in April 1934, when an unusually rapid and fatal form of yellow fever attacked adult field laborers in a sparsely populated rural district at Coronel Ponce, 180 kilometers from Cuyabá, the capital of Matto Grosso, Brazil. This area, which lies just between

the valley of the Amazon and the valley of the River Plate, is quite free from stegomyia.

The factors responsible for the persistent endemicity of jungle yellow fever are as yet unknown.

Keeping Yellow Fever Down

By means of precautionary measures and intensive antimosquito work and through governmental quarantine restrictions, yellow fever has been kept successfully away from most of its old haunts in the Americas, despite the fact that the danger of bringing the disease from an endemic area into one not infected has recently been increased by the greater speed of travel. This new danger has been counteracted by rigid mosquito control work in some of the tropical cities visited by airplanes and ships, and by the International Sanitary Convention for Aerial Navigation of the Office International d'Hygiène Publique which ten nations have already ratified.

An elaborate system of control has for years been in operation in Brazil. In this country The Rockefeller Foundation has been cooperating with the Government of Brazil in yellow fever control work. The yellow fever laboratory formerly situated in Bahia, Brazil, is now being removed to Rio de Janeiro. In this city a laboratory and office building on a Federal site will constitute

the new headquarters of the yellow fever activities, with regard to both control and research work. The new quarters provide adequate housing for the laboratory and insure close cooperation between field work and central laboratory work.

The control work in Brazil takes the form first of all of maintaining a widespread network of antilarval services. This work is done by the Brazilian Government, which, by means of sanitary laws and regulations enforced by an adequate corps of inspectors and trained workers, keeps the stegomyia index either at zero or at such a low point that there is no danger. These antilarval services are in operation in many parts of the country, and are increased or reduced according to the state of the indices and according to the general plan of campaign. Where danger threatens, that is, where a case of yellow fever has been discovered or where several cases appear, the work is proportionately strengthened. On the other hand, when the disease has been brought completely under control, as it has been, for example, today in Rio de Janeiro, where an epidemic of yellow fever with several hundred fatalities occurred in 1929, forces are reduced. The stegomyia index in Rio de Janeiro has now for some time been maintained at zero. There have been no new cases of yellow fever, and the

antilarval service has been reduced to 1,000 men.

The yellow fever service is concentrated principally between Para and Rio de Janeiro. In this region all the coastal cities, and practically every village of 1,000 inhabitants or more, are under control. In places the control service extends hundreds of miles inland and reaches isolated farmhouses, as in the São Gonçalo area of Pernambuco. The coastal cities usually have stegomyia house indices close to zero, commonly around 0.1 per cent. These remarkably low indices, unattainable under former methods, show that *Aedes aegypti* has been almost exterminated locally.

Such surprising results have been made possible by (1) the oiling of all foci discovered, thus compelling the scrubbing of the offending containers and the destruction or removal of the ova; (2) a presidential decree empowering the yellow fever service to levy fines on householders for permitting mosquito breeding; (3) the establishment of "capture-squads" to check up on the adequacy of larva control by searching for adult mosquitoes. There are also revision squads that search for larvae as a check on the regular inspectors. If larvae or adult mosquitoes are found, an intensive search is made for the producing focus which supplied the adult stegomyia that laid the eggs from which the larvae

hatched. If the focus is found, it is destroyed and, if possible, permanently eliminated.

Another branch of the control service concerns the collection of liver specimens from fatal cases of brief febrile diseases. This service has been greatly aided by the invention and general adoption of an instrument known as the viscerotome, which facilitates the collection of liver specimens. All specimens are shipped to the central laboratory, where scientific diagnosis is made. In this way there is an additional check on the possible occurrence of yellow fever cases in interior parts of the country. When no infected livers are found in any given area, the viscerotome posts maintained in that area are reduced. These viscerotome stations are, so to speak, the outposts which are continually on the watch for fatal cases of yellow fever, so that when the disease occurs, prompt control measures can be taken.

Although an outstanding recent development has been the discovery that yellow fever may be benign in character, it should not be concluded from this that all the strains of yellow fever virus are benign, or that the disease is slowly dying out by becoming attenuated. This is contradicted by the simple fact that occasional fatal cases appear in regions where the protection tests indicate the presence of yellow fever. These fatal cases might never be discovered except for the

viscerotome procedure of routine collection of liver specimens from all persons who die suddenly from febrile diseases. Moreover, the light cases spread yellow fever and keep it alive in areas from which it may be thought to have been eradicated by means of control measures.

Before the partial perfection of a vaccination method, first applied to human beings on May 13, 1931, one of the tragedies of yellow fever work was the comparatively great danger to laboratory workers and men engaged directly in the fight against yellow fever. For a while, scarcely a year passed in which it was not necessary to report the loss of a heroic life at one or another sector of the firing line. Fortunately this danger seems to have been ended by the timely application of a method of vaccination which consists in administering modified virus accompanied by immune serum. The greatest and most fitting honor that can be paid to the unobtrusive gallantry of the famous pioneers of modern science who worked with yellow fever in the pre-vaccination period lies in the untiring efforts of their successors to perfect the work which they began.

Intensive laboratory activity is now in progress in an effort to improve the present method of vaccination so that it can be applied to larger populations. In the laboratory of The Rockefeller

Foundation no vaccination has been done without the use of human immune serum. Up to the present, although limited in application, this is still considered to be the only entirely safe method of vaccination.

Vaccination, even if extended, will in all likelihood continue to be only one line of defense. Of equal importance is the vigilant warfare directed at the eradication of the yellow fever mosquito. Above all there must continue the ceaseless efforts to penetrate farther into the mysteries of yellow fever, especially when, in its ultimate fastnesses, we are confronted with the disease in the absence of *Stegomyia* mosquitoes.

Malaria Work

The yellow fever problem, complicated though it is, does not involve the many-sided type of control work required by malaria. Yellow fever does not completely encircle the globe. It is not as common as malaria. Malaria is incontrovertibly carried by mosquitoes, but the malaria mosquito belongs to the genus of *Anopheles*, many different species of which are capable of transmitting the disease.

These species of malaria-carrying *Anopheles* vary greatly in living habits, in the kind of environment they prefer, and in the type of breeding places they select. The hatching of

mosquito eggs, however, always requires a certain amount of moisture, and the age-old association between moist places, swamps, or marshes, and malaria is therefore well founded.

The Rockefeller Foundation engaged in anti-malaria activities in order to meet a problem which, next to that of hookworm disease, must be reckoned with in any program aiming at a complete health service in tropical or temperate climates. Like hookworm disease, malaria is a debilitating disease. Under normal conditions, provided quinine is available, malaria incapacitates rather than kills. The use of quinine dates back several hundred years and has done yeoman service in preventing loss of lives. But it requires more than a drug to wipe out the source of malaria, which, when all is said and done, is the *Anopheles* mosquito.

The antimalaria activities in which The Rockefeller Foundation has participated have therefore always taken the form of antimosquito work. These activities have in each case been based upon preliminary surveys of the area in which it was sought to control malaria. These surveys and the experiments based upon them have tended only to emphasize the variety of means which must be employed if malaria is to be successfully eliminated from any given area.

No attempts have been made in the activities

of The Rockefeller Foundation to banish or eliminate malaria altogether from any country or state. Such a task involves united effort on the part of all communities, seconded by government regulation, so that the work of attacking the malaria mosquito, by whatever means or combination of means has proved to be most efficacious for the areas in question, can go on year after year until the mosquito index can be maintained indefinitely at zero.

In three states in the United States, four countries in Central America, eight in Europe, three in South America, in one country in Asia, and in the three insular domains of Puerto Rico, Jamaica, and the Philippine Islands, The Rockefeller Foundation, during 1934, aided local or central authorities in attacking malaria. For a more detailed description of this work the reader is referred to the separately published report of the work of the International Health Division of The Rockefeller Foundation.

The account given in the next section serves merely as an illustration of how the problem of malaria has been attacked and is being attacked today by modern methods in one country, Italy, where the Foundation has been active for ten years in an auxiliary capacity in connection with a nation-wide malaria campaign of which the headquarters have just been transferred to

the newly opened government Institute of Public Health.

Malaria in Italy

Malaria always has been and still is one of the grave health problems of Italy. It is the chief barrier which has prevented the free movement of dense northern agricultural populations toward the rich deltas and sparsely inhabited plains of Sardinia and the south. It is malaria that has until recently kept Rome itself from exploiting the well watered and fertile Campagna at its gates, compelling the metropolis to obtain its milk from Milan and its vegetables from Naples.

Organized warfare on malaria with emphasis on drainage problems goes back to Roman times. With no definite knowledge of the rôle played by mosquitoes, malaria has for centuries been associated by Romans and Italians with swamps and standing water. Large scale drainage operations are associated with the names of emperors and popes, of local rulers during the Renaissance, and of kings and prime ministers down to the present time.

There is however a sound biological reason why drainage alone should have failed to eradicate malaria. The insect responsible for the transmission of malaria in Italy, as well as in the rest of Europe, is *Anopheles maculipennis*, a

mosquito at home in the cold waters of England, the Netherlands, and Germany. In regions as far south as the Mediterranean this mosquito seeks out the coldest waters available. It thrives along the quiet edges of flowing streams and canals. Putting water into motion by drainage is not necessarily a deterrent to the particular mosquito responsible for malaria in Italy.

It should be clearly understood that failure to eradicate the mosquito is not a condemnation of drainage schemes, which, aside from the incidental effect upon the problem of mosquito control, are essential projects in land reclamation with important hygienic and agricultural objectives. Economically and from the point of view of public welfare, land reclamation is of the greatest value in countries where the pressure of the agricultural population is constant.

The Tiber delta, drained with pumps since 1889, remained highly malarious and 90 per cent uncultivated for more than thirty years thereafter. It was this situation which in the main led to the adoption of state quinine distribution in 1902. The state manufactures its own quinine and sells it at a small profit, devoting the proceeds to malaria control and to opening credits in favor of very poor communities to enable them to purchase quinine. The effect of the wide use of quinine on the severity of malaria has been

marked and incontrovertible. The death rate from that disease has rapidly decreased. Cases of pernicious malaria are far less frequent now than they were formerly. However, the effect on incidence has been almost negligible. There has been no demonstrable quantitative diminution in malaria for many years past. Quinine may be depended upon to mitigate the severity of the symptoms and to cut short the acute paroxysms; it cannot prevent the transmission of the infection.

Far-sighted Italians in recent years have come to realize that considerably more attention must be paid to the anopheline mosquito. Numerous surveys and field studies have been undertaken. Professor Fermi became an enthusiastic protagonist of larva control as far back as 1912, and his experiments, followed by those of Grassi and Sella in the Tiber delta dating from 1917, aroused public interest and contributed greatly to our knowledge of malaria epidemiology and anopheline behavior. In 1925 the Public Health Department of Italy, aided by The Rockefeller Foundation, founded the Malaria Experiment Station in Rome with field branches all over malarious Italy. Out of studies made by this station has grown the present well organized and nation-wide program of antimosquito work.

Four additional antimosquito measures not

previously applied in Italy, or anywhere else in Europe, have been adopted in recent years with considerable success. One of these is the introduction of *Gambusia*, a small minnow-like fish which eats the mosquito larvae. These small fishes thrive excellently in certain southern waters. If they are allowed to multiply uninterruptedly, inlets fairly teem with them. No horizontal vegetation, however thick, can protect anopheline larvae from these fishes which constantly patrol every square inch of water surface. In an area of about eight square miles which has been under observation for five years in Istria, malaria has been practically done away with and the only measure employed has been *Gambusia* distribution.

Then engineers, following the practice adopted in Panama, made small concrete channels in the flat bottoms of drainage canals. These channels keep the water moving. They are easily cleaned, and allow minnows to penetrate into every ramification of the system of ditches. Such channels, with the aid of electric pumps and the cooperation of *Gambusia*, have been sufficient in themselves to eliminate anopheline breeding from the area surrounding Ostia in the Tiber delta and to abolish malaria in this region.

There are many communities where, because malaria is caused by river-breeding *Anopheles*,

drainage is not applicable and the use of *Gambusia* is unsuccessful. Here Paris green has proved to be of the greatest value. A very small quantity of Paris green mixed with a large quantity of road dust or similar diluent is spread thinly on the water by means of a blowing apparatus or from an airplane. The Paris green is not harmful to any form of life except to the larvae of the anopheline mosquito, which rise to the surface of the water to breathe and which are so small that even a few specks of Paris green dust are sufficient to kill them. In southern Italy about 88 per cent of the farmers live under urban conditions. They live in towns and go back and forth to their work each day. Around these many scattered population centers it has become standard practice in Italy to spread Paris green on all anopheline breeding places within one and one-half miles of the center. Anopheline breeding has been made a nuisance under the law and landowners are responsible for eliminating it within one and one-half miles of inhabited centers. This new use of Paris green is one of the major weapons in the fight against the malaria mosquito.

The fourth method is the screening of houses. Mosquito proofing is by no means a new thing in Italy, but formerly it was limited largely to certain kinds of government buildings, principally

railway employees' dwellings in malarious zones. In 1928 the Government of Rome made it obligatory upon all houseowners of the Roman Campagna to provide screening. Education in the use and repair of screens has been introduced in the schools.

An important advance in Italy in the war on malaria was the so-called Law of Mussolini, passed in 1928, providing rules and regulations in connection with the new drainage districts or land reclamation projects which the Italian Government has undertaken. The provisions include the screening of all houses, the elimination of anopheline breeding, avoidance of every malaria hazard, as well as proper medical assistance and hospital facilities.

The chief single agency in malaria control has been the Provincial Malaria Committee. This committee is composed of representatives of the Health Department, the Department of Agriculture, and a number of other agencies including the Red Cross. Its business is to coordinate all available powers and resources in order to form a united front against malaria, which more than any other disease is the enemy of the farmer, restricting his movements, paralyzing his efforts, and lowering his standard of living.

Over and above the practical results obtained in malaria work in Italy there has been at least

one major contribution in malaria research. The intensive study devoted to *Anopheles maculipennis* has led to the discovery that this species is composed of at least six varieties of mosquitoes, alike in form and shape but different in habits and environmental preferences. These varieties can be distinguished one from the other only by the circumstance that they lay different kinds of eggs. A minute study has been made of these mosquito eggs which are now used as the basis of the new classification. This biological difference in the varieties of *Anopheles maculipennis*, the malaria mosquito of Europe, has finally thrown light on the erratic distribution of malaria in Europe which heretofore had been a puzzle to malariologists. Certain varieties of *Anopheles maculipennis* prefer to feed on animals, and as agriculture has advanced they have become entirely zoophilic. Thus, although the malaria mosquito is widespread in Europe, its presence does not necessarily mean the presence of malaria. Antilarval work enters a new phase by this discovery, which enables malariologists to give increased and more intelligent attention to the different varieties of *Anopheles maculipennis*. It is necessary to pay attention not only to the different species of *Anopheles*, several dozens of which may transmit malaria, but in one case at least, that of the *Anopheles maculipennis*



Photograph Excised Here

Squad of inspectors on the staff of the Brazilian Yellow Fever Service en route for one of their regular house-to-house mosquito surveys in the rural areas of their district.



Photograph Excised Here

Breeding of the malaria mosquito is being controlled in the coastal swamps near Kingston, Jamaica, by the construction of tidal ditches of this type, which receive the drainage from cross ditches. Careful inspection has shown that anophelines are not breeding in these ditches.

of Europe, to six separate non-interbreeding varieties, each presenting problems of its own.

Hookworm Disease and Other Diseases

Hookworm disease is also called uncinariasis or ancylostomiasis. Neither of these two scientific names is very well known. For that matter, the disease itself was comparatively unknown until an extensive campaign was undertaken from 1910 to 1914 by the Rockefeller Sanitary Commission, which instituted antihookworm work in the southern states of the United States and also investigated the disease in various other countries throughout the wide tropical and semi-tropical belt encircling the globe where hookworm disease exists.

When the work began in 1910, knowledge of the disease was confined to a small minority of physicians. Most laymen regarded it as a myth. By the time the work of the commission was finished, the medical profession and the public recognized the prevalence of hookworm disease and regarded its cure and prevention as an essential part of public health work in the South. The purpose for which the fund had been given and the commission created was the cure and prevention of hookworm disease in the states where it had become a menace. It was assumed at the start that the commission itself should not



Photograph Excised Here

A hookworm treatment clinic at the local health station in Minatitlan, Mexico.



Photograph Excised Here

Car of the travelling x-ray unit of the Jamaica Tuberculosis Commission, which visits small towns and rural areas of the island to hold tuberculosis clinics, make house-to-house surveys, and give tuberculin tests to school children.

attempt the task of complete eradication. The problem was one for the states. Cooperative agreements were entered into with the departments of health in a number of southern states. The aim was to bring about measurable reduction in the degree of infection in heavily infected areas, and to make at least one complete community demonstration in each significant area. It was hoped, if possible, to help lay the foundation for a state and local health service that should in the end take care of hookworm infection and all other preventable diseases.

An enormous amount of work was done in hookworm disease by this commission. More than 500,000 cases were given treatment. In 1914 its work was taken over by The Rockefeller Foundation which launched an international public health program aimed at the increase and spread of knowledge, not only of hookworm disease but also of other public health problems. The publicity centering around early hookworm campaigns had made many communities public health conscious. It put them into the correct frame of mind for doing something also against malaria and other widespread diseases. It served as an impulse to many types of health welfare work. Above all it stimulated the growing demand for better rural health departments.

Two illustrations of how hookworm work has

successfully broadened out into more general public health work are afforded by Colombia, South America, and Ceylon. In Colombia, the health education efforts stimulated by hookworm campaigns several years ago reached such vast numbers of people that there resulted a distinct change of attitude toward public health in general. The machinery developed for carrying on a hookworm campaign was expanded into a section of rural sanitation. Along with hookworm disease treatments, a great deal of emphasis was placed on sanitation and much time and energy were spent in developing an efficient sanitary inspection service in rural areas, particularly in coffee-producing areas. The new broad point of view is reflected in the health periodical, *Salud y Sanidad*, published by the Rural Health Section of the National Public Health Service. This publication, which originally dealt exclusively with hookworm disease, has become a periodical disseminating information on a wide variety of public health problems. It is much used as a supplementary text in the schools. Through its free distribution there is established an effective link between the central government and the scattered population which the government aims to serve in matters pertaining to health and sanitation.

In Ceylon, judged on its own merits and with-

out reference to its general influence, the hookworm campaign might be considered disappointing in that the disease still remains one of the important causes of death. However, hookworm control work in Ceylon has had a powerful effect in Eastern Countries in demonstrating in clear-cut fashion that it is possible to do successful health work of a modern type throughout the Orient. The disease itself has not yet been completely controlled, but in its connection with other diseases many human lives have been saved because of the new health habits and procedures such as health surveys initiated in the hookworm work. Throughout Ceylon the health units, which were an outgrowth of the hookworm campaigns, are making steady progress and exerting their influence not only in this island but in sections of the mainland of India and in other countries of Asia. The health units of Ceylon have become visiting centers much studied by health officials whose work lies in these areas and who obtain inspiration from the cumulative and steady progress of the Ceylonese public health work developed from the early hookworm activities.

In most countries where hookworm campaigns have at one time or another been carried on, this work has become merged with the general public health program. Hookworm activities

constitute one unit in the broader type of effort that today characterizes government health services. In a sense, therefore, the support which The Rockefeller Foundation now gives to local health demonstrations may be considered an extension of the former hookworm disease work.

An effort to measure the lasting effects of one of the early hookworm campaigns was recently made in Mississippi when the Department of Preventive Medicine and Public Health of Vanderbilt University School of Medicine inaugurated a check-up of the present status of hookworm disease in fifty-two counties in Mississippi. It was found that from 1910 to 1933 the incidence of hookworm infection had fallen from 53.1 per cent to 19.6 per cent. What is more important, the degree of severity has been diminished so that cases of hookworm infection which still occur are not the serious menace to health presented by unchecked hookworm disease.

Many articles dealing with research work in hookworm disease, especially with the investigation of hookworm anemia and with the unceasing search for a more effective vermifuge, continue to be published. The more extensive separate report of the work of The International Health Division of The Rockefeller Foundation for 1934, to which reference has already been

made, contains brief descriptions and citations of twenty-five articles on hookworm disease published by members of the Foundation staff or under Foundation auspices.

Other diseases in which the Foundation has supported studies during 1934 are yaws, tuberculosis, diphtheria, smallpox, and undulant fever. The work in yaws centers chiefly in Jamaica, where investigations dealing with control measures and epidemiology are going forward. Definite plans of control for use in endemic areas have been formulated and are in operation. Special studies have been published dealing with a possible insect vector of yaws, a small fly, *Hippelates pallipes*.

Laboratory headquarters for tuberculosis work receiving Foundation support are situated in Cornell University Medical College. Studies in two rural areas in the United States have been made, and localized campaigns are under way in Jamaica and Austria. Chief operations center in Jamaica where the government has been active in promoting tuberculosis work. The Foundation has been of aid in supplying an x-ray laboratory and in supporting field studies, with the object of learning more of the prevalence and epidemiology of tuberculosis in Jamaica. Throughout the tuberculosis work the emphasis has been on epidemiology.

An important study in diphtheria immunization was aided in the district of Eisenstadt, Austria. Studies on undulant fever which have for a number of years been conducted with Foundation aid in France are now drawing to a close. Additional miscellaneous studies were published during 1934 in connection with milk sickness and intestinal amebiasis.

Public Health Work in the United States

Rockefeller funds for the promotion of public health first became available in 1910 for the southern United States through the agency of the Rockefeller Sanitary Commission, whose work was taken over, continued, and expanded by The Rockefeller Foundation in 1914. The scope of the original program was broadened to include not only continued intensive work against specific diseases such as hookworm and malaria, but also aid toward the logical development of national, state, and local health services, national schools of public health, and other facilities for the training of public health personnel. This broadening program which has been in operation since 1914 has to some degree reached forty-four of the forty-eight states.

In the northeastern section of the United States the township is the principal unit of local government. In the remainder of the country,

generally speaking, the recognized unit is the county. All of the states have state health departments, usually with full-time health officers and a number of separate services to take care of state health needs.

In the northern and eastern states, educational, health, and other community services have advanced farther than in the other sections of the country. Health services have been developed for a long period on a part-time basis. The township governmental machinery has not easily been displaced in favor of the full-time basis found practicable in areas where the county is the health unit. In these regions Foundation aid has therefore been given almost exclusively toward the development of state health services.

In the remainder of the country, representing three-fourths of the states, aid has been given not only for the development of state health services, but also for the development of county or district health services. Concentration of effort in this direction has been greatest in the states south of Pennsylvania and extending from the Mississippi Valley to the Atlantic Ocean.

Although health services are still far from adequate, striking progress has been made in the past twenty-five years. This progress is reflected in the increased expenditures of southern state

departments of health which now spend from ten to twenty-five times as much for their work as they did in 1910.

All the states have similar health problems, but the South, because of climatic conditions and the presence of more than a single race, has additional health problems peculiar to the region. Hookworm disease and malaria are more prevalent there. Mortality among Negroes from typhoid fever, tuberculosis, and venereal disease is relatively high. There are other regional variations in diseases, but the objective in each state has been the development of an efficient health service, both state and local, which would deal with the special problems of each area.

At the end of 1933 approximately 524 county health departments were in operation in all states. At one time or another the Foundation has contributed financially toward 451 of them.

In the United States there are a number of universities offering graduate courses in public health. In two of them special schools have been endowed by The Rockefeller Foundation: the Johns Hopkins School of Hygiene and Public Health and the Harvard University School of Public Health. In addition to endowing these schools, the Foundation has aided approximately 400 health workers in the United States to gain professional training in public health by granting

fellowships. The steady introduction of trained personnel into the ranks of health workers is gradually developing leadership and exerting a wholesome influence on public opinion.

The following table shows the extent and distribution of aid to central and local health services in the United States during 1934:

FOUNDATION AID TO STATE AND LOCAL HEALTH SERVICES IN THE UNITED STATES, 1934

	Num- ber of States	Total Budget 1934	Foundation Aid	Percentage of Foundation Aid
Central Administration.	15	\$107,260.94	\$30,032.77	<i>Per cent</i> 27.9
Divisions of Vital Sta- tistics.....	5	57,102.01	7,085.00	12.4
Divisions of Epidemi- ology.....	13	99,988.34	31,842.50	31.8
Divisions of Public Health Laboratories..	3	17,638.73	2,645.83	15.0
Divisions of Sanitary Engineering.....	4	24,950.00	8,125.00	32.5
Local Health Services..	18	588,192.91	88,945.96	15.1
TOTAL.....		\$895,132.93	\$168,680.06	18.8

Extensive studies have been conducted with regard to hookworm disease, covering effective treatment and measures for its prevention. Similar studies have been made on malaria, tuberculosis, dysentery, typhoid fever, and other health problems.

The public health nurse and the sanitary engineer have been more extensively employed in North America than elsewhere. A practicable routine type of state and local health service has been developed and is taking root, especially in the rural areas.

A high point in the year was the discontinuance as of November 1, 1934, of Foundation aid to the routine type of rural health unit in the United States. The closing out of Foundation assistance was made possible by a Federal appropriation of \$1,000,000 to the United States Public Health Service. The year 1934, therefore, marks the end of necessary assistance to strictly routine rural health units. The value of these units has been amply demonstrated, and sufficient progress has been made to assure the continuance of this work without special assistance. The support given by The Rockefeller Foundation since it began this work amounts to over \$2,900,000. This aid has helped to establish the policy of the employment of trained personnel and the exercise of efficient central control over local or county health work.

Public Health in Europe

The program of the International Health Division of The Rockefeller Foundation envisages three distinct and yet closely interwoven fields

of action: state and local health services, public health education, and the investigation and control of specific diseases. In studying the European field it is of interest to determine to what extent this program conforms to the public health needs of Europe.

The countries of Europe, exclusive of Soviet Russia, may be classified into two groups. One group, the more advanced, covers a fairly homogeneous area in the northwestern sector. The other, relatively less advanced, includes southern and eastern countries, and may be called the southeast group. It is easy to identify the first group as comprising countries that lie to the north of the Pyrenees, the Alps, and the Carpathian Mountains and to the west of the pre-war Russian Empire. Modern public health may be said to have had its greatest triumphs in this group of countries. In this region persistent efforts have been made to provide protection from disease. In the southeastern countries, efforts to promote the health and well-being of the population are more recent in origin and are as yet in a less fully developed stage.

Levels of public health attainment are difficult to measure. There is no wholly adequate means of evaluation, but an approximation may be reached by using as yardsticks the infant, tuberculosis, and general mortality rates. This has

been done for the two groups of countries mentioned above, and the results are shown in the table on page 60.

Except for Finland not a single country in the southeast group attains the average of the northwest group by any of the three methods of measurement; nor does any member of the latter group with the exception of France in tuberculosis have a rate as high as the average of the southeast group. Although there are individual countries that are slightly out of line, the grouping by and large seems to be justified.

In determining to what extent the public health program of The Rockefeller Foundation conforms to the health needs of Europe it is necessary to keep in mind the fact that the health problems of these two categories of countries are essentially different.

The administrative machinery for the application of public health in the southeast countries following the world war was outworn, outmoded, and ineffective. It was obvious that the Foundation could play an important rôle in the southeast countries through assistance in the training of competent specialized personnel through its fellowship program and through the establishment of schools of hygiene and schools of nursing, as well as through demonstrations illustrating the operation of modern state and

MORTALITY RATES IN VARIOUS COUNTRIES OF EUROPE, 1932*

The Northwest Countries				Southern and Eastern Europe			
Country	Infant	Tuberculosis	General	Country	Infant	Tuberculosis	General
Belgium	87	82.7	13.2	Austria	106	130.0	13.9
Denmark	72	68.6	11.0	Bulgaria	150		16.3
England & Wales	65	83.7	12.0	Czechoslovakia	138	150.0	14.1
Scotland	86	84.4	13.5	Estonia	97	187.0	14.8
France	76	152.0	15.8	Finland	71	211.0	12.6
Germany	79	78.7	10.8	Greece	129	162.0	18.0
Irish Free State	72	124.0	14.5	Hungary	184	194.0	17.9
North Ireland	83	112.0	14.1	Italy	110	104.0	14.7
Norway	47	136.0	10.6	Latvia	89		13.7
Netherlands	46	64.4	9.0	Lithuania	167	112.0	15.2
Saar	96	90.6	9.8	Poland	143	151.0	15.0
Sweden	51	116.0	11.6	Portugal	146	168.0	17.1
Switzerland	51	116.0	12.1	Rumania	185	212.0	21.7
				Spain	112	117.0	16.3
				Yugoslavia	167		19.2
Average rate	72	97.4	12.38	Average rate	139.4	143.8	16.25

* Figures for each country from League of Nations Annual Epidemiological Report for the year 1932. Geneva, 1934.

local health services. With these objectives in mind the Foundation has worked in no fewer than twelve of the fifteen countries comprising this group.

In the northwest group of countries there has been less need for administrative reform or for health personnel training, with the result that the Foundation has concerned itself in this respect with only four of the thirteen countries involved.

The part of the Foundation program which concerns the control of specific diseases is applied in areas the selection of which is determined by considerations of an entirely different nature from those that pertain to public health education and state and local health services. For the study of a given problem dealing with certain aspects of malaria, undulant fever, scarlet fever, or whatever the particular disease in question may be, the only factor taken into account is whether conditions in the area selected are favorable for the particular study in hand.

Included in the assistance given to European public health in many fields are three contributions which appear to be of outstanding significance. The first of these deals with demonstrations in the application of health work through health centers and local health departments. Such demonstrations have shown that a reason-

ably complete program of public health can be applied without duplication or overlapping at a cost which the state and local communities are well able to meet. Another contribution has been the demonstration of the value of the public health nurse in the application of health work. The public health nurse is a recent acquisition in Europe and the Foundation has played a leading part in making her work better known and more highly valued. Finally, successful demonstrations in the control of malaria by anti-larval measures have made available important new knowledge in connection with the epidemiology of this disease.

Further work is needed in order to increase the efficacy of the health center mechanism. As we know it today, the health center tends to develop its public health activities in too isolated a fashion. For more complete usefulness it must be coordinated with other essential services. This, too, will to some extent obviate the constant danger of crystallization. Health centers to be effective must be dynamic and constantly improving. Continuous study and review of health center problems is essential toward attaining the full measure of benefit which this valuable item in the program of health activities is able to furnish.

In order to give a clearer picture of just which

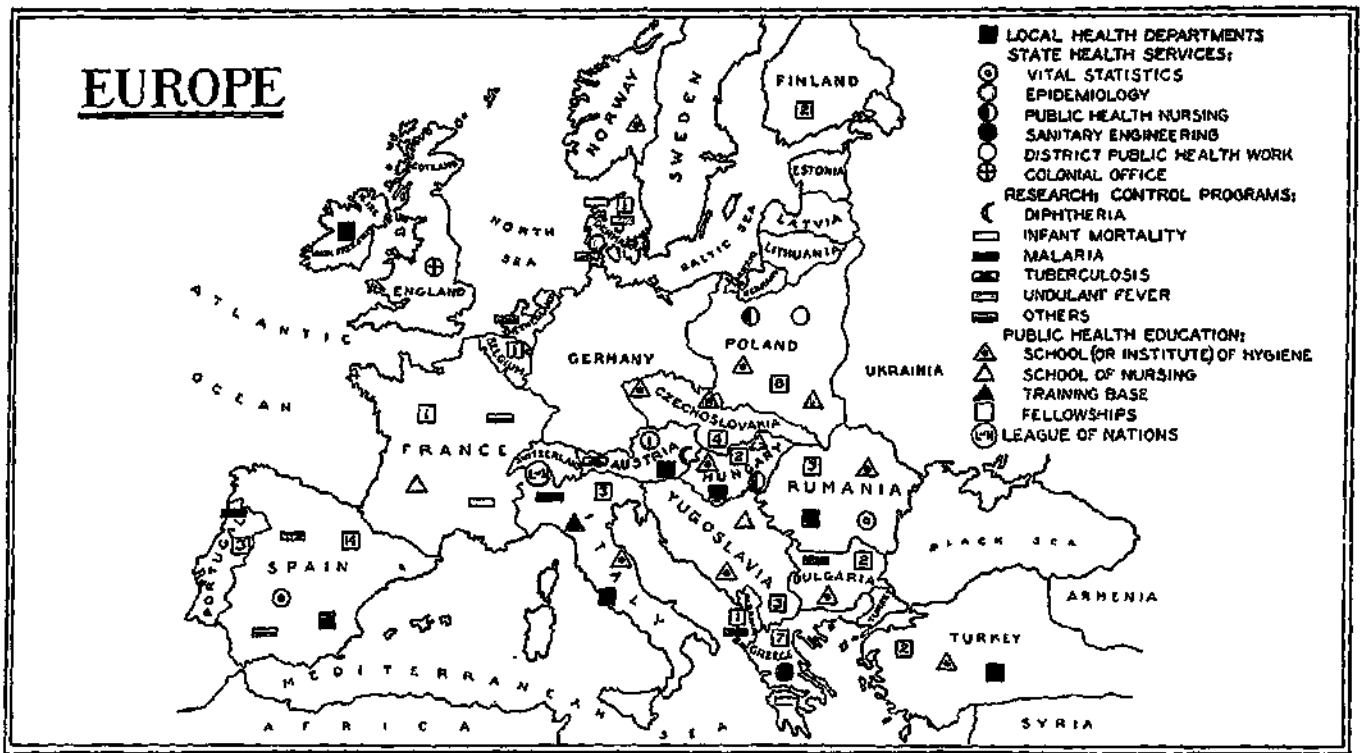
types of health activity have been aided in various countries of Europe, the reader is referred to the map of Europe on page 65, from which it appears that malaria studies or control activities were carried on in Albania, Bulgaria, Greece, Italy, the Netherlands, Portugal, and Spain; local or district health work in Austria, Hungary, Irish Free State, Italy, Poland, Rumania, Spain, and Turkey; aid was given to schools of public health or nursing in Bulgaria, Czechoslovakia, France, Hungary, Italy, Norway, Poland, Rumania, Turkey, and Yugoslavia; tuberculosis studies were made in Austria and Denmark, undulant fever studies in France and Denmark, a yellow fever laboratory study in France, an infant mortality study in Denmark, and an epidemiological study of diphtheria in Austria. In addition, aid was given to sanitary engineering in Greece, to rural public health nursing in Hungary, to the Bureau of Public Health Nursing in Poland, to the Bureau of Vital Statistics in Rumania, and to the Bureau of Sanitary Statistics and the Madrid smallpox laboratory in Spain. The Rockefeller Foundation also gave research aid to former fellows in Hungary, and cooperated with the Health Organization of the League of Nations.

During 1934, fifty-seven fellows from European countries studied under fellowships sup-

ported by The Rockefeller Foundation. Thirty of these fellows were nurses, twenty-two were physicians, and five were engineers. Their countries of origin were: Albania, one; Belgium, one; Bulgaria, two; Czechoslovakia, four; Denmark, one; Finland, two; France, one; Greece, seven; Hungary, two; Italy, three; Poland, eight; Portugal, three; Rumania, three; Spain, fourteen; Turkey, two; Yugoslavia, three. Thirty-five of these fellows studied in the United States, eleven in Europe, three in Canada, and eight divided their time among two or more countries.

A World Wide Effort

The public health work of The Rockefeller Foundation is not limited to the United States and Europe. Work in Brazil and Africa has been mentioned in connection with yellow fever activities. Work in Puerto Rico, Jamaica, the Philippine Islands, and elsewhere, has been noted incidentally in connection with malaria. In the previous account of hookworm disease reference was made to activities in Colombia and in Ceylon. There are many other countries in which work of one type or another has been done, and for a complete summary the reader is once more referred to the fuller account of Rockefeller Foundation public health activities published in a separate report.



Types of health work in which the Foundation is assisting in Europe.

The public health work aided by the Foundation in all these countries is not a haphazard growth. It follows a carefully conceived plan which has expanded in scope, but which in its essential outlines has not changed since the Foundation undertook its public health program.

Beginning with the investigation of a few definite public health problems connected with hookworm disease, the Foundation very soon included in its program provision for the proper training of the type of men who were willing to devote their lives to becoming leaders in the public health field. A public health fellowship program began in 1917 and from that period up to the end of 1933, 1,216 fellowships had been active. In 1934, 101 were added. The amount of money set aside for this fellowship program in 1934 alone was \$200,000. Over 1,300 fellowships were granted to hand-picked men and women who had already completed their full professional training and who, before fulfilling their pledge to return to the health service of their native land, were willing to specialize for a year or more in postgraduate public health activities. These persons have been given an opportunity to broaden their training and to obtain inspiration by observation and study, in most cases in countries other than their own, of public health problems



Photograph Excised Here

Public health car maintained by the Health Department of Costa Rica for work in rural areas.



Photograph Excised Here

Interior of the Costa Rica public health car.

in which they were specifically interested. With the aid of this nucleus of qualified individuals highly trained in up-to-date procedures, who, after completion of their work have gone back to health service posts in many different countries, the public health problems of the world today are being tackled in a vigorous manner and with techniques that represent the result of the combined experience of the leading experts in this field.

In addition to personnel, the Foundation has made it a point to provide training centers either by making possible the establishment of well-equipped postgraduate schools of public health or by strengthening already existing centers of public health training. These schools, located at strategic centers in various countries of the world, are ready to continue guidance in research work and to provide the instruction without which there can be no future leaders.

With men and their training taken care of, the Foundation undertook the task of helping many governments to give the new highly trained men in public health an entrée. This has been done by providing aid to central and local health departments, so that services could be modernized and methods transformed to cope with modern health problems and keep public health abreast of similar advances in other fields. The chief

reason, however, for aiding permanent agencies, such as governments, in carrying on health work has been the realization that no private foundation, however extensive, can ever hope to carry out and see through to a finish the task of maintaining public health. It is and always will be the duty of governments to guard the health of their populations year after year, to protect them from infectious diseases, and to carry on the never-ending campaign against disease.

In addition to aiding outright government departments, the Foundation has been of assistance in promoting and carrying through specific demonstrations in public health activities. The purpose of such demonstrations, which are always set up in a manner to answer local requirements, is merely to find out how a specific task can best be done. After the required results have been obtained, the Foundation withdraws and the work in practically every case is carried on by the local authorities.

It is kept in mind that throughout all public health work there must run the motif contained in the second part of the motto of The Rockefeller Foundation, "through the increase of knowledge." It is not results alone that count, but what is important above all is improvement of methods, so that better health can be brought within the grasp, the means, and the sympathetic

understanding of the local population. This implies alertness for new knowledge to overcome the obstacles that keep the benefits of public health from spreading. Thus over and above its many specific tasks, the Foundation has devoted itself to intensive research in a limited number of fields with the determined effort to broaden the horizon of our knowledge in those fields. As an illustration, new knowledge has been obtained both in the epidemiology and therapeutics of hookworm disease. In malaria, the stock armamentarium of weapons available to communities desiring to make a determined attack on this disease has been increased. Yellow fever work has led to the shedding of new light on the nature of this deadly virus disease. New laboratory methods finally produced a vaccine which in a limited form of application is highly successful.

In this way, through demonstrations, through lending a helping hand here and there, through field research work of its own, and through making provision above all for the best type of human leadership, the Foundation has endeavored to assist in raising the level of public health.

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¹ Appointment terminated July 6, 1934

² Appointment effective October 29, 1934

³ Appointment effective July 1, 1934

⁴ Resignation effective June 30, 1934

THE MEDICAL SCIENCES

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THE MEDICAL SCIENCES

The year 1934 was characterized by continuing diminution of funds for research in nearly all branches of medicine in the United States and Canada, and no very marked improvement in the resources for these purposes in the other countries of the world. The reductions imposed by diminished income from invested funds, and by the inability of previous donors to continue their gifts or begin new undertakings would amount to a sum far beyond the capacity of any foundation to supply. The resultant situation is one of unusual difficulty not only for the successful accomplishment of research already under way but for the prospects of trained investigators and in some instances for the very stability of research as a function of university work.

Under such circumstances a concentration of interest on the part of any foundation in a special branch of medicine involves decisions which are difficult. The Rockefeller Foundation has shown a preference to support steady and intensive work in a few fields rather than in many. The group of studies on which particular emphasis is laid is that of the function, derangements, and diseases of the nervous system or, speaking in

broader terms, of that psychobiological knowledge of the behavior of man which might be in the possession of the ideal psychiatrist. Indeed it is increasingly evident that physicians generally are being looked to for knowledge that will help in interpreting as well as in guiding the behavior of man and it is equally clear that medicine lacks sufficient basic data in these fields to meet such a demand. It is not a narrow interpretation of the nervous system which will serve to describe the Foundation's interest. It is not easy, nor indeed is it in some senses logical, to subdivide our knowledge of the individual, or to delimit in categories the various types of study which may prove significant. And thus to present the year's activity is to give not only an account of projects aided at a time of dislocation, retrenchment, and adjustment, but a list of undertakings whose relationship to each other and to the field of psychiatry is not one of wholly schematic clarity or deliberate organization.

Many grants represent continuations of previous undertakings within the fields of present interest, some are accounted for as previous commitments fulfilled, a few are temporary grants outside the dominant interests of the Foundation.

Within the field of psychobiology or psychiatry (if the latter term be given its most inclusive

interpretation) the principal needs appear to be that able persons be found, trained, and allowed to contribute to our knowledge and the application of that knowledge. To find such persons the teaching of psychiatry and all that bears upon it should be of such a character as to interest the best young talent rather than discourage or dissuade it. For the training of those attracted to these subjects scholarships and fellowships have certain peculiar advantages, and decently remunerated permanent posts must be available as well. To make effective the training and energies of able men already prepared and in permanent posts, opportunities in the form of research grants and maintenance grants for application of existing knowledge are clearly valuable.

In the following pages are briefly recorded the year's activities in the medical sciences. It will be seen that most of them illustrate some one of the aforementioned categories.

Program of Specific Concentration

Psychiatry

Aid given by the Foundation during 1934 for the advancement of psychiatry was of four types: endowment and building funds for establishing departments; grants to universities and other institutions for the development of research and teaching in psychiatry and associated subjects;

research aid grants to individual workers engaged in important investigations in mental diseases; and fellowships to enable men and women especially qualified for work in this field to obtain desirable advanced training.

McGill University

**Endowment of Teaching and Research in the
Montreal Neurological Institute**

A gift of \$1,000,000 was made to McGill University as an endowment for the development of teaching and research in the new Montreal Neurological Institute, which was formally opened on September 27, 1934. This grant completed the Foundation's payments on a pledge of \$1,282,652 made to the university in 1932, of which \$232,652 was for the building and equipping of a neurological institute, \$1,000,000 for the endowment of teaching and research, payable on the completion of the building, and \$50,000 for the expenses of teaching and research during the year ending July 1, 1933, at which time it was expected that the building would be completed. Owing to delays in construction, the building was not ready for use until the following year. The Foundation made an additional grant of \$54,600 to the university toward the costs of teaching and research in neurology during the year ending July 1, 1934, the date at which the endowment became available.

**Department of Mental Diseases, Massachusetts
Studies in Psychiatry at the Boston State Hospital**

A well-run state hospital for the mentally diseased offers valuable opportunities for psychiatric research, and aid to a few centers where there is promise of stimulating or enlarging state interest in such research falls within the scope of the Foundation's program.

In 1934 an appropriation of \$41,100 was made to the Department of Mental Diseases of the State of Massachusetts toward the support of studies in psychiatry at the Boston State Hospital over a period of three years beginning March 1, 1935, under the direction of Dr. Abraham Myerson. The funds will be used for the salaries of the director of the studies, a neuropathologist, a resident clinical psychiatrist, a secretary, and a technician. At the Boston State Hospital, with the aid of the Federal Government, a research laboratory building has been erected. The State of Massachusetts is equipping the building, providing for its maintenance, and paying the salaries of subordinate research personnel.

Since 1928 the Department of Mental Diseases of Massachusetts has received aid, first from the Laura Spelman Rockefeller Memorial and later from The Rockefeller Foundation, for a study of individual case histories in mental hospitals.

This study has brought about a great improvement in the care with which such case records are taken and indirectly in the treatment of the individual patients in the mental hospitals of Massachusetts.

Worcester State Hospital, Massachusetts

Research on Dementia Praecox

Of the graver mental disorders, the most common is schizophrenia (dementia praecox). In the United States the daily cost of caring for the 140,000 or more patients suffering with this disease is well above \$1,000,000. Research on the disease has been carried on at the Worcester State Hospital, Massachusetts, for several years, with the support of the State of Massachusetts and the Memorial Foundation for Neuro-endocrine Research at the Harvard Medical School. To aid in the extension of these studies The Rockefeller Foundation made a grant of \$16,500 to the hospital for use during the year beginning July 1, 1934. The work carried on during 1934, under the direction of Dr. R. G. Hoskins, included more accurate classification of schizophrenia, studies of the circulatory disturbances and metabolism of patients with this disease, and investigations of the rôle of the suprarenal cortex in relation to the symptoms and progress of the disease. In order to control the results

accurately, comparisons were made with normal persons living under identical institutional conditions.

The funds provided by The Rockefeller Foundation were for salaries of trained personnel, the expenses of persons serving as controls, and the installation of a room where humidity and temperature can be governed exactly, thus making possible accurate studies of the heat-regulating mechanism of patients and controls.

The Johns Hopkins University

**Development of Child Psychiatry in the Pediatric
Clinic**

The departments of Psychiatry and Pediatrics of the Johns Hopkins University School of Medicine are cooperating in the development of a program of research and teaching in child psychiatry in the Pediatric Clinic under the direction of Dr. Leo Kanner, a former Rockefeller Foundation fellow. The Foundation made a grant of \$14,600 toward the support of this undertaking during the year beginning September 1, 1934. The project provides for a thorough study over a period of five to ten years of the complaints, personality development, and characters of children showing deviation from ordinary behavior and attitudes. The children will be carefully observed for the purpose of adding to the general knowledge of the meaning of their symptoms,

and data will be compiled on the eventual outcome of their complaints. For the purpose of the study, affiliations have been established with the welfare agencies, recreational centers, and public schools of Baltimore. It is hoped that these extended observations on individual children will furnish valuable information regarding the relation of early maladjustment difficulties to the development of mental diseases in adult life.

The project affords opportunity also for the training of medical students and hospital interns in methods of interpreting and dealing with the social, moral, intellectual, and emotional abnormalities of childhood.

University of Leiden

Child Psychiatry

At the University of Leiden, Netherlands, a program of research in child psychiatry has been undertaken by the departments of psychiatry, pediatrics, law, and social hygiene, under the direction of Dr. D. Wiersma. Toward this project the Foundation has appropriated the sum of \$19,700 for use over a period of five years beginning January 1, 1935. During the first year, study will be limited to about two hundred children in order that each child may have careful and thorough observation. Among the types of pa-

tients from which research material will be drawn are (1) mentally backward children, who require careful investigation by a psychiatrist and clinical study by a pediatrician for physical signs of body impairment; (2) children with disorders such as tics, spasms, and fits, who also need the combined attention of psychiatrist and pediatrician; and (3) so-called nervous children who must be examined by psychiatrist and pediatrician and whose environment must be investigated by a social worker. The collaboration of the four university departments in this work will make possible a complete study of each patient from the physical, mental, and social standpoints. The project has the cooperation of the Social Service Bureau of the Netherlands and the Society for the Prevention of Crime in Children, a state organization with activities throughout the country.

The Chicago Area Project

A grant of \$22,500, for use during the year beginning October 1, 1934, was made by the Foundation to the Chicago Area Project, which has as its purpose the study, treatment, and prevention of juvenile delinquency within a few selected areas of Chicago. The project involves field study by psychiatrists of behavior in children considered abnormal and may bring further

knowledge of the nature of juvenile delinquency.

For a number of years studies of the factors contributing to juvenile delinquency and the effectiveness of the various methods employed in the care and treatment of delinquent children have been carried out in Chicago by the Department of Research Sociology of the Institute for Juvenile Research and by the Behavior Research Fund. Four general findings by these agencies have led to an undertaking known as the Chicago Area Project: community disorganization is directly related to juvenile delinquency; gang or group loyalties affect delinquent behavior; social experiences during childhood and adolescence influence the development of the attitudes and habits involved in delinquent behavior; and institutionalization all too frequently fails as a method of treatment of juvenile delinquents.

In the field of public health, especially in tuberculosis work, several successful experiments or demonstrations have been made on the basis of intensive studies of an area or unit of population. The Chicago Area Project is being carried out to determine the applicability of similar methods to juvenile delinquency. Four small sections have been selected in districts where delinquency is prevalent, and in each of these a comprehensive and varied program has been organized to provide supervised leisure time ac-

tivities for all children between the ages of eight and seventeen years, to coordinate the activities of various local institutions and agencies which can be of assistance in the undertaking, and to foster the development of an organization of adult residents in each area in order to secure their help and utilize their knowledge in dealing with local difficulties.

University of Rochester

Child Guidance Clinic

During the five-year period beginning September 1, 1929, the Foundation contributed to the University of Rochester the sum of \$124,000 toward the development in the Department of Psychiatry of the School of Medicine and Dentistry of a habit training clinic for "problem children." In 1934 a supplementary grant of \$13,000 was made to the university toward the maintenance of the clinic during the academic year 1934-35. The clinic affords an excellent field for the training of medical students in mental hygiene and is thus an important aid in the teaching of psychiatry. The facilities of the clinic are also available to non-medical students interested in the problems of abnormal psychology.

National Committee for Mental Hygiene

The sum of \$30,000 was appropriated to the National Committee for Mental Hygiene toward

the support of its general expenses during the calendar year 1935. Of this amount \$20,000 is to be available unconditionally and \$10,000 available dollar for dollar as funds are obtained by the committee from other sources.

The committee has at present four main activities: (1) administration of special projects, among which are a study of psychiatric teaching in the medical schools of the United States and Canada, child guidance clinics, and the study of research possibilities in dementia praecox on a grant from the Scottish Rite Masons; (2) maintenance of a consultation and information service for individuals and national, state, and local organizations, and publication of a journal and other literature; (3) improvement of the care of the insane through liaison work between various agencies, such as state institutions, medical schools, and private and public welfare agencies; (4) stimulation of national, state, and local organizations to forward mental hygiene activities. The committee received aid toward its work from the General Education Board during the years 1932 to 1934 and from the Foundation for several years preceding that time.

University of Colorado

Teaching of Psychiatry in the School of Medicine

As a part of the Foundation's program in psychiatry, the task of improving the teaching of

this subject in a few influential centers has been studied during the past two years. It has become evident that there is need for clinical instruction not only in the psychiatric wards of hospitals but for liaison work between the department of psychiatry and other departments of the medical school.

To aid in the development of such work in the School of Medicine of the University of Colorado the Foundation made a grant of \$10,000, available for a period of one year beginning August 1, 1934, to enable the Department of Psychiatry to secure the services of a psychiatrist to act as consultant and teacher in the departments of medicine, surgery, obstetrics, and pediatrics for the purpose of demonstrating to the students the applicability and usefulness of psychiatric knowledge and the importance of regarding the patient as possibly an individual with mental maladjustment or disease as well as physical illness. The Foundation's grant was used toward the salary of a psychiatrist, the support of the social service work of the Department of Psychiatry, and for clerical assistance.

The School of Medicine of the University of Colorado is an advantageous point at which to develop psychiatric training. Its Psychiatric Department is under the direction of Dr. F. G. Ebaugh, who is the director of the Colorado

Psychopathic Hospital, situated next to the School of Medicine and its principal teaching hospital. During the past few years. Dr. Ebaugh has done much to correlate the work of his department with that of the other departments of the School of Medicine.

University of Michigan

Development of Teaching and Research in Psychiatry

At the Medical School of the University of Michigan a program for the improvement of teaching, training, and research in psychiatry is being developed under the direction of Dr. A. M. Barrett, head of the Department of Psychiatry.

The program aims to bring psychiatric teaching and service into more effective relationship with the other divisions of the teaching hospital of the Medical School, to increase the usefulness and influence of the university's psychiatric clinic among the state hospitals by extending neuropathological study and research, to intensify and lengthen the training of junior psychiatric personnel, and to improve the presentation of psychiatry to medical students, nurses, and social workers.

The Foundation appropriated the sum of \$15,000 to the university toward the support of this program during the year beginning July 1, 1934.

**Institute of the Pennsylvania Hospital
Teaching and Research in Psychiatry**

Aid for the extension of teaching and research in psychiatry was also given to the Institute of the Pennsylvania Hospital, a division of the hospital engaged in the study and treatment of the milder mental abnormalities and adjustment problems.

In addition to its work in this field the institute carries on research in the hospital's Department of Mental Diseases and in a small school which the hospital maintains for children who, though of good intelligence, present behavior problems. It also conducts a psychiatric service for the student population of schools and colleges of Philadelphia which have made formal or informal arrangements for such service. Its studies thus cover the wide range from the normal to the diseased mind.

To enable the institute to maintain additional research and teaching personnel during the year beginning July 1, 1934, the Foundation granted it an appropriation of \$18,000. This sum provided the salaries of two psychiatrists working at the institute on psychoneuroses, two junior psychiatrists working in the Department of Mental Diseases on psychoses, a psychiatrist at the school for problem children, and several special part-time workers.

Neurology and Related Subjects**New York University****Research in Neurology**

A grant of \$5,000 was made to New York University toward the support of research in neurology in the Medical College under the direction of Dr. Foster Kennedy during the year beginning May 1, 1934.

Dr. Kennedy and his associates are carrying out in their laboratory a number of neurological studies on problems closely related to human disease. For this work they have access to the large and varied clinical resources of Bellevue Hospital. The Foundation's gift has provided certain necessary laboratory equipment and assistance and has enabled Dr. Kennedy to enlarge the scope of his work and to secure the services of Professor Franz Schück, formerly of the Urban Hospital, Berlin, whose experience and present research interests will add to the potentialities of the laboratory. Dr. Schück is investigating the cause of unconsciousness in brain injury, the control of pain by neurosurgical methods, and wound healing and inflammation as influenced by the nervous control of circulation.

Northwestern University Medical School**Research in Neuroanatomy**

Northwestern University received from the Foundation a grant of \$4,000 toward the sup-

port of research in neuroanatomy in the Institute of Neurology of its Medical School, under the direction of Dr. S. W. Ranson, for a period of one year beginning July 1, 1934.

Dr. Ranson's work concerns a special phase of brain function known as cerebral localization. This has to do with the identification of special areas of the brain with various motor, sensory, and other functions of the body. Dr. Ranson is using a technique, by means of which the brains of mammals can be stimulated at accurately defined points and a correlation can be established between anatomical locus of stimulus and physiological function. Especially interesting possibilities lie in the determination of the influence of certain parts of the brain over some of the organs of internal secretion and over the functions of the gastro-intestinal tract, the kidneys, and other organs.

University of Pennsylvania

**Studies on the Growth and Regeneration
of the Peripheral Nerves**

A grant of \$7,500 was made to the University of Pennsylvania toward the support during the year beginning July 1, 1934, of studies by Professor Eliot R. Clark, of the Department of Anatomy of the School of Medicine, on the growth and regeneration of the peripheral nerves. This appropriation is a continuation of aid given

toward Dr. Clark's work during the five-year period ending June 30, 1934.

Dr. Clark and his associates have developed a method which permits direct and prolonged observation of the form and behavior of living cells in the body. This method has provided a valuable means of studying nervous control of the circulation and the nature of nerve destruction and regeneration.

**Walter and Eliza Hall Institute of Research in Pathology
and Medicine**

**Studies of Virus Diseases Affecting the Nervous
System**

An appropriation of \$12,600 was made to the Walter and Eliza Hall Institute of Research in Pathology and Medicine, in Melbourne, Australia, for studies of virus diseases affecting the nervous system. This Foundation grant will be available during the three-year period which began July 1, 1934, and the Commonwealth Government of Australia will provide an equal amount for this work over the same length of time. The institute is closely affiliated with the University of Melbourne and the Melbourne Hospital and is situated on the grounds of the hospital.

The opportunities in Australia for the study of neurotropic viruses are unusual. There is a possibility that some of the work on these viruses in

Australia may throw new light upon diseases of the nervous system in man.

Dartmouth College

Research in Physiological Optics

Vision is one of the special senses most highly developed in man, and since the special senses play a large rôle in the organization and function of the nervous system, important advances in our knowledge of the physiology of vision bear directly upon neurological diagnosis and treatment. The places in the world where advanced work in physiological optics is done are not numerous, particularly in the application of physics and mathematics to the study of the eye.

At Dartmouth College there has been developed in the Department of Physics a division of research in physiological optics led by Adelbert Ames, Jr., Gordon H. Gliddon, and Kenneth N. Ogle. These investigators have discovered a new field of work important to ophthalmology, psychology, and neurology. It consists of the study of image size variation in binocular vision. Enough clinical application has been made of the findings to prove the validity of their work, and testing apparatus has been devised and is already in use in a few clinics and physiological laboratories. The Rockefeller Foundation has contributed \$20,000 to Dart-

mouth College toward the support of the studies in physiological optics during the academic year 1934-35.

Other Research Projects

Lister Institute of Preventive Medicine, London

Purchase of an Ultracentrifuge

An appropriation of \$18,000 was made by the Foundation to the Lister Institute of Preventive Medicine in London for the purchase and installation of an ultracentrifuge to be used in medical research, particularly in studies of the biophysical aspects of body fluids.

The ultracentrifuge of the type to be installed was developed by Professor T. Svedberg of the University of Uppsala, Sweden. Professor Svedberg's studies on the size of the molecule, carried out with the aid of this instrument, constitute a new and promising application of physics to medical research. Valuable work has also been done with the instrument in connection with blood pigments and serum proteins. Large fields in immunology and in the physical chemistry of normal blood await investigation by these methods.

Professor Svedberg has applied the ultracentrifuge so successfully to certain biological and medical subjects that numerous demands have been made upon the equipment of his depart-

ment by medical investigators from other institutions of research. This has curtailed his own studies, and it has therefore seemed advisable to install an ultracentrifuge in another research center. The Lister Institute was prepared to house and maintain the instrument. The institute will also provide the salary of a research worker who has been especially trained in ultracentrifuge methods.

Royal Caroline Institute, Stockholm

Research in Biochemistry

The sum of \$22,400 was appropriated toward the support of research in biochemistry at the Royal Caroline Institute in Stockholm, under the direction of Professor Einar Hammarsten, for a four-year period beginning January 1, 1935.

For a number of years Professor Hammarsten has been investigating the chemical structure of various hormones and enzymes. He has succeeded in isolating in crystalline form, secretin, an intestinal ferment which stimulates pancreatic activity, and he has obtained an ovarian hormone in practically pure state. Recently he has been engaged in working out a new method of purifying the principle in the liver specific for pernicious anemia. The Foundation's grant will be used for the purchase of apparatus and supplies for Professor Hammarsten's work, to sup-

plement his salary so that he may be freed from the necessity of extradepartmental teaching, and to provide him with technical assistance.

Harvard University

Research on Synovial Fluid

The Rockefeller Foundation made a grant of \$3,000 to Harvard University in support during the year beginning September 1, 1934, of studies of synovial fluid which are being conducted under the auspices of the Robert W. Lovett Memorial Foundation of the Harvard Medical School.

The Robert W. Lovett Memorial Foundation devotes its funds to research on arthritis. Despite the fact that rheumatic conditions are widespread in temperate climates, of great economic importance, and a subject of extensive study by pathologists, there has been relatively very little done in the past in the study of the physiology of joint membranes and fluids. The present program includes studies of the chemical and physical properties of the fluid of the joints in man and in animals, and the mechanism of the passage of substances, normal and pathological, through the synovial membrane.

University of Rochester

Research on Special Respiratory Problems

A grant of \$2,500 was made to the University of Rochester toward support during the academic

year 1934–35 of research on pulmonary capacity by Dr. W. S. McCann and his associates in the Department of Internal Medicine of the School of Medicine and Dentistry. This work involves a study of pulmonary capacity in normal persons and in pathological subjects, particularly sufferers from heart disease or pneumonia. It includes a correlation of this capacity in certain persons and in certain types of disease with physical and chemical changes in the blood, such as arterial oxygen saturation, blood volume, and rate of blood flow. Through arrangements with the Experimental Diving Unit at the Washington Navy Yard observations are being made on the effects of anoxemia and low barometric pressures on pulmonary capacity. It is expected that this research will throw light on the problem of heart failure in certain diseases of the lungs and also on the mechanism of the adjustment of man to changes in altitude, i.e., changes in barometric pressure.

Former Program

Since 1931 the National Research Council has received Foundation support for the work of its Committee on Drug Addiction. In 1934 an appropriation of \$50,000 was made in continuance of this aid. The committee's work interested the Foundation because of its by no means remote

relation to the field of psychiatry. Drugs that will relieve pain effectively often have the dangerous property of producing habitués among their beneficiaries. The task toward which funds have been contributed is that of finding non-habit-forming substitutes for habit-forming drugs whose abuse is otherwise so difficult to prevent.

Studies by Dr. H. M. Evans, of the University of California on the relation of vitamins and hormones to problems of growth have received Foundation support since 1929. The work of Dr. Evans and his associates has added considerably to the knowledge of the nature and function of the pituitary gland, especially in relation to the effect of the internal secretion of the anterior lobe of the pituitary gland upon the growth of the organism. The subject still presents an important field for further study, and the Foundation has continued its support of the work by an appropriation of \$20,000 to the University of California for the use of Dr. Evans during the year beginning July 1, 1934.

In 1930 the Foundation pledged to the University of Montreal the sum of \$125,000 payable over a five-year period for the development of laboratories in the Department of Medicine. In 1934 the final appropriation of \$25,000 was made on this pledge.



Photograph Excised Here

Montreal Neurological Institute, McGill University, which was formally opened September 27, 1934. The Rockefeller Foundation has contributed toward the building, equipment, and endowment of the institute.

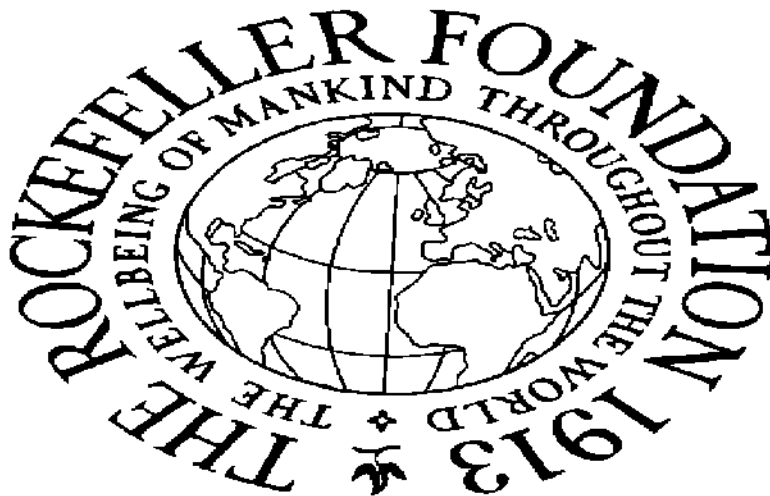
Aid was continued to the College of Physicians and Surgeons of Columbia University toward the support of studies of the common cold by Dr. A. R. Dochez and for research in medical mycology in the Department of Dermatology under the direction of Dr. J. G. Hopkins. Extension of previous aid was also given to the School of Medicine and Dentistry of the University of Rochester for research in dental pathology and for diathermy studies by Dr. Stafford Warren; to Yale University for research in dental pathology; to the University of Copenhagen for studies in the Institute of General Pathology on inheritance in relation to blood groupings under Professor Oluf Thomsen; and to the University of Paris toward the support of the work of its Department of Parasitology under the direction of Professor Emil Brumpt.

In Russia only, the Foundation is continuing until the close of 1937 its postwar program of assistance to medical libraries for the purchase of foreign medical publications. An appropriation of \$10,000 was made to the Narkomsdrav, the Department of Public Health and Medical Education in Moscow, to supply such literature during 1935 to the Central Medical Library and to certain important research institutes in the major scientific centers, chiefly Moscow and Leningrad.



Photograph Excised Here

Ophthalmo-eikonometer, an instrument which has been developed at Dartmouth College for measuring the relative size and shape of ocular images and also the ocular condition of the eyes. This instrument has opened up a new field in physiological optics important to ophthalmology, psychology, and neurology. Studies in physiological optics at Dartmouth College are receiving Foundation support.



Photograph Excised Here

Laboratory of pathological anatomy, University of Montreal. The Foundation has contributed \$375,000 to the university for the development of the laboratories of its Department of Medicine.

General Program

Fellowships

For the administration of fellowships in the medical sciences during the year 1935-36, the Foundation appropriated \$20,000 to the National Research Council, and \$15,000 to the Medical Research Council, London. The Peiping Union Medical College in China received appropriations totaling \$50,000 during the year, with which to provide fellowships and small study grants for members of its staff and selected graduate students for the years 1934-35 and 1935-36.

Eighty fellowships in the medical sciences were supported and administered during 1934 directly by The Rockefeller Foundation. Their distribution according to the fellow's country of origin was as follows: seven each from India and Japan; five each from Argentina, Australia, China, England, and Sweden; four each from France, Portugal, and Siam; three from Denmark; two each from Finland, Hungary, Italy, Northern Ireland, Poland, Republic of Lebanon, Russia, Spain, Switzerland, and one each from Austria, Brazil, Egypt, Estonia, Greece, New Zealand, Peru, and Rumania. Fourteen studied physiology; ten, biochemistry; seven, pathology; six, internal medicine; four each, histology, bacteriology, and pharmacology; three each, psychol-

ogy, neurophysiology, and neuropathology; two each, parasitology, neurology, psychiatry, nutrition, serology, public health, surgery, embryology, and neurosurgery; and one each, tuberculosis, tropical medicine, genetics, medical entomology, gynecology and obstetrics, mycology, histophysiology, histopathology, pediatrics, immunology, industrial hygiene, radiology, clinical medicine, anatomy, experimental zoology, microbiology, and biology. Thirteen fellows studied more than one subject.

Under the joint program of the Foundation and the General Education Board twenty-four American and Canadian psychiatrists received postdoctoral fellowships in the field of mental and nervous diseases. Eleven of the holders of these fellowships studied psychiatry; four, neurosurgery; three each, psychoanalysis and neuropathology; and one each, neurology, educational psychology, and psychology. Two of them worked in more than one field and all of them devoted themselves to special aspects of their chosen fields. The countries in which these studies were pursued were: the United States, Canada, England, Germany, Austria, and the Netherlands.

Agencies toward whose fellowship programs The Rockefeller Foundation contributed administered a total of 159 fellowships in the

medical sciences during the year 1934. The National Research Council made forty awards to American and Canadian citizens. The Medical Research Council, London, appointed twelve fellows for study in the United States, six of whom studied internal medicine and one each, surgery, pathology, nutrition, neurology, and neuropathology. Six German doctors received fellowships under the Notgemeinschaft der Deutschen Wissenschaft, for study in the fields of immunology, endocrinology, pharmacology, physiology, tissue culture, and surgery. Three of these men studied in the United States, two in England, one in Denmark, and one in the Netherlands.

During the year, the Hungarian Scholarship Council appointed three fellows who studied neurohistology, embryology, legal medicine, and pediatrics. One studied in London, one in Glasgow, and one in Boston.

With funds provided by the Foundation, the Peiping Union Medical College granted fifteen fellowships to members of its staff for study abroad, and eight to graduate students for study at the college. In addition, seventy-five students received small grants for short periods of study at the college.

Research Aid Grants

Eighty-nine research aid grants in the medical sciences, varying in amount (but not exceeding

\$6,100), were made by the Foundation in 1934 toward the support of investigations by individual workers or groups of workers in twenty-two countries. The greater number of these grants were for research in psychiatry and related subjects. They were distributed among the following countries: Australia 1, Austria 3, Belgium 1, China 6, Czechoslovakia 1, Denmark 6, England 10, Finland 1, France 7, Germany 9, Iceland 1, Italy 2, Netherlands 6, Norway 1, Peru 1, Portugal 2, Republic of Lebanon 1, Russia 6, Scotland 2, Sweden 4, Switzerland 8, and the United States 10. Representative grants were: \$4,260 to Maudsley Hospital, London, toward research on the relation of infections and viruses to dementia praecox, under the direction of Dr. F. Golla; \$2,702 to the Neurological Clinic, University of Amsterdam, Netherlands, for chemical studies in dementia praecox by Dr. Herman de Jong, a former Foundation fellow; \$1,930 toward research on heredity in mental disease, under Professor Johann Lange, of the Psychiatric and Neurological Clinic of the University of Breslau, Germany; \$2,200 to the Institute of General Pathology, Copenhagen, Denmark, toward studies of hereditary anterior pituitary abnormalities, cytological studies on human chromosomes, and investigations on genetics of psychopathic cases by Dr. Tage Kemp, a former Foundation fellow;

§3,000 for research on the physiology of circulation as referred to the brain, under Professor H. Rein, of the Institute of Physiology of the University of Göttingen, Germany; §4,000 to Washington University, St. Louis, Missouri, toward the completion of an immunological study of encephalitis under Dr. R. S. Muckenfuss, of the Department of Medicine; §6,100 toward the expenses of research on poliomyelitis at the Long Island College of Medicine, Brooklyn, under the direction of the Infantile Paralysis Commission; §2,372 to the Laboratory of General Pathology, University of Amsterdam, Netherlands, for spectrophotographic investigations in the field of endocrinology, under Professor I. Snapper; §1,000 toward investigations by Professor A. P. Celestino da Costa, of the Institute of Histology and Embryology, Lisbon, Portugal, on endocrine glands and their relation to the central nervous system; §2,800 to the Institute of Physiology of Leiden, Netherlands, for research on the central nervous system and on the endocrines, by Professor C. G. J. Rademaker; §1,512 toward investigations on brain enzymes, under Professor S. Edlbacher, of the Institute of Physiological Chemistry of the University of Basel; §1,500 to the American University of Beirut, Republic of Lebanon, for studies on brain metabolism under Professor S. E. Kerr of the Department of Bio-

logical Chemistry; \$1,270 to the Institute of Medical Physiology of Copenhagen for research on the influence of hormones on carbohydrate metabolism and on the physiology of cerebral vessels, under the direction of Professor Einar Lundsgaard; \$2,000 for investigations on brain physiology under the direction of Professor Hans Maier, of the Psychiatric Clinic, University of Zurich, Switzerland; \$2,500 to the Institute of Physiology of the Leningrad Academy of Sciences for research on conditioned reflexes and on the physiology of the nervous system by Professor I. P. Pavlov; \$3,000 for investigations in neuroanatomy under the direction of Professor H. S. Burr of the Yale University Medical School; \$2,000 for investigations in neuropathology under Professor H. M. Zimmerman of the same school; \$3,000 for research in neurophysiology under Dr. H. S. Gasser of Cornell University Medical College; \$4,000 for research on respiratory, circulatory, and metabolic changes in high altitudes by Dr. Alberto Hurtado of the Faculty of Medicine of the University of San Marcos, Lima, Peru.

Emergency Research Aid

In 1933 the Foundation appropriated \$60,000 as a special research aid fund for the establishment, in countries other than their own, of eminent European scholars working in medical fields

who, because of disturbed political conditions, had been forced to leave their native lands. In continuation of this aid during 1934 the Foundation made an appropriation of \$30,000.

Miscellaneous Projects

Study of Centers of Neurophysiological Research in Europe

The Foundation appropriated \$5,000 for a study of the situation in the field of neurophysiology in Europe by Dr. R. W. Gerard, associate professor of physiology at the University of Chicago. He will spend ten months in Europe, completing his study in May, 1935. His program includes visits to various medical schools and research institutes in England and on the Continent for the purpose of securing information on the activities in centers of neurological research and aiding in the selection of promising candidates for fellowships in this field.

National Conference on Nomenclature of Disease

An appropriation of \$5,000, available during the year beginning May 1, 1934, was made to the National Conference on Nomenclature of Disease to enable it to complete its work on *A Standard Classified Nomenclature of Disease* to be used throughout the United States.

The National Conference on Nomenclature of Disease was organized in March 1928, for the pur-

pose of uniting the important medical, surgical, and statistical societies of the country, Federal medical and health organizations, and life insurance companies in an effort to develop a uniform system of naming and classifying diseases. In November 1930 the conference adopted a plan for the preparation of a nomenclature based on a dual method of classification, etiological and topographical. Support for the undertaking was provided by the Commonwealth Fund, life insurance companies, and other organizations. In January 1933 the first edition of the nomenclature was published. There remained the tasks of stimulating and guiding the introduction of the nomenclature into the important hospitals of the country and collecting information concerning necessary additions to the book and other desirable changes. The Foundation's contribution was made to supplement the funds available for the second year of this period and to enable the conference to prepare a revised edition of the nomenclature.

Summary of Appropriations Made in 1934

PROGRAM OF SPECIFIC CONCENTRATION

Psychiatry

McGill University, Montreal, Canada. Teaching and research.....	\$54,600
Massachusetts Department of Mental Diseases, Boston. Studies at Boston State Hospital.....	41,100

Worcester State Hospital, Massachusetts. Research in dementia praecox.....	\$16,500
The Johns Hopkins University School of Medicine, Baltimore, Maryland. Study and teaching in child psychiatry.....	14,600
University of Leiden, Netherlands. Research in child psychiatry.....	19,700
Chicago Area Project, Illinois. Study of juvenile delinquency.....	22,500
University of Rochester, New York. Child guidance clinic.....	13,000
National Committee for Mental Hygiene, New York City. Support of activities during 1935	30,000
University of Colorado, Denver. School of Medicine. Teaching of psychiatry.....	10,000
University of Michigan Medical School, Ann Arbor. Teaching, research, and training in psychiatry.....	15,000
Institute of the Pennsylvania Hospital, Philadelphia. Teaching and research in psychiatry.....	18,000
	<hr/>
	\$255,000
Neurology and Related Subjects	
New York University, New York City. Research in neurology.....	\$5,000
Northwestern University Medical School, Chicago, Illinois. Institute of Neurology. Research in neuroanatomy.....	4,000
University of Pennsylvania, Philadelphia. School of Medicine. Research on growth of living nerve tissue.....	7,500
Walter and Eliza Hall Institute of Research in Pathology and Medicine, Melbourne, Australia. Research in virus diseases.....	12,600
Dartmouth College, Hanover, New Hampshire Medical School. Research in physiological optics.....	20,000
	<hr/>
	\$49,100
Other Research Projects	
Lister Institute of Preventive Medicine, London, England. Purchase of ultracentrifuge..	\$18,000
Royal Caroline Institute, Stockholm, Sweden. Research in biochemistry.....	22,400
Harvard University Medical School, Boston, Massachusetts (Robert W. Lovett Memorial Foundation). Research on synovial fluid	3,000

University of Rochester, New York School of
Medicine and Dentistry. Research on special
respiratory problems.....

\$2,500

\$45,900 \$350,000

FORMER PROGRAM

National Research Council, Washington, D.C.
Committee on Drug Addiction. Toward budget,
1936.....

\$50,000

University of California Medical School, San
Francisco. Chemical aspects of vitamins and
hormones.....

20,000

University of Montreal, Canada. Faculty of
Medicine. Development of laboratories.....

25,000

Columbia University, New York City. School of
Medicine. College of Physicians and Surgeons.
Studies of the common cold.....

15,000

Columbia University, New York City. School of
Medicine. College of Physicians and Surgeons.
Research in medical mycology.....

3,000

University of Rochester, New York School of
Medicine and Dentistry. Diathermy studies..

6,200

University of Rochester, New York School of
Medicine and Dentistry. Special research in
dental pathology.....

40,000

Yale University, New Haven, Connecticut. Re-
search in dental pathology.....

20,000

University of Copenhagen, Denmark. Institute
of General Pathology. Research on inheritance
in relation to blood groupings.....

8,500

University of Paris, France. Department of
Parasitology. Support, 1935-36.....

5,000

Medical literature, Russia (1935).....

10,000

\$202,700 \$202,700

GENERAL PROGRAM

Fellowships

Administered by The Rockefeller Foundation,
New York Office (1935).....

\$85,000

Administered by the Medical Research Coun-
cil, London, England (1935-36).....

15,000

For staff members and graduate students of
Peiping Union Medical College, China
(1934-35).....

25,000

For staff members and graduate students of
Peiping Union Medical College, China
(1935-36).....

25,000

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Administered by the National Research Council, Washington, D. C.....	\$20,000	
	<u> </u>	
	\$170,000	
Research Aid Grants		
Administered by The Rockefeller Foundation, Paris Office, for Europe (1934).....	\$90,000	
Administered by The Rockefeller Foundation, Paris Office, for Europe (1935).....	70,000	
Administered by The Rockefeller Foundation, New York Office. (Psychiatry and public health) (1934).....	30,000	
Administered by The Rockefeller Foundation, New York Office. (Psychiatry and public health) (1935).....	40,000	
Administered by the National Research Council, Washington, D. C. (1935).....	30,000	
	<u> </u>	
	\$260,000	\$430,000
EMERGENCY GRANT		
Special research aid fund for European scholars..	\$30,000	\$30,000
MISCELLANEOUS		
Visits by teachers of public health and hygiene..	\$3,500	
Study of neurophysiological research in Europe.	5,000	
National Conference on Nomenclature of Disease, New York City. General expenses.....	5,000	
	<u> </u>	
	\$13,500	\$13,500
Total Appropriations.....		<u>\$1,026,200</u>

In addition to the above amount an appropriation of \$10,000 was made for returned fellows of The Rockefeller Foundation working in all fields.

1934 Payments

Albany Medical College, New York. Organization of extension teaching in medicine.....	\$5,000.00
American University of Beirut, Republic of Lebanon. Improvement of teaching facilities in the medical sciences, nursing, and the premedical subjects.....	49,999.92
Central Institute for the Deaf, St. Louis, Missouri. Research in neurology.....	346.46
Cheeloo University, Tsinan, China. School of Medicine. Maintenance.....	12,318.75

Chicago Area Project, Illinois. General budget	\$7,097.84
China Medical Board, Inc., New York City. Maintenance of Peiping Union Medical College, 1934-35	175,000.00
China Medical Board, Inc., New York City. Salary and expenses of director	152.65
Chinese Medical Association, Shanghai. General budget	4,119.83
Chulalongkorn University, Bangkok, Siam. Equipment and supplies for medical, premedical, and nursing schools	154.34
Chulalongkorn University, Bangkok, Siam. Visiting professors and nurse leaders	5,870.63
Chulalongkorn University, Bangkok, Siam. Addition to pathology building and building for School of Nursing	11,656.22
Columbia University, New York City. College of Physicians and Surgeons. Research in medical mycology . . .	3,000.00
Columbia University, New York City. College of Physicians and Surgeons. Research in virus diseases	4,180.40
Columbia University, New York City. College of Physicians and Surgeons. Studies of the common cold	16,500.00
Columbia University, New York City. School of Tropical Medicine, University of Puerto Rico, San Juan. Studies of nutrition in Puerto Rico	4,000.00
Committee on the Grading of Nursing Schools, New York City. Publication	4,989.08
Cornell University Medical College, New York City. Studies of the rôle of the glands of internal secretion in relation to growth and inheritance	24,990.40
Dalhousie University, Halifax, Nova Scotia. Development of teaching in public health and preventive medicine	3,813.10
Dartmouth College Medical School, Hanover, New Hampshire. Research in physiological optics	10,000.00
Emergency aid to schools of nursing in Europe	2,368.01
Fellowships in psychiatry	34,535.10
Fellowships administered by The Rockefeller Foundation	115,186.08
Grants in aid in psychiatry and public health	27,298.01
Harvard Medical School, Boston, Massachusetts. Teaching and research in psychiatry	21,000.00
Harvard Medical School, Boston, Massachusetts. Research in physiology and physical chemistry	26,382.82
Harvard Medical School, Boston, Massachusetts. Studies of synovial fluid	1,500.00
Hungarian Scholarship Council, Budapest. Foreign scholarships in medicine	4,113.16
Institute for Psychiatric Research, Munich, Germany. Research in neurohistology, serology, and biochemistry	15,369.94

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Institute of the Pennsylvania Hospital, Philadelphia. Development of research and teaching in psychiatry.	\$9,000.00
Johns Hopkins School of Medicine, Baltimore, Maryland. Study and teaching in field of child psychiatry.	7,300.00
Johns Hopkins University School of Medicine, Baltimore, Maryland. Research in psychiatry.	20,000.00
Johns Hopkins University School of Medicine, Baltimore, Maryland. Study of deafness.	10,754.60
Johns Hopkins University School of Medicine, Baltimore, Maryland. Study of obstetrical records.	6,600.00
Kaiser Wilhelm Institute of Anthropology, Human Heredity, and Genetics, Berlin-Dahlem, Germany. Research on twins and the effect of poisons on germ plasm.	3,406.48
Leland Stanford, Jr., University, Stanford University, California. School of Medicine. General research fund	15,000.00
Library of the Society of Physicians, Vienna, Austria. Medical literature.	64.15
McGill University, Montreal, Canada. Faculty of Medicine. Teaching and research in neurology.	53,390.61
McGill University, Montreal, Canada. Faculty of Medicine. Endowment.	951,280.00
McGill University, Montreal, Canada. Faculty of Medicine. Construction and equipment of a laboratory in the Royal Victoria Hospital.	112,853.87
Massachusetts General Hospital, Boston. Development of teaching and research in psychiatry.	23,000.00
Massachusetts Society for Mental Hygiene, Boston. Work in field of mental disorders.	1,455.93
Medical literature for Russia.	14,939.32
Medical Research Council, London, England. Research in puerperal fever.	14,271.55
Medical Research Council, London, England. Research on virus diseases.	5,393.38
Medical Research Council, London, England. Fellowships.	16,011.33
National Conference on Nomenclature of Disease, New York City. General budget.	3,750.00
National College of Medicine of Shanghai, China. Maintenance.	3,374.64
National Research Council, Washington, D.C. Fellowships in the medical sciences.	53,295.34
National Research Council, Washington, D.C. Work of the Committee on Drug Addiction.	47,292.26
Neurophysiology in European countries. Survey.	3,379.47
New York University Medical College, New York City. Research in experimental neurology.	2,916.62
Northwestern University Medical School, Chicago, Illinois. Research in neuroanatomy.	2,000.00

Notgemeinschaft der Deutschen Wissenschaft, Berlin, Germany. Fellowships in the medical sciences	\$8,375.73
Peiping Union Medical College, China. Foreign fellowships	17,878.32
Peiping Union Medical College, China. Fellowships and grants in aid to graduate and departmental students	9,000.00
Research aid funds, Europe	99,917.52
Research aid fund, Special, for European scholars	36,566.81
Research and developmental aid in China	4,090.63
Shanghai, China. Purchase of land for medical school; expenses in connection therewith	622.23
State Central School of Nursing, Budapest, Hungary	750.00
Trudeau Foundation, Trudeau, New York. Research in tuberculosis	10,000.03
University College, London, England. Department of Physiology. Building and equipment	7,187.06
University of California Medical School, San Francisco. Study of chemical aspects of vitamins and hormones	11,000.94
University of Colorado School of Medicine, Denver. Teaching of psychiatry	5,000.00
University of Cracow, Poland. School of Public Health and Bedside Nursing. Salaries and scholarships	331.30
University of Leipzig, Germany. Institute of Physiological Chemistry. Research aid	10,825.00
University of Lyon, France. Faculty of Medicine and Pharmacy. Endowment	2,028.03
University of Lyon, France. Health Center for field training courses	8,000.00
University of Lyon, France. School of Nursing. Building and equipment	64,533.33
University of Michigan Medical School, Ann Arbor. Development of teaching and investigative work in psychiatry	7,500.00
University of Montreal, Canada. Faculty of Medicine. Development of laboratories	25,000.00
University of Oregon School of Medicine, Portland. General research fund	3,250.00
University of Padua, Italy. Institute of Histology and Embryology. Research	1,942.35
University of Paris, France. Radium Institute. Support of scientific personnel, Division of Physics	14,268.00
University of Paris, France. Faculty of Medicine. Department of Parasitology. Support	4,528.70
University of Pennsylvania School of Medicine, Philadelphia. Study of living tissues	18,730.62
University of Rochester School of Medicine and Dentistry, New York. Development of a child guidance clinic in the Department of Psychiatry	26,000.02

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University of Rochester School of Medicine and Dentistry, New York. General research fund.....	\$5,000.00
University of Rochester School of Medicine and Dentistry, New York. Special research in dental pathology.....	13,374.49
University of Rochester School of Medicine and Dentistry, New York. Special research on pulmonary capacity.....	1,250.00
University of Rochester School of Medicine and Dentistry, New York. Studies on the biological effects of heat.....	3,100.00
University of Szeged, Hungary. Maintenance of Department of Medicine.....	3,192.00
University of Szeged, Hungary. Scientific equipment for Department of Medicine.....	8,172.98
University of Toronto, Canada. School of Nursing. Maintenance.....	24,263.84
University of Turin, Italy. Institute of Anatomy. Research in problems of growth.....	2,855.58
Vanderbilt University School of Medicine, Nashville, Tennessee. General research fund in the medical sciences.....	45,000.00
Walter and Eliza Hall Institute of Research in Pathology and Medicine, Melbourne, Australia. Research in virus diseases.....	4,082.50
Washington University, St. Louis, Missouri. General research fund.....	15,000.00
Washington University School of Medicine, St. Louis, Missouri. Research in neurophysiology.....	11,185.08
Washington University School of Medicine, St. Louis, Missouri. Research on virus diseases.....	5,326.69
Western Reserve University School of Medicine, Cleveland, Ohio. Research on whooping cough.....	6,000.00
Worcester State Hospital, Massachusetts. Research in dementia praecox.....	12,000.00
Yale University, New Haven, Connecticut. Institute of Human Relations. Development of psychiatry and care of individuals under observation.....	100,000.00
Yale University School of Medicine, New Haven, Connecticut. General research fund.....	18,750.00
Yale University School of Medicine, New Haven, Connecticut. Special research in dental pathology.....	22,500.00
	<hr/>
Total Payments.....	\$2,670,052.07

In addition to the above amount, payments totaling \$74,418.65, for all fields, were made on appropriations of a general type in which the particular field of activity was not specified (general research aid funds, aid for returned Rockefeller Foundation fellows, visitors, etc.).

**THE MEDICAL SCIENCES
STAFF DURING 1934**

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ASSOCIATE DIRECTOR

William S. Carter, M.D.*

ASSOCIATE DIRECTOR

Robert A. Lambert, M.D.

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Bradley M. Patten†

ASSISTANT DIRECTOR

Daniel P. O'Brien, M.D.

* Retired May 1, 1934

† Appointed February 1, 1934

THE NATURAL SCIENCES

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THE NATURAL SCIENCES

In accordance with the general policy of concentration of effort which is reflected in the present programs of all divisions of The Rockefeller Foundation, the division of the natural sciences during the year 1934 terminated its interest in certain projects falling under previous program, diminished its support of general projects, and increased its support within the chosen area of experimental biology.

The items of previous program which received terminating support fall under the two headings: "Astronomy and Meteorology" and "Aid to Natural Science Departments of Chinese Universities." The first heading represents a field of scientific research in which the Foundation previously recognized an interest, but which will no longer be supported under the present program. The second heading represents an interest which, insofar as it is recognized in the present program, will no longer be cared for by the division of the natural sciences but as part of a unit program in China.

During previous years, when the available income and the extent and character of the demands upon the Foundation's resources made

such a procedure feasible, considerable support was given to practically all fields of pure science. In many instances this took the form of general support, money being appropriated to other organizations for allocation over whole broad fields of science. Specific illustrations are furnished by such items as the funds appropriated to the National Research Council for fellowships in physics, chemistry, mathematics, biology, forestry, and agriculture, and for research aid grants in these same fields; the funds appropriated to various universities to be allocated by them in aid of scientific research; and the funds used to aid general scientific publications in various scientific fields. Under the present policy, and in view of present circumstances, it is planned that aid of this general nature will be considerably reduced. A major reduction occurred previous to 1934, and the present statement reports a further reduction. Certain items, moreover, have been removed from this category by a complete redirection of the effort supported. For example, the European fellowship and research aid projects of the Foundation previously embraced all scientific fields, and hence were to be included under general program. These projects now, however, have been redirected specifically to serve in the future the newly recognized concentrated program in experimental biology.

In choosing that special field of science to receive support under the new concentrated program of the Foundation, consideration was given to the natural sources of support of various fields, to the relative degree of present support and of advancement, and more particularly to the practical probability of making a significant and rather direct contribution to the welfare and happiness of mankind. It is obvious that the physical sciences will continue to enjoy noteworthy advances: no thoughtful person would doubt this or deprecate it. But it seems equally assured that the physical sciences have now gained a momentum of interest, of facilities and trained personnel, and of public recognition and support which will guarantee this desirable advance. The biological sciences, however, are in a somewhat different position. Having little or no contact with invention and industry, their support has been relatively less extensive. The subtlety and complexity of the problems of living material have quite naturally resulted in a slower general progress. Significant and most promising advances of the last quarter century, aided to a considerable degree by the application to biological problems of many of the quantitative techniques of physics, chemistry, and mathematics, have, however, brought the reasonable assurance that the next quarter or half century

will see developments in the biological and psychobiological field which will be of enduring significance in the control of abnormal bodily processes, in the understanding of nervous and mental activity, and in the attainment of a way, for the average man, of sane, healthy, and happy living. For reasons of this general sort, The Rockefeller Foundation has decided to concentrate its present effort in the natural sciences on the field of modern experimental biology, with special interest in such topics as endocrinology, nutrition, genetics, embryology, problems centering about the reproductive process, psychobiology, general and cellular physiology, biophysics, and biochemistry.

Program of Specific Concentration

Experimental Biology

Genetics

Amherst College, Research in Biology

Biological research at Amherst College centers around the interpretation of the process of development. Professor Otto Glaser, head of the Department of Biology, who is a physiologist, is working on the interpretation, in chemical and physical terms, of growth phenomena and growth curves. Work on the effects of temperature on crossing-over in the chromosomes of *Drosophila*, and on the effects of high temperatures in the

production of mutations, is being carried out by Professor H. H. Plough; while methods of interspecies transplantation in amphibian eggs have been developed by Professor O. E. Schotté and seem to indicate that the presence of organ specificity is independent of any developmental inducator or organizer. In connection with this work Amherst College has received from The Rockefeller Foundation an appropriation of \$21,000. Of this amount, \$9,200 has been designated for apparatus and \$11,800 for salaries of technical assistants. The latter sum is to be expended over a five-year period beginning January 1, 1935, and the amount for apparatus is to be used during the period ending December 31, 1936.

**New York State College of Agriculture
Maize Stocks Clearing House**

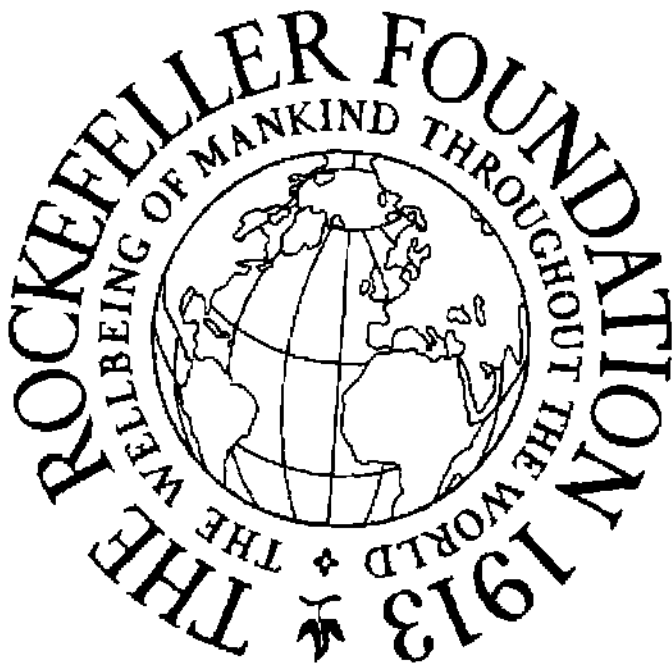
Under the leadership of Professor R. A. Emerson, a national group of over fifty corn geneticists holds conferences at various meetings of scientific societies for the purpose of exchanging ideas and information. There has also been set up at the New York State College of Agriculture at Cornell University by this same group, and under the immediate supervision of Professor Emerson, a clearing house for names and symbols of maize genes, to collect and distribute summaries of linkage data and other important genetic information, to maintain a respository for collecting,

storing, and disseminating seed stocks with new genes and desirable combinations of genes, and to raise all stocks at Cornell in order to insure against loss of valuable new races. This exchange of information among corn geneticists is of particular importance in preventing duplication of experiments since, in maize genetics, only one generation a year is possible and several years may elapse before publication of results. In support of this work of collecting and disseminating maize stocks, and for the exchange of published and unpublished information among plant geneticists of maize stocks, the Foundation appropriated \$5,000 to the New York State College of Agriculture at Cornell University.

American Society of Naturalists

Drosophila Stock Center

The American Society of Naturalists has received from the Foundation an appropriation of \$9,000 for the establishment of a stock center for *Drosophila* (fruit flies), at the Carnegie Institution laboratory at Cold Spring Harbor, Long Island, New York, under the direction of Dr. M. Demerec. More than 500 different genes and combinations of genes of fruit flies have been discovered by geneticists, and these stocks, together with the maize stocks collected at Cornell University, constitute some of the most valuable material

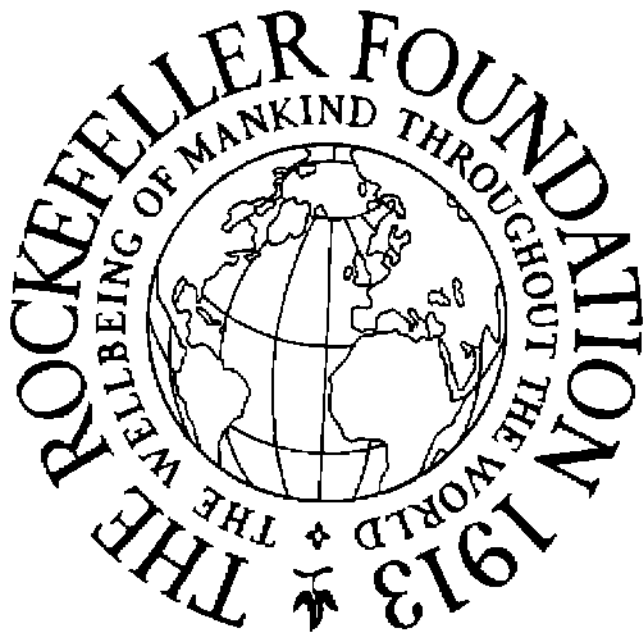


Photograph Excised Here

Corner of the laboratory of the *Drosophila* stock center of the Carnegie Institution, Cold Spring Harbor, New York, showing part of the stock cultures and equipment used in studies of the mechanism of heredity.

known to science for the study of the mechanism of heredity. Many of the most fundamental advances made by geneticists in America, Europe, and Japan, in experimental evolution and heredity, have resulted from work with fruit flies. At the present time, individual workers keep alive from 50 to 200 stocks, many of which may not be used for long periods, but which are too valuable to allow to die out, since a gene once lost may possibly never be recovered.

A committee of *Drosophila* geneticists met in Boston toward the end of 1933 to formulate plans for the establishment in the east of a central clearing house which would avoid duplication, preserve all known stocks of fruit flies at some important research center, and supply these stocks, as well as information concerning them, to the 200 or more geneticists in various parts of the world who are working with these insects. Such a stock center is maintained at Professor T. H. Morgan's laboratory in Pasadena. Plans were drawn up for the establishment of a similar stock center at Cold Spring Harbor in the Station for Experimental Evolution of the Carnegie Institution. The Carnegie Institution of Washington is furnishing space, materials, and maintenance, and The Rockefeller Foundation appropriations will be used for the establishment of the stocks themselves.



Photograph Excised Here

Laboratory of the Institute of Physical Chemistry of the University of Uppsala, where an ultracentrifuge giving 750,000 times the force of gravity is being used in research on the physico-chemical properties of proteins and other heavy molecules. The Foundation is contributing toward these studies.

**Roscoe B. Jackson Memorial Laboratory
Research in Mammalian Genetics**

In addition to the research in genetics concerned with fruit flies and maize, important work is being done with mice. Mammalian material is subject to the important influences of internal secretions, and some of the work with mice has been fruitful in producing theoretical findings. A notable center for this work is the Jackson Memorial Laboratory, Bar Harbor, Maine, under the direction of Dr. C. C. Little, who has been able to establish and maintain a stock of more than 20,000 mice. The Foundation contributed \$11,000 in 1933 toward the support of Dr. Little's work for the year 1934, and has now made a grant of \$12,500 in support of the research work in mammalian genetics during the year 1935.

Physicochemical Biology

**Harvard Medical School and Massachusetts Institute of
Technology**

Spectroscopic Analysis of Blood Serum in Anemia

Dr. K. D. Blackfan of the Harvard Medical School, in carrying out investigations of anemia in children, found it desirable to study the metabolism of iron and other metallic supplements to iron in the formation of hemoglobin. The relative amounts of these substances in the blood are so small that chemical determination

of the exact quantity is exceedingly difficult. However, spectroscopic methods have been successful in determining both the presence and the relative amounts of these elements in the blood.

A joint program of spectroscopic analysis was undertaken by Dr. Blackfan in collaboration with Professor George R. Harrison, spectroscopist of the Massachusetts Institute of Technology, in analyzing blood with special reference to the presence of iron, copper, manganese, and other elements necessary for hemoglobin production and metabolism. Samples of the blood are prepared in the laboratories of the medical school and then sent to the Institute of Technology for spectroscopic analysis. The facilities available for such work at this institute are among the best in the world. For the support of this work during the academic year 1934-35, The Rockefeller Foundation appropriated \$4,000.

Leland Stanford, Jr., University
Chemophysical Biology

The Laboratories of Chemophysical Biology at Stanford University, under the direction of Professor C. V. Taylor, are especially interested in using the instrumentation of the physical sciences in the solution of biological problems. Certain studies of protoplasm require minute and delicate instruments such as micromanipulators for the dissection of single cells and non-polariz-

able microelectrodes for potentiometric determinations in the interior of the cells, and these instruments must be controlled with high precision. The needs of the laboratory for equipment of this kind, as well as for ultra-violet ray equipment, constant temperature apparatus, and technical assistants, have been met in part through a Foundation grant to Stanford University of \$10,000 for support, during the academic year 1934-35, of investigations in the effects of irradiation and other chemophysical agents on unicellular animals.

**McGill University, Departments of
Neurology and Physics
Research in Spectroscopic Biology**

For the support of research work in the departments of neurology and physics of McGill University in the application of spectroscopic methods to biological and medical problems, The Rockefeller Foundation made a grant of \$10,000, available during the period May 1, 1934, to June 30, 1935. Under the leadership of Dr. J. S. Foster, Professor of Physics at McGill University, there has been developed a spectroscopic method whereby, in a small sample (one-fifth cc.) of spinal fluid, one hundred-millionth of a gram of lead can be detected and measured. Within one-half hour after the sample is taken from a patient, qualitative results can be ob-

tained; quantitative results require half a day.

This technique has direct application to lead poisoning. Dr. W. V. Cone and Dr. C. K. Russel, of the Department of Neurology of the Faculty of Medicine at McGill, are studying occult lead poisoning in its relation to multiple sclerosis and to various obscure nervous diseases. It has not been established that lead is the cause of multiple sclerosis, but in cases of this disease lead has been found in various tissues and fluids of the body. Advances have also been made in the treatment of this condition by calcium therapy.

For increasing the accuracy of the methods employed, there is required improved technique and a more refined apparatus. When these have been obtained it is proposed to extend the study of lead in the blood and the relationship of this lead to that found in the spinal fluid. Spectroscopic methods require so minute a sample that the work can be done with small experimental animals. Other research in spectroscopic biology now under way is concerned with the analysis of the secretory activity of digestive glands and the part played by the different epithelial structures of which these glands are formed, and with an application of the method to the identification and determination of the hormone content of pituitary gland preparations.

University of Chicago

Spectroscopic Methods Applied to Biological Problems

Recent work at the University of Chicago on the application of spectroscopic methods to the analysis of plant pigments has resulted in the development of very delicate but reliable apparatus by means of which it has been possible to determine the location and nature of the absorption band in chlorophyl, which in turn makes possible certain other delicate quantitative determinations. This specific work on chlorophyl has stimulated interest in widening the scope of application of this work to include an attack on the general problem of determining the nature, purity, and concentration of specific substances in various biological systems. For support of this work the Foundation has appropriated \$11,750 for a period of sixteen months ending June 30, 1935.

This research is being carried out under the leadership of Professor T. R. Hogness in physical chemistry, Professor F. C. Koch in physiological chemistry, and Professor E. J. Kraus in botany. The work has been largely concerned, to date, with the development of suitably accurate and powerful spectroscopic equipment for determining absorption coefficients. The future program provides for the investigation of various body fluids, with a view to obtaining information

concerning hormone, vitamin, enzyme, and other constituents.

University of Michigan
Research in Biophysics

An appropriation of \$8,800 has been made to the University of Michigan for research during the academic year 1934-35 on the application of spectroscopic methods to biological problems, under the auspices of the departments of physics and internal medicine. These two departments have been cooperating in developing spectroscopic methods of measuring inorganic substances in the urine. These methods have been sufficiently evolved to permit the rapid determination of the amount of magnesium, sodium, potassium, and calcium, from small samples with errors no greater, in general, than those involved in much more tedious chemical analyses. The technique is being further perfected for the purpose of extending it to the study of as many body fluids as possible. Other spectroscopic procedures, particularly infra-red absorption methods, are being investigated. Spectroscopic methods are also employed in the determination, through use of the Raman spectra, of the amounts of the various amino acids which constitute the protein molecule. The application of spectroscopic methods to such problems opens up two fields of in-

vestigation: the detection of unknown amino-acids with determination of their chemical nature, and the quantitative analysis of the constituent amino-acids of proteins.

Data obtained in the last few years emphasize the importance of analysis of the changing composition of the body fluids during disease. Research of this sort may thus be of considerable significance to medicine in diagnosis, prognosis, and therapy.

University of Uppsala
Physicochemical Properties of Proteins

This university has received from the Foundation a grant of \$11,000 in support of research conducted at the Institute of Physical Chemistry by Professor T. Svedberg on the physicochemical properties of proteins and other heavy molecules. Professor Svedberg's interest in the properties of protein molecules led to the development, some ten years ago, of the ultracentrifuge, the latest model of which gives over 750,000 times the force of gravity. Experiments with this instrument throw light upon the structure of the molecules of proteins, as well as upon the molecular weights of certain enzymes. Preliminary studies of the blood of healthy persons and of those having certain organic diseases indicate marked differences during health and disease in the number and size of the protein mole-

cules. The ultracentrifuge method thus promises to be valuable in the investigation of pathological changes in the blood. An ultracentrifuge installation which will be used largely to develop possible medical applications has recently been undertaken at the Lister Institute in London. (See page 96.)

California Institute of Technology
Research in Chemistry

For the support of researches in chemistry at the California Institute of Technology, under the direction of Dr. Linus Pauling, The Rockefeller Foundation has for the past three years contributed an annual sum of \$10,000. In continuation of this support, an appropriation of \$30,000 was made in 1934. This sum will be available over a three-year period beginning July 1, 1935.

The general nature and significance of this research was described in the Annual Report of The Rockefeller Foundation for 1933. Professor Pauling's work has consisted chiefly of the development of methods whereby to attack the different structural problems which are basic to biochemistry. During 1934 the quantum-mechanical methods previously developed and applied in connection with aromatic hydrocarbons and free radicals were extended and applied to other substances, such as porphyrins, which are

the characteristic constituents of hemoglobin and chlorophyl. There has also been developed in Professor Pauling's laboratories an x-ray method, by means of which the environment of an iron atom in hemin and related substances can be investigated.

Columbia University
Biological Effects of Heavy Hydrogen

The so-called heavy hydrogen, an atom of which weighs just twice as much as an atom of ordinary hydrogen, was discovered in 1931 by Harold C. Urey of Columbia University. This new substance is so important that one of the world's recognized authorities on chemical isotopes, Professor F. W. Aston of the University of Cambridge, stating that we have before us a new chemistry and a new biology, remarked that the potentialities, particularly in organic chemistry, of this discovery really merit the word sensational. For his discovery of heavy hydrogen, Professor Urey was awarded the Nobel Prize in Chemistry for 1934.

The substances which contain hydrogen are, from the point of view of biological chemistry, the most numerous and most important of all the compounds. In any hydrogen compound, heavy hydrogen can be substituted for ordinary hydrogen, so that in this manner there can be produced a vast array of new substances. The departments

of chemistry, zoology, botany, and physiological chemistry at Columbia University are engaged in cooperative research on the properties of heavy water with particular reference to the biological and physical effects. These researches include a study of enzyme reactions in heavy water media and the effect of heavy water upon the normal nutrition of animals and upon various other life processes of both plants and animals. The program is under the direction of Professor Urey and Professor J. E. Zanetti.

Heavy water is expensive. A long and delicate treatment of more than eight tons of ordinary water is necessary to produce one ounce of heavy water. Heavy water is, moreover, highly hydroscopic, so that it quickly becomes contaminated with ordinary water. In biological experiments great care and skill are required in order to concentrate, safeguard, reconcentrate, and analyze the original costly supply. For the completion of the research program undertaken by Columbia University, approximately one gallon of heavy water will be necessary. According to present calculations, this amount would cost nearly \$20,000. The Rockefeller Foundation has made an appropriation of \$22,500 to aid Columbia University in conducting researches on the biological effects of heavy hydrogen. The grant is available for one year, beginning July 1, 1934.

Physiology and Endocrinology
Columbia University
Pituitary-Gonad Interrelationship

Toward the support of a program of research on the pituitary-gonad interrelationship in mammalia, the Foundation contributed \$5,000 to Columbia University. The amount will be available for one year, beginning July 1, 1934, and the work will be under the direction of Dr. P. E. Smith, Professor of Anatomy, and Dr. E. T. Engle, Associate Professor of Anatomy. These men have, for a number of years, received support for their researches from the National Research Council's Committee for Research in Problems of Sex. The Foundation's appropriation supplements the committee's allotment of funds for this purpose.

National Research Council
Committee for Research in Problems of Sex

For the main work in this field during the year beginning July 1, 1935, The Rockefeller Foundation has appropriated to the National Research Council the sum of \$80,000, to be allocated to various research projects by the Committee for Research in Problems of Sex. A description of the work of this National Research Council Committee was given in the Annual Report of The Rockefeller Foundation for 1933. During 1934, the committee aided a number of well-estab-

lished projects, and in addition used a certain portion of its funds for projects representing its newer interests in the psychobiology of sex, including psychopathology.

Ohio State University

Research in Endocrinology

For researches on the chemical and clinical aspects of extracts obtained from the adrenal glands, The Rockefeller Foundation has made an appropriation of \$9,000 to Ohio State University, for use during the year 1935. This work is under the direction of Dr. F. A. Hartman, who in 1927 was one of the discoverers of cortin, a hormone of the adrenal cortex which has proved to be of importance in the treatment of Addison's disease and also in the treatment of surgical shock. Since that time Dr. Hartman has continued his researches on the endocrinology of the adrenal gland, outlining for 1935 a program which includes both research and clinical work. In carrying out the clinical portion of the program, there will be cooperation with clinics and laboratories in both Columbus and Boston.

State University of Iowa

Research in Cellular Physiology

For the past ten years, Professor J. H. Bodine of the State University of Iowa has been working on the cellular physiology of certain species

of grasshopper. The embryo of the grasshopper has been chosen for these basic cellular studies because of its relative simplicity as an organism, its lack of hormone or other disturbing factors, the large size of its cells, and the ease of temperature control in cold-blooded animals. Professor Bodine has devised a developmental time scale whereby the exact stage of development is known at hourly intervals, from egg to adult. With the aid of this time scale many problems of cellular physiology can now be attacked in a quantitative manner. Some of these problems deal with the intricacies of cell division and are of particular interest because of the possibility that they may throw light on the problem of abnormal cell division. The Foundation made an appropriation of \$10,000 to the State University of Iowa in support of these investigations for a period ending June 30, 1935.

**University of Michigan
Physiology of Respiration**

Researches in the Department of Physiology of the University of Michigan, conducted under the direction of Professor Robert Gesell, have dealt with the fundamentals involved in the control of respiration. Professor Gesell is interested in determining whether respiration is the result of an automatic discharge of the respiratory center or whether it is fundamentally a reflex

phenomenon subject to chemical control. Certain findings point strongly to the possibility that respiration is a reflex phenomenon. Studies are also being conducted on the control of circulation as it relates to the problem of respiratory control. For this work during the academic year 1934–35, The Rockefeller Foundation has made an appropriation of \$5,000.

**University of Rochester
Physiology of Reproduction**

Under the direction of Dr. G. W. Corner, Professor of Anatomy at the medical school of the University of Rochester, research work is being conducted on the physiology of reproduction in the monkey. This work was begun at the Johns Hopkins University in 1921, and since 1923 has been continued at the University of Rochester. It involves observational and experimental studies of the reproductive cycle in certain species of the higher primates, in which this cycle closely resembles that of the human species. The effect of the various interrelated reproductive hormones is being studied. A Foundation grant of \$3,300 has been made available for the academic year 1934–35.

**University of Wisconsin
Endocrinology**

For the support of the researches of Professor L. J. Cole on endocrine disturbances in animals,

the Foundation made a contribution of \$4,000 to the University of Wisconsin, for one year ending June 30, 1935. The purpose of the investigation is to extend to the larger domesticated animals researches of a fundamental character on the relation of endocrine disturbances to reproduction.

Fellowships and Research Aid Grants

The Foundation continued to contribute to the National Research Council for the administration of fellowships and research aid grants in the natural sciences. During 1934, \$100,000 was appropriated to the council for fellowships in the biological and physical sciences to be awarded during the year July 1, 1935 to June 30, 1936, and \$50,000 for research aid grants to be allocated during the years 1935 to 1937 inclusive. The council also received from the Foundation an emergency appropriation of \$30,000 for its general expenses during the years 1934-35 and 1935-36.

During the year 176 fellows studied under National Research Council grants: thirty-six in physics, thirty-seven in chemistry, nineteen in mathematics, and eighty-four in biological sciences. The number of research aid grants made by the council for the year 1934 was seventy-two: thirteen in physical sciences, thirteen in chem-

istry, twenty-one in geology and geography, and twenty-five in biological sciences.

Seventy-four fellowships in the natural sciences, including sixteen financed by the General Education Board, were administered directly by the Foundation during 1934. In addition, ten resident fellowships were granted to Chinese students for study in Chinese institutions. The following table shows the distribution of the fellowships, exclusive of the resident Chinese fellowships, by country of origin and subject of study. The table on page 150 shows their distribution by country of origin and chief place of study.

FELLOWSHIPS IN THE NATURAL SCIENCES ADMINISTERED BY
THE ROCKEFELLER FOUNDATION DURING 1934
ACCORDING TO FIELD OF STUDY

Country of Origin	Physical Sciences	Biological Sciences	Totals
China.....	12	3	15
Czechoslovakia.....	1	..	1
Denmark.....	3	..	3
England.....	8	3	11
France.....	3	2	5
Germany.....	7	..	7
Greece.....	1	..	1
Italy.....	2	..	2
Netherlands.....	1	..	1
Poland.....	3	1	4
Scotland.....	2	..	2
Sweden.....	1	1	2
Switzerland.....	2	1	3
United States.....	3	14	17
Totals.....	49	25	74

In addition to the fellowships administered by the Foundation, research aid grants were awarded during the year to individual scientists to enable them to carry forward work in progress. Although the amounts given in research

aid grants are always relatively small, the work accomplished with their aid is frequently of the greatest importance.

The following are typical grants: \$5,936 to McGill University for research assistants and materials for research on the posterior lobe of the pituitary gland, under Professor R. L. Stehle; \$4,800 to Washington University, St. Louis, to finance research on the nature of the nerve impulse and related problems in nerve physiology, conducted by Professor F. O. Schmitt; \$4,425 to the University of California, Berkeley, for Professor T. H. Goodspeed's investigation of the disposition of fixed minerals in the living cell as shown by the microincineration method; \$3,000 to the University of Göttingen, Germany, in aid of Professor A. Kühn's researches on the relation between genetics and endocrinology in moths and in amphibians; \$3,000 to Yale University to provide research assistance and equipment for the development of optical methods for the study of bacteriological life cycles, under the direction of Professor C.-E. A. Winslow; \$4,800 to the University of Leeds, England, for researches by W. T. Astbury, director of the physical laboratory of the Textile Department, on the x-ray analysis of the structure of tissues; \$7,500 to the Institute of Theoretical Physics at the University of Copenhagen, for special scientific equip-

FELLOWSHIPS IN THE NATURAL SCIENCES ADMINISTERED BY THE ROCKEFELLER FOUNDATION DURING 1934 ACCORDING TO COUNTRY OF ORIGIN AND CHIEF PLACE OF STUDY

Country of Origin	Denmark	England	Germany	Irish Free State	Italy	Netherlands	Sweden	Switzerland	United States	Totals
China.....	15	15
Czechoslovakia.....	1	1
Denmark.....	1	..	..	..	..	..	1	3
England.....	2	..	..	..	..	..	..	..	2	12
France.....	1	..	..	..	..	..	..	..	5	5
Germany.....	..	1	..	..	..	..	..	..	3	7
Greece.....	1	1
Italy.....	1	..	..	1	2
Netherlands.....	1	1
Poland.....	..	2	..	..	..	..	..	..	1	4
Scotland.....	2	2
Sweden.....	2	2
Switzerland.....	1	3
United States.....	..	3	1	1	1	..	1	..	11	17
Totals.....	3	7	2	1	2	1	4	1	33	74

ment to be used in connection with research work under Professor Niels Bohr; \$2,600 to the University of Oxford, in aid of Professor F. A. Lindemann's research on low temperature effects, in the Clarendon Laboratory of Physics; \$2,500 to the University of Virginia to provide research assistance to Professor J. W. Beams in continuing his work on Allison's magneto-optic method; and \$2,198 to George Washington University for research assistance, experimental animals, and chemicals to be used by Professor Vincent du Vigneaud in his researches on the synthesis of the higher homologues of cystine and of methionine and their utilization for growth purposes and their fate in the body.

General Program

Aid to Institutions

Long Island Biological Laboratory

Three appropriations were made during the year to the Long Island Biological Association at Cold Spring Harbor, New York. One was in the amount of \$20,000, of which \$15,000 was designated for support of the work of the Biological Laboratory during 1934 and \$5,000 for the expenses of a summer symposium on biophysics which was held during the summer of that year. The other two grants, made later in the year, provide \$7,000 for the expenses of the symposium of

the summer of 1935 and \$26,000 for gradually diminishing support of the Biological Laboratory over a three-year period beginning January 1, 1935.

The Biological Laboratory at Cold Spring Harbor has received Foundation support since 1931. It has been in existence since 1890, and since 1923 has been concerned chiefly with research. At present it offers facilities, available throughout the year, for advanced research by qualified scientists, and graduate summer courses, combined with research, in all fields of biology. It also maintains a small permanent staff of full-time research workers. About fifty visiting scientists and thirty students work there during the summer.

In 1933 a new feature was added to the laboratory's program in the form of a summer conference-symposium on various topics of modern experimental biology. At these conferences there is brought together a moderate-sized group of specialists in some live and important field of quantitative biology. One or two papers are presented daily for a period of five weeks, and there is ample time for discussion, criticism, and exchange of views.

**University of Virginia
General Research Fund**

For the development of general research in the natural sciences, the Foundation appropriated to

the University of Virginia the sum of \$35,000, available, on a conditional basis, over a period of five years, beginning with the academic year 1935-36. This is a continuation of an eight-year grant made in 1928, for the same purpose, by the International Education Board.

**Aid to Scientific Publications
American Mathematical Society**

As an emergency measure, the Foundation appropriated \$8,500 to the American Mathematical Society toward the development of a plan of support for the society's scientific publications. With the aid of this grant, one of the society's officers, Professor Mark H. Ingraham of the University of Wisconsin, visited some seventy colleges and universities in the United States and Canada for the purpose of soliciting sustaining memberships in the society, the fees involved to be roughly proportional to the amount of mathematical research published by the staffs. The general plan to augment the society's resources involves, in addition, an increase in the subscription price of the principal journal, and the establishment of a new type of voluntary contributing membership for new members.

The American Mathematical Society received support from the General Education Board dur-

ing the years 1925 to 1931, and has been aided by the Foundation since 1931.

**National Research Council
Biological Abstracts**

For the general expenses of editing *Biological Abstracts*, and for indexing the volumes which have already appeared, the Foundation made two appropriations during the year to the National Research Council. One of these grants was in the amount of \$85,000, for use during 1934; the other, of \$75,000, will be applied to the budget for 1935. The Foundation has contributed to the support of this publication since 1925, when this abstracting service was initiated.

Former Program

**Astronomy and Meteorology
Apia Observatory, Western Samoa**

The Apia Observatory, which has been in existence since 1902, originally belonged to Germany but was mandated in 1921 to New Zealand. Its work is concerned with terrestrial magnetism, meteorology, seismology, atmospheric electricity, solar radiation, and earth and sea tides. It has uninterrupted recordings since 1904. Since there is no other geophysical station within 2,000 miles, its records are of importance for the world study of physical phenomena.

The Foundation has contributed a total of

\$15,000 to the work of the Apia Observatory since 1931. The most recent grant, made in May 1934, allocated \$2,500 to the observatory for its research program for a period of one year, ending March 31, 1935.

**California Institute of Technology
Meteorological Research**

At the California Institute of Technology, the group interested in geophysical research has for some time applied itself with recognized success to research problems in meteorology. Dr. Beno Gutenberg, professor of geophysics, has had large experience in forecasting in Germany; Dr. Theodor von Karman, professor of aeronautics and director of the Daniel Guggenheim Laboratory, has gained outstanding position for his theoretical treatment of the problem of turbulence; and Dr. Irving P. Krick has applied air-mass problems to forecasting.

In aid of its program of research, the California Institute of Technology received from The Rockefeller Foundation a grant of \$5,000. This sum will be available until June 30, 1935.

International Commission for the Polar Year 1932-33

An appropriation of \$15,000 was made by the Foundation to the International Commission for the Polar Year 1932-33, toward expenses of analyzing, discussing, and distributing the geo-

physical data resulting from the observations made in 1932-33. The Foundation appropriated \$40,000 in February 1932 in support of the activities during the Polar Year.

The First International Polar Year occurred in 1882-83, when fourteen expeditions were sent out by twelve different countries—twelve to the Arctic region and two to the Antarctic. The scientific and practical results of these expeditions were of great importance.

The Second Polar Year occurred during 1932-33. The name of this scientific enterprise is somewhat misleading inasmuch as its activities are not at all restricted to a single year nor to the polar regions. Twenty-six different nations participated in the more recent venture which was described in the Annual Report for 1932. This international collaboration resulted in the most significant effort ever organized to investigate important world-wide geophysical phenomena.

Professor D. La Cour, President of the International Commission for the Polar Year 1932-33, has been made director of a temporary central bureau to deal in various ways with the material collected.

Emergency Grants, China

Since 1916 the Foundation has made appropriations for the advancement of premedical

sciences in China, the greater part of which have been used for the development of science teaching in various colleges and universities. The original purpose of these grants was to provide for improved preparation of future students of the Peiping Union Medical College. In 1933 an appropriation of \$25,000 was made for emergency aid for equipment and current expenses of maintenance of science teaching in five Chinese universities, available until June 30, 1934. During 1934 an additional appropriation of \$35,000 was made, which will be available until June 30, 1935, in the following amounts: \$1,250 to Ginling College, Nanking; \$20,000 to Lingnan University, Canton; \$5,000 to Nanking University; \$4,375 to Cheeloo University, Tsinan; and \$4,375 to Sochow University.

Summary of Appropriations Made in 1934

PROGRAM OF SPECIFIC CONCENTRATION

Experimental Biology

Genetics

Amherst College, Massachusetts. Research in genetics and experimental embryology . .	\$21,000	
New York State College of Agriculture, Cornell University, Ithaca. Collection and dissemination of maize stocks	5,000	
American Society of Naturalists. Establishment of <i>Drosophila</i> stock center at Cold Spring Harbor, New York.	9,000	
Roscoe B. Jackson Memorial Laboratory, Bar Harbor, Maine. Research in mammalian genetics	12,500	\$47,500

Physicochemical Biology

Harvard University Medical School and Massachusetts Institute of Technology,

Cambridge. Spectroscopic analysis of blood serum of anemic children.....	\$4,000	
Leland Stanford, Jr., University, Stanford University, California. Chemicophysical biology.....	10,000	
McGill University, Montreal, Canada. Biophysical research.....	10,000	
University of Chicago, Illinois. Research in application of spectroscopic methods to biological problems.....	11,750	
University of Michigan, Ann Arbor. Departments of Physics and Internal Medicine. Research in application of spectroscopic methods to biological and medical problems.....	8,800	
University of Uppsala, Sweden. Physicochemical researches.....	11,000	
California Institute of Technology, Pasadena. Research in chemistry.....	30,000	
Columbia University, New York City. Biological effects of heavy hydrogen.....	22,500	\$108,050
Physiology and Endocrinology		
Columbia University, New York City. Pituitary-gonad interrelationship.....	5,000	
National Research Council, Washington, D.C. Committee for Research in Problems of Sex.....	80,000	
Ohio State University, Columbus. Research in endocrinology.....	9,000	
State University of Iowa, Iowa City. Research in cellular physiology.....	10,000	
University of Michigan, Ann Arbor. Research on physiology of respiration....	5,000	
University of Rochester, New York. Research on physiology of reproduction....	3,300	
University of Wisconsin, Madison. Research in endocrinology.....	4,000	\$116,300
Quantitative Biology		
Long Island Biological Association, Cold Spring Harbor, New York. Support of symposium held during summer of 1934.....	5,000	
Long Island Biological Association, Cold Spring Harbor, New York. Support of symposium to be held during summer of 1935.....	7,000	\$12,000
Fellowships and Research Aid Grants		
Fellowships administered by The Rockefeller Foundation, 1935.....	65,000	

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Research aid grants administered by The Rockefeller Foundation, New York Office, 1934.....	\$30,000	
Research aid grants administered by The Rockefeller Foundation, New York Office, 1935.....	50,000	
Research aid grants administered by The Rockefeller Foundation, Paris Office, 1934..	40,000	
Research aid grants administered by The Rockefeller Foundation, Paris Office, 1935..	60,000	\$245,000
GENERAL PROGRAM		
Aid to Institutions		
Long Island Biological Association, Cold Spring Harbor, New York. Support of biological laboratory during 1934.....	15,000	
Long Island Biological Association, Cold Spring Harbor, New York. Support of biological laboratory, 1935-1937.....	26,000	
National Academy of Sciences, Washington, D.C. General expenses of the National Research Council during years 1934-35 and 1935-36.....	30,000	
University of Virginia, Charlottesville. General research fund.....	35,000	
Zoological Station of Naples, Italy. Compensation for loss in exchange.....	4,260	\$110,260
Aid to Scientific Publications		
American Mathematical Society, New York City. Support of scientific publications....	8,500	
National Research Council, Washington, D.C. Editing and indexing <i>Biological Abstracts</i> , 1934 and 1935.....	85,000	
National Research Council, Washington, D.C. Editing and indexing <i>Biological Abstracts</i> , 1935.....	75,000	\$168,500
Fellowships and Research Aid Grants		
Fellowships administered by the National Research Council, 1935-36.....	100,000	
Research aid grants administered by the National Research Council, 1935-37.....	50,000	\$150,000
FORMER PROGRAM		
Astronomy and Meteorology		
Apia Observatory, Western Samoa. Support..	2,500	
California Institute of Technology, Pasadena. Support of program in meteorology.....	5,000	
International Commission for the Polar Year 1932-33. Toward expenses of analysis of findings.....	15,000	

University of Leiden, Netherlands. Johannes- burg Observatory, Union of South Africa. Supplement to compensate for loss in ex- change.....	\$29,000	
University of Oslo, Norway. Institute of Theoretical Astrophysics. Supplementary grant for construction and equipment of building.....	7,100	\$58,600
Aid to Natural Science Departments of Chinese Universities		
Cheeloo University, Tsinan	4,375	
Ginling College, Nanking.....	1,250	
Lingnan University, Canton.....	20,000	
Nanking University.....	5,000	
Soochow University.....	4,375	\$35,000
Total Appropriations.....		\$1,051,210

In addition to the above amount an appropriation of \$10,000 was made for returned fellows of The Rockefeller Foundation working in all fields.

1934 Payments

American Institute of Physics, New York City. Scientific publications.....	\$3,979.78
American Mathematical Society, New York City. Scien- tific publications.....	13,000.00
American Mathematical Society, New York City. Sup- port of <i>Annals of Mathematics</i>	750.00
American Society of Naturalists. Establishment of <i>Dro- sophila</i> stock center, Cold Spring Harbor, New York.	9,000.00
California Institute of Technology, Pasadena. Research in biology.....	15,000.00
California Institute of Technology, Pasadena. Research in chemistry.....	5,000.00
California Institute of Technology, Pasadena. Research in physics and chemistry.....	10,000.00
California Institute of Technology, Pasadena. Support of meteorological program.....	5,000.00
Cheeloo University, Tsinan, China. Maintenance of science departments.....	4,375.00
China Medical Board, Inc., New York City. Peiping Union Medical College, China. Human paleontological research in Asia.....	14,231.84
Columbia University, New York City. Research in pituitary-gonad interrelationship.....	2,500.00
Columbia University, New York City. Research in bio- logical effects of heavy hydrogen.....	11,250.00

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Fellowships in the natural sciences administered by The Rockefeller Foundation	\$99,647.52
Fukien Christian University, Foochow, China. Maintenance of science departments	5,000.00
Ginling College, Nanking, China. Maintenance of science departments	1,250.00
Grants in aid in fields of vital processes and earth sciences	35,367.52
✓ Hannover Polytechnic School, Germany. Scientific equipment for research in inorganic chemistry	2,872.66
Harvard University, Cambridge, Massachusetts. Chemical research to determine heats of organic reactions	8,000.00
Harvard University, Cambridge, Massachusetts. Geophysical research	10,000.00
Hungarian Biological Research Institute, Tihany. Maintenance	1,596.00
Iowa State College of Agriculture and Mechanic Arts, Ames. General research fund in the natural sciences	6,250.00
Johns Hopkins University, Baltimore, Maryland. Biological research	42,500.00
Jungfrauoch Scientific Station, Switzerland. Construction and equipment	24,936.20
✓ Kaiser Wilhelm Institute of Physical Chemistry and Electrical Chemistry, Berlin-Dahlem; Germany. Scientific equipment	1,684.45
Keio Gijuku University, Tokyo, Japan. Salary and expenses of visiting professors in biological sciences	5,032.37
Leland Stanford, Jr., University, Stanford University, California. Research in chemophysical biology	7,000.00
Lingnan University, Canton, China. Maintenance of science departments	20,000.00
Long Island Biological Association, Cold Spring Harbor, New York. Work of the Biological Laboratory	20,000.00
McGill University, Montreal, Canada. Research in the application of spectroscopic methods to biological and medical problems	7,500.00
Marine Biological Association of China, Amoy. Support of marine institute of biology	853.05
Massachusetts Institute of Technology, Cambridge. Aerological research	8,300.00
Massachusetts Institute of Technology, Cambridge. General research fund for physics, chemistry, geology, and biology	30,000.00
National Academy of Sciences, Washington, D.C. Work of Committee in Aid of Research Publications	10,310.00
National Academy of Sciences, Washington, D.C. General expenses of National Research Council	8,000.00
National Research Council, Washington, D.C. Publication of <i>Annual Tables of Constants and Numerical Data</i>	3,000.00

National Research Council, Washington, D.C. Publication of <i>Biological Abstracts</i>	\$77,754.66
National Research Council, Washington, D.C. Committee on Effects of Radiation on Living Organisms. . . .	7,500.00
National Research Council, Washington, D.C. Committee for Research in Problems of Sex.....	73,327.90
National Research Council, Washington, D.C. Fellowships in the biological sciences.....	110,298.40
National Research Council, Washington, D.C. Fellowships in the physical sciences.....	129,211.86
National Research Council, Washington, D.C. Fellowships in the physical and biological sciences.....	28,967.42
National Research Council, Washington, D.C. Research aid fund.....	50,000.00
New York State College of Agriculture, Cornell University, Ithaca. Support of clearing house for maize genetics.....	5,000.00
New Zealand Department of Scientific and Industrial Research, Wellington. Work of the Apia Observatory, Western Samoa.....	2,500.00
Ohio Wesleyan University, Delaware, Ohio. Support of Perkins Observatory.....	2,645.23
Peiping Union Medical College, China. Human paleontological research in Asia.....	2,349.19
Research aid funds, Europe.....	38,365.67
Research aid fund, Special, for European scholars.....	43,478.71
Research and developmental aid in China.....	4,090.63
Roscoe B. Jackson Memorial Laboratory, Bar Harbor, Maine. Research in mammalian genetics.....	11,000.00
Royal Joseph Technical University, Budapest, Hungary. Support of investigations of problems in the chemistry of carbohydrates.....	500.00
Soochow University, Soochow, China. Maintenance of science departments.....	4,375.00
State University of Iowa, Iowa City. Support of investigations on the physiology of the normal cell.....	5,000.00
Tohoku Imperial University, Sendai, Japan. Salary and expenses of visiting professors in biological sciences. .	2,815.98
University of Chicago, Illinois. Research in the biological sciences.....	39,971.47
University of Chicago, Illinois. Research in application of spectroscopic methods to biological problems.....	8,812.50
University of Geneva, Switzerland. Station of Experimental Zoology. Construction and equipment.....	16,426.45
University of Göttingen, Germany. Institute of Inorganic Chemistry. Construction and equipment.....	8,295.00
University of Michigan, Ann Arbor. Research in applications of spectroscopic methods to biological and medical problems.....	4,400.00

University of Michigan, Ann Arbor. Research in physiology of respiration.....	\$2,500.00
University of Minnesota, Minneapolis. Establishment of laboratory for rock analysis.....	101.27
University of Nanking, China. Maintenance of science departments.....	5,000.00
University of North Carolina, Chapel Hill. Research in the natural sciences.....	5,000.00
University of Oslo, Norway. Institute of Theoretical Astrophysics. Equipment.....	2,742.82
University of Oslo, Norway. Institute of Theoretical Astrophysics. Construction and equipment.....	32,957.02
University of Rochester, New York. Research in physiology of reproduction.....	1,650.00
University of Stockholm, Sweden. Increased facilities for investigations in zoophysiology.....	372.08
University of Szeged, Hungary. Maintenance of departments of science.....	3,192.00
University of Szeged, Hungary. Scientific equipment for departments of science.....	8,172.97
University of Uppsala, Sweden. Institute of Physical Chemistry. Research assistants.....	4,011.87
University of Utrecht, Netherlands. Institute of Comparative Physiology. Construction of building.....	39,968.50
University of Warsaw, Poland. Research apparatus....	1,943.08
University of Washington, Seattle. Building and equipment of laboratory and boat for oceanographic work; maintenance of boat.....	5,098.81
University of Wisconsin, Madison. Research in endocrinology.....	2,000.00
Washington University, St. Louis, Missouri. General research fund.....	15,000.00
Woods Hole Oceanographic Institution, Massachusetts. Current expenses.....	55,000.00
Yale University, New Haven, Connecticut. Institute of Human Relations. Maintenance of anthropoid experiment station, Orange Park, Florida.....	40,000.02
Yenching University, Peiping, China. Maintenance of science departments.....	12,500.00
Zoological Station of Naples, Italy. Current expenses....	9,462.00
Total Payments.....	\$1,376,944.90

In addition to the above amount, payments totaling \$74,418.65, for all fields, were made on appropriations of a general type in which the particular field of activity was not specified (general research aid funds, aid for returned fellows of The Rockefeller Foundation, visitors, etc.).

**THE NATURAL SCIENCES
STAFF DURING 1934**

**DIRECTOR
Warren Weaver**

**ASSOCIATE DIRECTOR IN EUROPE
Lauder W. Jones***

**ASSISTANT DIRECTORS
Frank Blair Hanson
Harry M. Miller, Jr.
W. E. Tisdale**

*Retired July 31, 1934.

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During 1934, in the social sciences the Foundation not only maintained its general program but also continued its more recent policy of directing its interest toward certain specified objectives. The general program has consisted of aid to centers for teaching and research, fellowships and research aid grants, and the support of advisory and planning bodies and social science publications. Here the Foundation's immediate interest has been the development of the institution, the organization, or the man. The Foundation has not specified the subjects to be studied. In addition the Foundation has had an interest in the special fields of economic planning and control, international relations, and community organization and planning. The effect of this interest has been reinforced by an increased emphasis, in general program, upon problems of contemporary urgency. A large amount of the funds, given without specification by the Foundation, has been devoted to work in one or another of these special fields. The greater part of the research carried on under the direction of universities or institutes, advisory or planning bodies, or indeed by individual fellows or in-

investigators, has fallen in the fields of economic stabilization or international relations. The result has been an emphasis, throughout the Foundation's program in the social sciences, upon these problems of current importance. During 1934, \$1,164,490 was appropriated for the social sciences.

The general program in the social sciences, which was taken over from the Laura Spelman Rockefeller Memorial when that organization was amalgamated with The Rockefeller Foundation in 1929, has been in effect for more than fifteen years. By decision of the trustees it has been decided to terminate this program as soon as practicable in favor of a policy of concentration in areas of specific interest which offer possibilities of practical solution and some contemporary application. On the basis of studies already under way, the officers will make recommendations to the trustees during 1935 regarding the areas in which specific programs of this character may be most profitably undertaken. New programs for the social sciences, formulated under principles adopted in 1934, will be initiated in 1935.

During the period in which the program of general support has been active in the United States, changes have taken place in the character of research, graduate instruction, and re-

search training. Much more than heretofore, social science research in the universities is realistic in the sense that it now recognizes the enormous complexity of the problems under study. There is less abstract theorizing, less dispute as to method, more reasoning on the basis of extensive evidence regarding real situations. Rigorous theoretical training is now more securely upheld by a richer supporting documentation. This change in the character of research activity is reflected in the research training of the oncoming generation. They are better equipped technically at no apparent loss of basic theoretical training. In fact, the more realistic character of recent research and training may well account for the larger rôle played by the social scientist in recent American public life.

A. General Program

1. Institutional Centers for Research and Advanced Training

Support of institutional centers for research and advanced training was one of the original elements in the Foundation's social science program. The purpose here has been to combine in a few selected centers of national or regional importance the promotion of realistic social science research with improved advanced research training. The following table indicates the scope of the program:

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INSTITUTIONAL CENTERS RECEIVING SUPPORT DURING 1934
UNDER PREVIOUS APPROPRIATIONS

Name of Institution	Amount†
United States:	
Brookings Institution, Washington, D.C. Research program.....	\$75,000
Columbia University, New York City. Council for Research in the Social Sciences.....	75,000*
Harvard University, Cambridge, Massachusetts. Research fund for social sciences.....	75,000*
Leland Stanford, Jr., University, Stanford University, California. Research fund for social sciences.....	40,000*
University of California, Berkeley. Institute of the Social Sciences. Research program.....	30,000
University of Chicago, Illinois:	
Faculty of the Social Sciences. Endowment.....	500,000‡
Division of the Social Sciences. Research facilities..	75,000*
University of North Carolina, Chapel Hill. Institute for Research in the Social Sciences.....	30,000*
University of Texas, Austin. Research fund for social sciences.....	25,000*
University of Virginia, Charlottesville. Institute for Research in Social Sciences.....	10,000*
Canada:	
McGill University, Montreal. Research fund for social sciences.....	25,000*
Europe:	
Institute of Economics and History, Copenhagen, Denmark. General budget.....	6,000
Institute of Economic and Social Research, Paris, France. General budget.....	Frs. 750,000*
International Institute of Public Law, Paris, France. Budget.....	Frs. 100,000
London School of Economics and Political Science, England. Land.....	
Research fund in social sciences.....	\$150,000‡
Library. Building and equipment.....	17,000*
Library. Development.....	300,000‡
Improving facilities for research and postgraduate teaching.....	50,000‡
	30,000*
Rumanian Institute of Social Sciences, Bucharest. Administrative and research program.....	7,500
University of Oslo, Norway. Institute of Economics. Research program.....	10,000
University of Stockholm, Sweden. General research program in social sciences.....	9,000*

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University of Stockholm, Sweden. Development of social science library.....	\$4,000
Near East:	
American University of Beirut, Republic of Lebanon. Program in social sciences.....	10,000†
The East:	
Nankai University, Tientsin, China. Institute of Economics.....	15,000*
Yenching University, Peiping, China. College of Public Affairs.....	10,000*

* Academic or fiscal year 1934-35.

† In this table and in those that follow the total amount available for the year is shown. Inasmuch as all or a part of many of the grants was made on a matching basis, the individual items do not necessarily represent the amounts actually received by the beneficiaries during the year.

‡ Total amount of appropriation; available as needed, to date of termination of grant.

¶ Academic year 1933-34.

During the year under review, six grants were made to institutions which were already receiving funds under previous appropriations. Support of the Institute for Research in the Social Sciences at the University of Virginia was extended on a tapering basis over a five-year period in order to give further opportunity to the university authorities to provide for the permanent establishment of the institute. Work carried on under the earlier appropriation has been centered upon problems of the State of Virginia. These studies appear to have contributed to the formulation of state policy. Thus the institute's study entitled "Stabilization of Employment in Virginia and Building up Employment Reserves" proved very timely in connection with

the formulation of the state's unemployment program. The institute has collaborated for some time with the public authorities in studying the state's tax problems and also with the League of Virginia Municipalities and the School of Political Science of the University of Virginia in the maintenance of the Bureau of Public Administration which is devoted to the study and investigation of municipal administrative problems and to the training of graduate students in political science.

A grant of \$16,000 was made to the American University of Beirut for the academic year 1934-35. Part of this grant was to compensate for exchange losses suffered through the devaluation of the dollar. Similarly, small grants were made to Yenching and Nankai Universities to take care of exchange losses.

The University of Chicago received \$100,000 for the purchase of social science materials. An exhaustive survey revealed serious gaps in the files of documents, particularly in the way of American and foreign public items. The Foundation's contribution was designed to create a library of a quality appropriate to the university's standing as an international center of social research.

During 1934 the University of Stockholm received additional support to permit it to share

with an American university the services of an American sociologist. The purpose of the grant was to enable the university to introduce a specifically American method of attack upon social problems and to train young people in this methodology. This action represents an interesting variation from the fellowship mechanism for transferring scientific techniques from one area to another.

In addition to these grants to institutions already receiving Foundation support, this part of the general program was extended to include two other European universities.

A five-year grant was made to the University of Oxford at the request of the Hebdomadal Council, in order to facilitate the realization of promising plans in the social sciences which had been matured over a two-year period by a special faculty committee. The plans provided for the establishment of a statistical institute, the strengthening of undergraduate instruction in certain departments, and the encouragement of realistic research on the part of members of the faculty through the provision of appropriate types of aid. The administration of the research fund is under a special board. A small portion of the grant is to be used to develop further the plans for stimulating research in the several social science faculties and for elaborating an improved

program of training for men entering public administration, the social services, and the colonial service. Oxford's strong position among the universities and in the public life of Great Britain renders developments there exceptionally significant.

In September 1934, when the exchange situation made extended commitments involving foreign currencies undesirable, the Foundation appropriated \$21,000 to the University of Paris for a one-year period. This represented at once provision for the continuation and completion of a number of small research projects in progress in university institutes and a first step toward better organized planning of research and training in a center of international importance. This grant, together with the appropriation made in 1933 to the Institute of Economic and Social Research, will aid the social scientists of Paris by providing greater opportunity for realistic research which has come to be regarded as an important element in the progress of the social sciences and in the training of the oncoming generation of scholars.

SUMMARY OF APPROPRIATIONS TO INSTITUTIONAL CENTERS IN 1934

University of Chicago, Illinois. Purchase of basic documents.	\$100,000
University of Chicago, Illinois. Interest on endowment of Faculty of Social Sciences.	1,000
University of Virginia, Charlottesville. Institute for Research in the Social Sciences.	30,000
University of Oxford, England. Social science research.	130,000

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University of Paris, France. Research fund in social sciences	\$21,000
University of Stockholm, Sweden. Special faculty appointment.....	3,750
American University of Beirut, Republic of Lebanon. Research in the social sciences.....	16,000
Nankai University, Tientsin, China. Institute of Economics.	7,500
Yenching University, Peiping, China. College of Public Affairs.....	5,000
	<hr/>
Total.....	\$314,250

2. Fellowships

The fellowship program is another of the original elements in the Foundation's general program. It has been concerned with improving the training of younger scholars even more than with the grants to institutional centers. Field experience has been emphasized in view of the difficulties of combining university training directed toward academic degrees with practical first-hand contact with the realities of social situations. Hence awards have quite generally been confined to candidates who already held the Ph.D. degree or its equivalent. Administration of the program has been divided between the Foundation staff and the Social Science Research Council, the council handling the American and Canadian candidates and the Foundation handling all others. Second year extensions have often been granted by the Foundation, only exceptionally by the council. The council's fellowships are available for American or foreign study, while those granted by the Foundation are exclusively

for study in countries other than that of residence. This rule has given the latter program a definitely international character and has contributed to the development of a body of younger scholars of broad outlook and unusual understanding of the international aspects of the problems with which they are concerned.

In 1934 the Social Science Research Council appointed 30 fellows, distributed by country and field of study as follows:

FELLOWSHIPS ADMINISTERED BY THE SOCIAL SCIENCE RESEARCH
COUNCIL IN 1934, WITH FUNDS PROVIDED BY THE
ROCKEFELLER FOUNDATION

Country of Study	Number of Fellows	Field of Study	Number of Fellows
Austria.....	1	Anthropology.....	2
China.....	1	Economics.....	7
England.....	6	Geography.....	1
France.....	3	History.....	4
Germany.....	2	Political science.....	4
Ireland.....	1	Psychology.....	3
Italy.....	2	Sociology.....	7
Russia.....	2	Social statistics and meth-	
Sweden.....	1	odology.....	2
Switzerland.....	1		
Uganda Protectorate.....	1		
United States.....	9		
	—		—
Total.....	30	Total.....	30

There are now in Europe alone 330 former fellows of the Foundation who have spent from one to three years in foreign study. A network of friendships links them together. Many of them have already obtained positions of importance in

their own countries. The Foundation's program in international relations also benefits from the existence of this group.

The Foundation's program, covering as it does a far wider and more densely populated area, operates on a larger scale. Fifty-three new appointments were made in 1934. In addition, there were ninety-four fellows appointed earlier who were studying during some part of the year. The corresponding figures for 1933 were forty-four new appointments and one hundred and nineteen studying under previous appointments. The relative magnitude of the two programs is shown in the following table of awards according to the year of original appointment:

FELLOWSHIPS IN THE SOCIAL SCIENCES—NEW APPOINTMENTS,
1924 TO 1934

Administering Agency	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934
Rockefeller Foundation	16	24	44	48	45	43	44	73	60	44	53
Social Science Research Council		15	12	17	17	25	28	25	30	15	13
Totals	16	39	56	65	62	68	72	98	90	59	66

The geographical spread of the program administered by the Foundation and the distribution of men within the various fields of the social sciences are shown in the following table:

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FELLOWSHIPS ADMINISTERED BY THE ROCKEFELLER FOUNDATION
 DISTRIBUTION BY FIELDS OF STUDY AND BY COUNTRIES,
 1924-1934

Country of Origin	Economics and Statistics	Sociology and Criminology	Political Science and Law	History	Anthropology	Geography	Psychology and Philosophy	Total
Australia and New Zealand.....	21	1	2	3	5	2	..	34
Austria.....	10	1	9	1	1	1	3	26
Belgium.....	1	1	..	..	1	..	..	3
Bulgaria.....	5	1	4	..	..	..	2	12
Canada.....	..	1	1	2	2	..	..	6
China.....	4	4	1	..	2	..	..	11
Czechoslovakia...	12	5	5	1	1	..	1	25
Denmark.....	4	2	..	4	..	..	..	10
Estonia.....	1	1	2	..	..	1	..	5
Finland.....	5	1	..	..	..	..	1	7
France.....	13	8	16	5	4	2	1	49
Germany.....	33	8	12	9	2	2	2	68
Great Britain and Ireland.....	31	10	19	12	6	4	10	92
Greece.....	1	2	..	..	..	..	..	3
Hungary.....	11	..	3	..	..	..	1	15
Italy.....	13	..	4	..	2	..	1	20
Latvia.....	2	1	1	1	..	..	..	5
Lithuania.....	1	..	..	..	..	1	..	2
Mexico.....	1	..	..	..	..	..	..	1
Netherlands.....	5	5	2	1	2	3	..	18
Norway.....	3	2	1	2	..	..	1	9
Poland.....	7	9	2	1	3	1	3	26
Rumania.....	3	5	2	..	..	..	1	11
Sweden.....	6	2	1	1	1	..	1	12
Switzerland.....	..	1	1	2	..	..	..	4
Syria.....	2	..	1	..	..	..	..	3
Turkey.....	2	..	..	..	..	..	1	3
Union of South Africa.....	..	1	..	..	1	..	..	2
United States.....	..	4	..	..	..	..	..	4
Yugoslavia.....	3	2	2	..	1	..	..	8
Totals.....	200	78	91	45	34	17	29	494

The fifty-three new appointments made dur-

ing 1934 were distributed, by country of origin and field of study, as follows:

Country of Origin	Economics and Statistics	Sociology and Criminology	Political Science and Law	History	Anthropology	Geography	Psychology and Philosophy
Australia and New Zealand.....	3	..	..	..	..	1	..
Belgium.....	1	..	..	..	..	..	..
Bulgaria.....	1	..	1	..	..	..	..
China.....	3	..	..	..	1	..	..
Czechoslovakia.....	1	..	..	..	..	..	..
Denmark.....	1	..	..	1	..	..	..
Estonia.....	1	..	..	..	..	..	..
Finland.....	1	1	..	..	..	..	..
France.....	1	..	1	2	1	..	..
Germany.....	3	..	2	..	..	..	..
Great Britain.....	1	..	..	..	1	2	2
Greece.....	1	..	..	..	..	..	..
Hungary.....	2	..	..	..	..	..	..
Latvia.....	1	..	..	..	..	..	..
Norway.....	2	1	..	..	..	..	..
Poland.....	2	..	..	1	..	..	..
Rumania.....	1	..	1	..	..	..	..
Sweden.....	3	..	1	..	1	..	..
Turkey.....	..	..	..	..	..	..	1
Yugoslavia.....	2	..	..	..	..	..	..
Totals.....	27	6	6	4	4	3	3

Of these fifty-three fellows, twenty-eight studied or planned to study for the most part in the United States, ten in England, two in Italy, four in France, four in Austria, two in Africa, and one each in Canada, Switzerland, and Sweden.

The figures in the three preceding tables do not include eleven appointments to the Yale Seminar

on Impact of Culture on Personality, or twenty-two appointments financed with funds provided by the former International Education Board in the fields of agricultural economics and home economics.

3. Research Aid Grants

The Foundation continued to make research aid grants for individuals and small institutional projects. The Social Science Research Council administered the American program while the officers in the Paris office of the Foundation administered the program abroad. The council's policy differed from that of the Foundation in that its grants were made exclusively to individual scholars to enable them to complete significant research on which substantial progress had already been made. The Foundation's program had a somewhat broader objective. Its first and primary purpose was to aid former fellows to complete work undertaken during their fellowship periods. The fund was also used to make small grants for work in special fields of recognized Foundation interest. These grants might be either to individuals or to small institutes. Support was also provided occasionally for institutes working outside these special fields as part of the Foundation's concern with the general development of the social sciences in certain

strategic centers. During 1934 a number of grants were made in connection with the winding up of the research activities of institutes whose programs of research could no longer be included in the modified program of the Foundation. Supplementary grants from the fund were also made to beneficiaries under earlier grants to compensate for losses in exchange suffered as a result of the devaluation of the dollar.

The Social Science Research Council expended \$21,425 on research aid grants in 1934. Forty-seven awards were made, involving sums ranging from \$1,000 to \$150 and averaging \$455.

The Paris office made during the course of the year fifty-one grants involving an expenditure of \$81,145.36. The distribution of these grants by major purposes is shown in the accompanying table:

RESEARCH AID GRANTS IN EUROPE, 1934

Purpose of Grant	Number	Amount
To former fellows.....	23	\$18,381.27
Development of institutional centers.....	4	8,599.83
Research in economic planning and control and international relations.....	13	28,742.13
Completion of research under terminating programs.....	11	25,422.13
Total.....	51	\$81,145.36*

* Of this total \$2,244.11 was for adjusting exchange losses due to the devaluation of the dollar.

The largest number of grants, as is apparent

from the preceding table, was made to former fellows. These grants, however, total less than one-fourth of the sum expended during the year. Of the four grants made for the development of institutional centers, those to the Institute of Comparative Law and to the Institute of Ethnology, both in Paris, represent extensions of grants previously made. In addition, a grant of approximately \$3,000 was made to the Center of Economic Information at Paris to maintain an unusually effective information service pending the provision of adequate local resources for its permanent establishment. The bulk of the research aid grants were used for the development of work in the special fields of Foundation interest or for completion of research under terminating programs. A number of grants in special fields represented continuation of previous support. Two new grants were made for the purpose of developing small institutes of economic research in eastern Europe. The sum of \$3,000 was appropriated to the Polish Academy of Sciences for the development in connection with the University of Cracow of an institute of economic research, and an equal amount to the University of Sofia for the development of an institute of business cycle research.

The largest single grant was one of \$6,000 to aid in a study of the international aspects of

national agricultural policies. The study is being carried on in Italy under American scientific direction. A \$3,000 grant was made to the International Institute of Intellectual Cooperation to permit that organization to continue to provide more effective coordinating activities for a number of national organizations working in the field of international relations.

4. Advisory and Planning Bodies

a. *Social Science Research Council.*—Effective work in the social sciences depends in part on the ability of scattered workers to meet from time to time to discuss their common problems, to arrange for better coordination of existing efforts, and to explore the possibilities of new methods of attack on emergent issues. The several national associations of economists, sociologists, and related organizations in the United States satisfy very inadequately a need that frequently calls for groupings representative of more than one discipline. The Social Science Research Council is today the recognized agency in this country for promoting these more general conferences. It operates through committees composed of experts working on an entirely voluntary basis. Once a year the full council meets in conference to review the work of the preceding twelve months and to lay plans for the year ahead. Social scientists are agreed that the coun-

cil plays a vitalizing rôle throughout the broad social field. The Foundation continued in 1934 to support the work of the council. The following table shows the extent of this aid during the year:

SUPPORT GIVEN TO THE SOCIAL SCIENCE RESEARCH COUNCIL
IN 1934 UNDER PREVIOUS APPROPRIATIONS

Administrative Budget.....	\$50,000
General Research.....	75,000
Conferences and Planning.....	50,000
Total.....	\$175,000

b. *American Statistical Association.*—In 1934 the Foundation made a grant to the American Statistical Association. While this organization is affiliated with the Social Science Research Council, it is at the same time a national organization representing all social scientists interested in the quantitative approach to social problems. The Foundation's grant was given to permit the association to transfer its headquarters to Washington and to secure the services of a full-time secretary-editor. The provision of a full-time officer should permit the association to exert a more actively constructive leadership in the development of the statistical materials and methods essential to the progress of social research. The move to Washington will make it possible for the association to maintain closer contacts with the Federal statistical offices and bureaus where are gathered, tabulated, and made avail-

able so many of the statistical records upon which social scientists depend. The advantages of this contact between the personnel of government agencies and statisticians and social scientists outside the government have been demonstrated by the experience of the Committee on Government Statistics and Information Services to which reference is made later in this report. Both parties to the experiment are convinced that the contacts should be maintained on an informal basis. To effect these purposes the Foundation made a one-year grant of \$7,500 to the American Statistical Association.

5. Social Science Publications

The Foundation continued during 1934 its support of the *Encyclopedia of the Social Sciences*. Three volumes appeared during the course of the year and the fifteenth and final volume was expected to appear early in 1935. The complete set will constitute a work of reference that is likely to remain standard for many years to come. The Foundation paid \$38,000 in 1934 toward this enterprise.

B. Specific Research Programs

1. Economic Planning and Control

The objectives of the Foundation's program in economic planning and control were clearly set forth in the 1933 Annual Report. It was there

stated that the Foundation was endeavoring to promote basic research bearing upon the causes of economic instability and to encourage studies designed to develop and perfect appropriate practical measures for minimizing the effects of such social instability as is for the time being inescapable.

The only new appropriation of funds during 1934 was made to the University of Pennsylvania for the Industrial Research Department of the Wharton School of Finance and Commerce. The grant of \$25,000 was for continuation of support of the department's program at the level at which it had been supported by the Foundation for several years past. The work of this department has been discussed in previous reports. It will be recalled that the Department has been carrying on for years an intensive study of a limited number of industries, national in scope, with a view to acquiring the basis for broad generalizations regarding industrial developments and the requirements of sound economic policy. As the depression deepened the department devoted more attention than in the past to the study of problems of unemployment mitigation.

Owing to earlier actions there were at the beginning of the year a considerable number of institutes working in part at least with funds

provided by the Foundation upon problems recognized as falling within this field. The following table indicates the extent of the program:

**INSTITUTIONS AND ORGANIZATIONS RECEIVING SUPPORT DURING 1934
UNDER PREVIOUS APPROPRIATIONS FOR RESEARCH IN THE FIELD
OF ECONOMIC PLANNING AND CONTROL**

Name of Institution	Amount
Brown University, Providence, Rhode Island. Study of the gold standard.....	\$20,000 [§]
Harvard University, Cambridge, Massachusetts. Research in industrial hazards.....	125,000*
National Bureau of Economic Research, New York City. General budget.....	75,000
National Bureau of Economic Research, New York City. Study of history of prices [‡]	125,000 [†]
University of Pennsylvania, Wharton School of Finance and Commerce, Philadelphia. Industrial Research Department	25,000 [‡]
Austrian Institute for Trade Cycle Research, Vienna.....	4,000
Dutch Economic Institute, Rotterdam, Netherlands. Research program.....	5,000*
Institute of International Economics and Maritime Trade, Kiel, Germany. Research program.....	5,000*
League of Nations, Geneva, Switzerland. Financial Section and Economic Intelligence Service. Research program....	50,000*
University of Louvain, Belgium. Institute of Economics. Business cycle research.....	900

* Academic or fiscal year 1934-35.

§ Total amount of appropriation; available as needed, to date of termination of grant.

‡ Formerly under Economic Foundation, New York City.

† Of which \$75,000 was available as needed to the end of 1936.

‡ Academic year 1933-34.

2. International Relations

During 1934 the Foundation continued its policy of supporting efforts directed toward the promotion of international understanding. While recognizing the difficulty of effecting improvement of international relations, the importance

of the issues at stake appeared to justify continued effort. The Foundation's program has been shaped with a view to the development of (1) fuller understanding of world affairs and (2) greater competence in technical staffs attached to official bodies charged with the handling of troublesome and important international questions.

The following table shows the extent of the program at the beginning of 1934:

INSTITUTIONS AND ORGANIZATIONS RECEIVING SUPPORT DURING 1934
UNDER PREVIOUS APPROPRIATIONS IN THE FIELD OF
INTERNATIONAL RELATIONS

Name of Institution	Amount
American Geographical Society, New York City. Millionth Map of Hispanic America	\$25,000 [§]
Council of Foreign Relations, New York City. Re- search program	25,000
Foreign Policy Association, New York City. Re- search program	25,000
Harvard University and Radcliffe College, Cam- bridge, Massachusetts. Research	50,000*
Institute of Pacific Relations, American Council, New York City. General budget	25,000
Geneva Research Center, Switzerland. General budget	8,000*
League of Nations, Geneva, Switzerland. Fiscal Committee. Study of double taxation	50,000 [§]
League of Nations, Geneva, Switzerland. Publication of monetary and banking Laws	7,000 [†]
Postgraduate Institute of International Studies, Geneva, Switzerland. Budget	Sw. Frs. 350,000
Royal Institute of International Affairs, London, England. Research program	£8,000*
Institute of Pacific Relations, Honolulu, Hawaii. Re- search	\$50,000

* Academic or fiscal year 1934-35.

§ Total amount of appropriation; available as needed, to date of termination of grant.

† \$40,000 originally appropriated; balance lapsed.

Four new grants were made during the year. Two of these were toward the general expenses of research institutes and two were for the support of specific investigations. The two institutional grants represented one-year extensions of Foundation support under actions which terminated during the year. The Foreign Policy Association and the American Council of the Institute of Pacific Relations each received \$25,000 toward their 1935 budgets. These actions were essentially of an interim character to permit the work in progress to continue at the existing level and along existing lines.

In addition to its support of the Research Department of the Foreign Policy Association, the Foundation made a grant of \$35,000 to permit the association to direct a study of economic and social conditions in Cuba. This study was undertaken at the invitation of the President of Cuba. The association organized a technical commission of American, Cuban, and Latin-American scholars to study and report upon the island's economic and social problems. The United States Department of State endorsed the proposal. The Foundation lent financial support, in the belief that the factual materials and the resulting analysis would prove useful not only to the Cuban Government but also to the United States Government in the formulation of its future policy

towards Cuba. Moreover, the proposed technique of cooperative inter-American investigation promised to promote intellectual cooperation in the western hemisphere. The commission was organized promptly and the several studies were pushed forward with great vigor. Information available at the end of the year indicated that the findings would appear early in 1935.

In 1934 the Foundation again made a grant to the American Geographical Society so that work on the Millionth Map of Hispanic America might continue without interruption. As was pointed out in the 1933 Annual Report, the work on this map, which is essential to the settlement of many of the disturbing boundary disputes in South America, was threatened by the inaccessibility of certain funds which the society had set aside for the completion of this project.

The table below recapitulates appropriations made in 1934 for projects in the field of international relations:

APPROPRIATIONS MADE IN 1934 IN THE FIELD OF INTERNATIONAL
RELATIONS

American Geographical Society, New York City. Millionth Map of Hispanic America	\$25,000
Foreign Policy Association, New York City. Support of Research Department	25,000
Foreign Policy Association, New York City. Commission to study Cuban economic and social conditions	35,000
Institute of Pacific Relations, American Council, New York City. General expenses	25,000
	<hr/>
Total	\$110,000

3. Community Organization and Planning

A variety of ventures are grouped under this segment of the social science program. In general the work falls within the fields of city and regional planning, broadly defined, and public administration. The following table, showing the appropriations active at the beginning of 1934, gives an idea of the scope of the program.

INSTITUTIONS AND ORGANIZATIONS RECEIVING SUPPORT DURING 1934
UNDER PREVIOUS APPROPRIATIONS FOR RESEARCH IN
COMMUNITY ORGANIZATION AND PLANNING

Name of Institution	Amount
Community Council of Philadelphia, Pennsylvania. Joint Committee on Research. Program	\$7,500*
Harvard University, Cambridge, Massachusetts. School of City Planning.	35,000*
Science Advisory Board, Washington, D.C. Budget	50,000 [§]
Syracuse University, New York. School of Citizenship and Public Affairs. Research and training in public administration.	10,000*
University of California, Berkeley. Bureau of Public Administration. Graduate training and research.	20,000*
University of Chicago, Illinois. Program of local community research.	50,000*
University of Chicago, Illinois. Training and research in public administration.	25,000*
University of Cincinnati, Ohio. Training in public administration.	20,000*
Welfare Council of New York City. Research Bureau. Budget	65,000 [†]
Social Science Research Council. Committee on Government Statistics and Information Services.	100,000 [§]
University of Liverpool, England. Social survey of Merseyside. Publication of report.	2,400

* Academic or fiscal year 1934-35.

[§] Total amount of appropriation; available as needed, to date of termination of grant.

[†] Fiscal year 1933-34.

The Committee on Government Statistics and

Information Services set up in 1933 by the Social Science Research Council and the American Statistical Association completed its work during the period under review. The results were thoroughly satisfactory. Those working in the field of government statistics are unusually united in their opinion that the work of this committee will have permanently beneficial effects upon the character of the work of the Federal statistical services. A considerable number of the committee members and staff personnel have been drawn more or less permanently into the government services which have been under review. The committee suggested the creation of a Central Statistical Board, and, since the establishment of the board, has been represented in and actively associated with its work.

During 1934 three new grants were made for work in the field here under review. Two of these represented extensions of existing support, one an appropriation for a new venture. The grants are summarized in the accompanying table.

APPROPRIATIONS MADE IN 1934 FOR RESEARCH IN COMMUNITY
ORGANIZATION AND PLANNING

Community Council of Philadelphia, Pennsylvania. Joint Committee on Research. Research program.....	\$7,500
New Hampshire Foundation, Concord. Research program..	18,000
Welfare Council of New York City. Research Bureau. Budget.....	75,000
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Total.....	\$100,500

The Welfare Council of New York City is the central coordinating agency for most of New York's social service organizations. The latter support the regular administration expenses of the council; for some years past the Foundation has contributed to the council's research budget. The present grant of \$75,000 for the fifteen-month period ending December 31, 1935, will permit the council to continue to make investigations useful for community planning and for the coordination of efforts in the field of social welfare. The types of activities now under continued study by the Research Bureau are: inventories of the social resources of the metropolitan area; analyses of persistent social problems of the community; studies of methods employed by welfare agencies; studies of social causation and interrelationship of social factors; provision of indexes, directories, and guides as tools of research. Since 1931 the bureau has taken active part in developing city-wide coordination of effort in meeting the unemployment situation.

The Community Council of Philadelphia is the coordinating agency for some two hundred local welfare, health, educational, and civic agencies under private and public auspices. It carries on investigations through a Joint Committee on Research. During the present emergency the Foundation has been contributing to the council's

research budget. The present grant of \$7,500 will enable the work of the joint committee to continue through September, 1935. This work has centered on the unemployment situation. Close connections have been established with the Federal Emergency Relief Administration. The council acts as local supervising agent for federally financed studies in Philadelphia. Surveys have also been made by the Community Council for the Pennsylvania State Department of Welfare.

The grant to the New Hampshire Foundation represents an extension of program into the field of state planning. The New Hampshire Foundation was organized in 1932 as a non-profit-making research organization to observe and interpret developments in the governmental, economic, and social life of the state, to coordinate thinking on the state's problems, and to forward a better popular understanding of them. It has received some financial support from the New England Council and from popular subscriptions. Plans are on foot to enlist the cooperation of faculties and students of Dartmouth College and the University of New Hampshire in the research program. The Rockefeller Foundation's grant of \$18,000 for the year ending May 31, 1935, is to permit the director of the program to demonstrate the potentialities of this type of venture in the development of state planning.

C. Former Programs**1. Schools of Social Work**

As was stated in the Annual Report for 1933, the Foundation has made tapering grants to a number of schools of social work which had long received substantial aid from the former Laura Spelman Rockefeller Memorial. It was expected that with the aid of these grants the universities concerned would be able to stabilize the budgets of the schools. The depression, however, increased the demands upon the schools at a time when the universities were least able to provide the necessary additional support. The contributions of the schools in the present emergency to Federal, state, and local relief programs are so obvious that the Foundation has deemed it advisable to make certain supplementary grants to prevent undesirable disruption of the school organizations. The following schools were receiving support at the beginning of 1934:

SCHOOLS OF SOCIAL WORK RECEIVING SUPPORT UNDER PREVIOUS
APPROPRIATIONS

National Catholic School of Social Service, Washington, D.C.	\$5,000*
New York School of Social Work, New York City	30,000*
Tulane University of Louisiana, New Orleans. School of Social Work	12,000*
University of Chicago. School of Social Service Administra- tion	50,000†
Western Reserve University, Cleveland, Ohio. School of Ap- plied Social Sciences	25,000†

* Academic or fiscal year 1934-35.

† Academic year 1933-34.

In 1934 as in 1933, the Foundation made a small grant to the School of Applied Social Sciences of Western Reserve University to supplement the funds available under an earlier tapering grant.

In 1934 two appropriations in favor of the School of Social Service Administration of the University of Chicago lapsed. One appropriation had provided \$50,000 annually toward the school's administrative budget. The other had provided a pledge for endowment on a matching basis which the university had been unable to meet. Meantime the enrolment of the school had more than doubled and the graduates were being readily absorbed into the public and private welfare agencies. Again it seemed advisable to tide the school over until fund-raising conditions were more favorable for the university. Accordingly the endowment offer was extended and the conditions liberalized and two new appropriations toward the general budget were made. One of \$50,000 over a four-year period is on a tapering basis and unconditional. The other of \$125,000 over a five-year period is on a matching basis and subject to deductions related to payments that may be made on the capital grant.

2. Cultural Anthropology

In accordance with the decision to withdraw from the field of cultural anthropology, tapering

grants were made to Chicago, Columbia, and Tulane Universities to permit the orderly liquidation of programs of research and training which had heretofore received Foundation support. The University of Chicago received \$30,000 for its Department of Anthropology available over a three-year period; Columbia University \$7,500 available over a two-year period; and Tulane University \$27,000 available over three years.

INSTITUTIONS AND ORGANIZATIONS RECEIVING SUPPORT DURING 1934
UNDER PREVIOUS APPROPRIATIONS FOR RESEARCH IN
CULTURAL ANTHROPOLOGY

Name of Institution	Amount
Columbia University, New York City. Research and field training.....	\$5,000 [†]
Harvard University, Cambridge, Massachusetts. Graduate research.....	15,000*
Laboratory of Anthropology, Santa Fe, New Mexico. Field training course.....	7,500
Tulane University of Louisiana, New Orleans. Department of Middle American Research.....	15,000 [†]
University of Chicago, Illinois. Department of Anthropology. Institute for Comparative Research in Human Culture, Oslo, Norway. General budget.....	15,000 [†]
International Institute of African Languages and Cultures, London, England. General budget.....	2,500
Notgemeinschaft der Deutschen Wissenschaft, Berlin, Germany. Study of German population.....	50,000*
Royal Anthropological Institute, London, England. General budget.....	25,000
Australian National Research Council, Sydney. Research in anthropology.....	1,500*
Australian National Research Council, Sydney. Ethnological research in Melanesian Islands by Dr. Richard Thurnwald.	20,000*
	6,500 [§]

* Academic or fiscal year 1934-35.

† Academic year 1933-34.

§ Total amount of appropriation; available as needed, to date of termination of grant.

APPROPRIATIONS MADE IN 1934 FOR RESEARCH IN
CULTURAL ANTHROPOLOGY

Columbia University, New York City. Research and field training.....	\$7,500
Tulane University of Louisiana, New Orleans. Department of Middle American Research. Anthropological research..	27,500
University of Chicago, Illinois. Department of Anthropology. Research program.....	30,000
	\$65,000

D. Unclassified Grants

A limited number of unclassified grants were in effect during the year under review. They find their origin in earlier activities of the Laura Spelman Rockefeller Memorial, or represent exploratory efforts in the field of personality and behavior. On the basis of this two-fold classification the following appropriations were active at the beginning of 1934:

GROUP 1. GRANTS ARISING OUT OF ACTIVITIES OF THE FORMER
LAURA SPELMAN ROCKEFELLER MEMORIAL

Name of Institution	Amount
University of Denver, Colorado. Bureau of Business and Social Research.....	\$2,500†
Joint Vocational Service, New York City. Budget....	1,800

GROUP 2. GRANTS TO ORGANIZATIONS CARRYING ON RESEARCH IN
THE FIELD OF PERSONALITY AND BEHAVIOR

Name of Institution	Amount
University of Hawaii, Honolulu. Racial research.....	\$15,000*
Massachusetts Department of Mental Diseases, Boston. Statistical study of the insane.....	25,000‡
Yale University, New Haven, Connecticut. Institute of Human Relations. Research in psychology.....	150,000*
Canadian National Committee for Mental Hygiene, Toronto. Research in social sciences.....	20,000
University of Vienna, Austria. Psychological Institute..	4,000*

Jean Jacques Rousseau Institute, Geneva, Switzerland.	
Budget.....	Sw. Fra.30,000*
National Institute of Industrial Psychology, London, England. Research program.....	
	£1,500

* Academic or fiscal year 1934-35.

† Total amount of appropriation; available as needed, to date of termination of grant.

‡ Academic year 1933-34.

The only new grant to be made within the unclassified activities of the Foundation was to the Jean Jacques Rousseau Institute of Geneva (Institut des Sciences de l'Education). The sum of \$5,000 was appropriated to compensate for the loss in exchange on an existing grant and to provide in addition a small supplement toward the institute's general budget for the year 1934-35.¹ The purpose of the supplementary grant was to provide for the absolutely minimum requirements of the institute, pending examination of the work by other divisions of the Foundation with a view to determining the possible relevance of the work to their present programs.

¹ In addition to such grants as this, designed in part to compensate for exchange losses, six adjustments were made in connection with earlier appropriations for the exclusive purpose of compensating for exchange losses. These adjustments involved in all \$26,283. No reference has been made to these in the text in view of the fact that the institutes affected did not thereby receive any more in their respective currencies than was originally contemplated.

**THE SOCIAL SCIENCES
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Stacy May

John V. Van Sickle

EMERGENCY GRANTS

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EMERGENCY GRANTS

In April 1933, the Board of Trustees of the Foundation established a special fund for aiding projects designed to deal constructively with urgent phases of the world-wide depression. It was felt that the broad social, political, and economic changes, which were occurring in, and were in considerable measure provoked by, the depression, presented peculiarly challenging opportunities for useful work, many of which could not be seized under earlier formulations of Foundation program. A special trustee committee of three was appointed to administer the fund made available for this program, and the work thus inaugurated in 1933 was continued throughout 1934.

Of the \$1,500,000 placed at the disposal of the special trustee committee, \$589,000 was appropriated during 1933 for projects listed in the Annual Report for that year. Appropriations during 1934 amounted to \$525,500, the total for the two years being \$1,114,500. At the end of 1934 the trustees voted to discontinue the emergency grants as a separate program, since a reformulation of the regular program in the social sciences was judged to make possible the inclusion there

of much that had been assisted in the so-called emergency grants.

Most of the projects supported by emergency grants were closely related to specific programs of government—Federal, state, or local. In general, the projects may be classified under two main headings: 1. Studies providing for concurrent recording and appraisal of procedures in important sections of the Federal Government's recovery, relief, and reconstruction programs; and 2. Undertakings providing collaboration on the part of private agencies with programs, new in type or scale, of Federal, state, and local governments. In general, most of the projects within the first category were devised to provide an analysis and record of the progress of important social experiments, about which there inevitably arises a future need for accurate, unbiased information, never satisfactorily available unless gathered concurrently. In the second category, within which most of the projects were included, the major aim was to provide competent technical assistance to government administrators, particularly in the initial planning and direction of research projects, or where programs required from private agencies collaboration of a sort difficult to secure directly or regularly because of government restrictions. In practice, many of the projects presented features contributing to both

purposes, and consequently those for which appropriations were made during the current year are listed merely in chronological order.

American Public Welfare Association

Two grants of \$35,000 each, one for use in 1934 and the other in 1935, were made during the year to the American Public Welfare Association, in support of its work of rendering consultative, administrative, and technical services to public welfare agencies.

With the funds supplied for 1934, the association maintained a field staff which rendered valuable service in forty-two of the forty-eight states. In eleven states this staff assisted in the establishment of official commissions to deal with welfare problems, performed actual survey and research work for such commissions, or advised them upon matters of policy. In addition to such state service the association cooperated in numerous ways with municipal and local governments.

Throughout, the American Public Welfare Association worked in close collaboration with the Federal Emergency Relief Administration. Its director acted as consultant to the Federal Emergency Relief Administration, and a number of its field staff were released to accept important posts in the Relief Administration.

As a by-product of its regular clearing house activities and of the varied contacts resulting from its service program, the association is accumulating a mass of data that will prove immensely valuable to any future study or appraisal of the evolution of relief and public welfare policy during a transition period.

The second grant was made to allow the Public Welfare Association to continue this work during 1935.

Industrial Relations Counselors

To this organization The Rockefeller Foundation made an appropriation of \$25,000 to enable it to release some of its personnel upon various governmental services during the year 1934. The Industrial Relations Counselors is a non-profit research organization which has received Foundation aid in the past, notably for studies in the social insurance field. Its work is such that it has received numerous calls from Federal, state, and local governmental agencies for services in the fields of its special interest and competence, and the current grant was made to enable it to respond to such calls upon an unpaid basis.

Among the agencies which it served in important ways through this grant were the United States Departments of Labor and Commerce, the President's Committee on Economic Security, the Advisory Committee on Railroad Employ-

ment, the Federal Home Loan Bank Board, the National Labor Board, the New York State Department of Labor, and the New York Civil Service Commission.

**Social Science Research Council
Population Distribution Study**

In connection with the recovery, relief, and other emergency programs of the Federal Government, the problem of moving considerable portions of the population from economically unfavorable districts to regions which present better economic opportunities has received considerable attention. Although a formidable number of Federal agencies have developed positive programs which influence population shifts, there was at the beginning of 1934 no central agency for coordinating the several programs or for studying the problem as a whole.

Accordingly, the Social Science Research Council organized a project for a study aimed at formulating a sound and informed policy in the field of internal migration, and the Foundation supplied a grant of \$78,000 to finance this study and provide for a research staff to carry it forward. The study was inaugurated during 1934, but the work is being continued throughout 1935 as well. It has attempted to define the objectives of population distribution, to chart the migration trends that have occurred, to locate the areas

which hold forth the greatest economic promise, and to appraise the accomplishment and potentialities of attempts at government control of population shifts. Throughout, there has been a high degree of cooperation between the research staff and the administrators directing the Federal programs concerned.

Commission on Interracial Cooperation

An appropriation of \$50,000 was made to the Commission on Interracial Cooperation to be used during 1934 for forwarding the interests of American Negroes under the Federal program for promoting recovery. A special committee was organized to direct the project, which developed along two major lines: 1. The furnishing of personnel to cooperate with governmental agencies in seeing that their programs gave fair consideration to Negro interests; 2. The development of studies designed to gather and analyze the data needed as a basis for adapting programs to this end.

Under the first heading assistance was given to the Public Works Administration and to the Subsistence Homesteads Division of the Department of the Interior. Under the second, studies were made of the effects of the relief program and the National Recovery Administration upon Negro workers; the effects of the Agricultural Ad-

justment Administration program upon Negro farmers, particularly tenant farmers; and the status of Negro workers in the iron and steel, meat packing, and railroad industries as affected by the changes growing out of Federal control. In addition, the committee rendered frequent advisory service to the Tennessee Valley Authority. Perhaps the most noteworthy contribution of the committee was an analysis of the indirect effects of the Agricultural Adjustment Administration program upon tenant farmers in the South, and the formulation of means for meeting the difficulties, which was accepted by the administration as a basis for inaugurating remedial action.

Social Science Research Council Committee on Government Statistics and Information Services

A Foundation grant of \$1,500 was made to the Social Science Research Council's Committee on Government Statistics and Information Services to obtain the services of a competent statistical economist to cooperate in the formulation and direction of a retail price reporting study inaugurated as a Federal Civil Works Administration project with a budget of something over \$70,000. The salary restrictions of the Federal Civil Works Administration made it impracticable to command the expert services required, so a competent man was secured by the above-mentioned committee and his services were lent for the study.

The project, which was completed in June 1934, consisted of the collection and tabulation of some 350 items (other than foods) which enter into the consumer's budget, and for which previously there had been no monthly price information available. Following the first report, the work was transferred to Chicago where it was financed by the Illinois Emergency Relief Commission. Finally, the materials were turned over to the Bureau of Labor Statistics to be used as the basis of a permanent statistical service.

Slum Clearance Committee of New York

The sum of \$5,000 was appropriated to this committee for the completion of maps, charts, and statistical materials. A similar grant was made in 1933. The committee's work served to define the areas in Manhattan and Brooklyn in which there is greatest need for slum clearance and property rehabilitation. The Foundation's funds were used for furnishing competent direction, the routine work being provided through Federal Civil Works Administration funds. The completed study was turned over to the Municipal Housing Authority for its use.

Foreign Policy Association and World Peace Foundation

To supplement upon a more popular plane the work of the Commission of Inquiry on National Policy in International Economic Relations,

which was supported through an emergency grant of \$60,000 made in 1933, an appropriation of \$15,000 was made to the Foreign Policy Association and the World Peace Foundation. The purpose of the grant was to provide for publicizing in objective terms the conflicting issues of economic nationalism and internationalism, and to promote some popular understanding of the broad effects entailed by an adherence to either policy.

An extended educational campaign was organized through pamphleteering, newspaper publicity, radio speeches, and discussion groups, in all cases with scrupulous effort to present fairly the several possible viewpoints. Secretary Wallace's pamphlet, "America Must Choose," was printed and given wide publicity, as was Peter Molyneux's pamphlet, "What Economic Nationalism Means to the South." With the cooperation of the National Advisory Council on Radio in Education a nation-wide radio program was organized with speakers including Secretary Wallace, Senators Borah, Bankhead, and Wagner, Peter Molyneux, Matthew Woll, William Hard, M. L. Wilson, Lionel Edie, Willard Thorp, G. N. Peek, H. T. Harriman, and C. C. Davis. Through a large number of national organizations approximately 2,850 group discussions were devoted to the question of economic nationalism; bibliogra-

phies upon the subject were furnished to some 6,000 librarians, and arrangements were made for interscholastic and intercollegiate debates. In addition, special pamphlets dealing with the subject were prepared for adult education groups and furnished to the educational division of the Federal Emergency Relief Administration for distribution.

Emergency Fund for Personnel in Government Projects

With a relief program that included provision for a variety of studies employing white-collar workers, there was frequent need for more expert services in planning or interpreting the results of such studies than could be provided through relief funds. Accordingly, the Foundation appropriated \$15,000 for such projects, without specific allocations.

During the year one grant of \$1,230 was made from this fund to cover the cost of tabulation and analysis of a study, made through the Committee on Delinquent Consumer Debt, appointed by the Consumers' Advisory Board of the National Recovery Administration, of pay-roll attachments. The project was recommended by the Commissioner of Labor Statistics as likely to furnish important conclusions as a basis for prospective legislation covering the attachment of wages.

National Association of Housing Officials

The National Association of Housing Officials, which serves primarily as a clearing house of information for public officials of low cost housing projects, and for promoting higher standards and practice in the public housing field, was given four grants during the year 1934, totaling \$75,000.

Two of these grants, of \$10,000 each, were made to the association to allow it to make available expert consultative services to low-cost housing projects during the years 1934 and 1935. During the year 1934 the association received great numbers of requests for such services. Its field agents worked in forty-five cities, advising upon the formulation of housing programs and projects, and its officials have cooperated in the drafting of seven of the state laws which were enacted to set up housing authorities. Further, the association rendered numerous services to the Housing Division of the Federal Emergency Administration of Public Works, to the Federal Housing Administration, and to the Federal Emergency Relief Administration, the value of which has been attested by the ranking officials of these bodies. The association also published a number of technical pamphlets which were widely distributed through the Federal agencies and by the association itself, and at the request

of the Federal authorities, it organized conferences upon important phases of the housing program. The second grant will allow comparable work to be continued in the year 1935.

With another Foundation grant of \$15,000, the National Association of Housing Officials brought to the United States three European experts of broad experience, and organized a tour which brought them in close contact with those interested in housing in centers where housing developments were in process of formulation. The European group also consulted at length with the Federal officials at both the beginning and end of their visit. The visit culminated in a Baltimore conference attended by key individuals from all sections of the country, together with Federal officials. There resulted the formulation of a housing program for the United States which represents, perhaps, the most comprehensive agreement that has been reached by divergent groups in this country.

A grant of \$40,000 was made to the association for use during 1935 in organizing and directing an emergency training course for those persons who are appointed to operate and manage the first housing developments of the Housing Division of the Federal Emergency Administration of Public Works or other governmental groups

concerned with housing. Full cooperation was pledged by the Housing Division, and it was felt that an exceptional opportunity was offered for developing excellent and broadly conceived initial standards in an important field.

Brookings Institution

Studies of the National Recovery Administration and the Agricultural Adjustment Administration

Two appropriations were made to the Brookings Institution during the year, both supplementing grants made in 1933. One provided an additional \$16,000 for the concurrent study of the National Recovery Administration, and the other an additional \$45,000 for the concurrent study of the Agricultural Adjustment Administration. The original grants were for \$115,000 and \$100,000, respectively.

The concurrent study of the National Recovery Administration indicated considerable accomplishment at the time the supplementary grant was requested and made. Three publications, "The ABC of the NRA," "Price Control Devices in NRA Codes," and "The Economics of Free Deals," had been completed, and a much larger work, "The National Recovery Administration, an Analysis and an Appraisal," was scheduled for publication early in 1935, to be followed by a number of studies of the operation of the National Recovery Administration in special

industries. In addition to these studies, a number of members of the research staff served for varying periods of time in important administrative positions within the National Recovery Administration.

The original appropriation for the Agricultural Adjustment Administration study was intended to cover the period from June 15, 1933, to December 31, 1934. It was hoped that an objective appraisal as well as a record of the Agricultural Adjustment Administration procedures could be completed within that time. A number of factors combined, however, to make it apparent that an additional year of experience should be included and the supplementary grant of \$45,000 was made so that the study might be carried through the year 1935.

From the beginning, the staff working upon this study has had the most cordial cooperation of officials of the Agricultural Adjustment Administration and every facility has been afforded them for their work. The first publications to be put forth were factual studies of the operation of the Federal program in certain commodity fields,—corn and hogs, dairy products, wheat, and cotton.

The 1935 schedule calls for six analytic studies with appraisal of accomplishment for the programs in tobacco, wheat, livestock, dairy prod-

ucts, cotton, and the operation of marketing agreements. From these six intensive case studies it is planned to develop a final volume which will attempt to give a generalized interpretation and appraisal of the Agricultural Adjustment Administration experiment as a whole, and of its repercussions upon our national agricultural policy and institutions as they are interrelated with our whole economic and social system.

American Municipal Association

In support of its services to municipalities during the year 1935, this association has received from the Foundation an appropriation of \$130,000. In 1933, a grant similar in amount was made for the same purpose for 1934. In the expenditure of this sum the American Municipal Association during 1934 organized advisory services to municipalities in thirty-one districts covering the entire United States. In all except three districts field agents were appointed on a full-time basis. The number of cities which were visited and which received help with their problems was 6,000. A part of the problems related to questions of adjustment to the programs of the Federal Emergency Administration of Public Works, the Federal Civil Works Administration, and the Federal Emergency Relief Administration. These services constitute an important by-

product of the League of Municipalities movement.

Summary of Appropriations for 1934

American Public Welfare Association, Chicago, Illinois. Advisory service to public welfare agencies.....	\$70,000
Industrial Relations Counselors, New York City. Release of staff for public service.....	25,000
Social Science Research Council, New York City. Population distribution study.....	78,000
Social Science Research Council. Committee on Government Statistics and Information services.....	1,500
Commission on Interracial Cooperation, Atlanta, Georgia...	50,000
Slum Clearance Committee of New York City.....	5,000
Foreign Policy Association, New York City, and World Peace Foundation, Boston, Massachusetts. Publicizing the conflicting issues of economic nationalism and internationalism.....	15,000
Emergency fund for research personnel on government projects.....	15,000
The Brookings Institution, Washington, D.C. Concurrent study of the National Recovery Administration.....	16,000
The Brookings Institution, Washington, D.C. Concurrent Study of the Agricultural Adjustment Administration....	45,000
National Association of Housing Officials, Chicago, Illinois. Visits of European authorities and conference on public housing.....	15,000
National Association of Housing Officials, Chicago, Illinois. Emergency training course for housing managers.....	40,000
National Association of Housing Officials, Chicago, Illinois. Consultative services for low-cost housing projects.....	20,000
American Municipal Association, Chicago, Illinois. Advisory services to municipalities.....	130,000
Total.....	<u>\$525,500</u>

THE HUMANITIES

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THE HUMANITIES

The grants of 1934 for work in the humanities show, by comparison with those made during the year 1933, a further reduction of general appropriations and a larger number of grants for specific purposes. As all grants were limited to the requirements for a single year and in many cases for initial development of work within new areas of concentration, the total of appropriations was also less than during the preceding year.

At no time has the Foundation had a broad program for the encouragement of humanistic studies. Its general support of the established disciplines has been given within the United States alone and there only to a limited number of institutions. Since 1929 aid of this nature has taken the form chiefly of term grants effective for periods of two to five years and administered for the various universities by local committees. Two such grants were extended during 1934 for a single additional year. In that they were for a shorter term and for reduced amounts, these actions reflected the policy of the Foundation to limit the amount of general support extended to research and scholarly activities with a view to a higher degree of concentration under special

programs. In the humanities such diminution of general support had been going on during the two preceding years.

This change of emphasis was due to new interests developed during that period and to economic conditions making improbable the attainment of objectives within the original program of participation. The universities that had benefited through term grants were unable under the demands of established budgets to continue their allocations of new funds to advanced work in the humanities. It was evident that funds would not be forthcoming to maintain the level of operations reached during the earlier part of the five-year period from 1929 to 1934. The significance of this general program, however, appears in the long list of important publications issued thus far and in the new interest aroused among workers in various areas of humanistic studies. The present need is to conserve these benefits during a period of necessary readjustment to changed conditions. With this in view the Foundation is giving further help to these institutions, that they may be enabled to carry a few major projects to completion.

A similar diminution appears in the support given to general planning agencies. For many years the Foundation has appropriated to the American Council of Learned Societies the sum

annually required to maintain its administrative staff, advisory board, and special committees; contributions also have been made to the fund for projects directed by the council and related organizations and for research work of individual scholars applying to the council for assistance. During 1934 appropriations for such purposes were decreased materially. Similar action was taken in the case of the International Committee of Historical Sciences, whose service to international understanding has been largely supported through aid from the Foundation.

Fellowships and research aid grants are also within the general program in the humanities. These are administered for the most part by the American Council of Learned Societies. A few fellowships to foreign and American scholars were administered directly by the Foundation, but only as contributing elements to special parts of the program.

During 1934 the program of specific concentration in the humanities confined itself to two fields of operation: the improvement of international understanding through cultural interchange, and the preservation and interpretation of American cultural traditions.

As a basic need for the promotion of international understanding through cultural means, stress was laid on the study in American univer-

sities of Far Eastern languages, particularly Japanese, Chinese, and Russian; on the development of teaching ability and enduring interest in Far Eastern art, philosophy, and literature; and on the cooperative employment of Chinese, Japanese, and American workers on projects of mutual scholarly interest. Further aid was given toward improved international communication by means of research libraries, particularly through fellowships that enabled junior staff members to study in other countries. Investigations that look toward other means of promoting cultural interchange were initiated during the year.

In developing the Far Eastern center at the Library of Congress, the council and the Foundation have cooperated to strengthen one important part of their programs in Far Eastern studies. In a similar manner the Institute of Pacific Relations and the council have applied grants from the Foundation to the promotion of the study of Far Eastern languages and cultures in American universities.

The preservation and interpretation of American cultural traditions may have indirect effect upon international cultural understanding, especially in their relation to those nations of Central and South America that have like heritages of native arts and crafts. During 1934, however,

the only projects touching on mutual interests of nations on the American continents concerned closely defined studies of life in the Southwest. Other projects aided had the purpose of preserving the facts of colonial and pioneer life in Virginia and in Texas. Certain of these studies called into play both critical and creative powers. Their completion should therefore draw fresh attention to the possibilities for literary interpretation of materials within the American scene.

These possibilities have already been recognized to a considerable extent by dramatists. Moreover, the theatre's command of public attention gives the drama peculiar influence in making felt the force of native traditions. At the same time, their embodiment in drama may be the means of making them understood in other countries. These considerations have led in the last two years to a few grants such as those made in 1934 to Yale University and the State University of Iowa for the training of personnel for school, college, and community work in drama.

These and other grants within the program of specific concentration are directed toward a greater usefulness for the humanities in daily life. For effect on the level of artistic and esthetic appreciation in America, they unquestionably should use those mediums of expression most acceptable to the public of today. Among these

are the drama and its allied arts. If they are to have international significance in any large degree, they will make use of the best means for culture interchange. Of such means, two of high importance are a common language for reading and speech, and supplies of material in that language. All new grants of the past two years have been directed toward the development of personnel and the production of material that will contribute to such broader usefulness of the humanities in American life and internationally.

Other sections of the ensuing statement show what grants were made for general purposes, under former programs, and for emergency aid within the field of the humanities. The final pages give the amounts appropriated and paid during the year within the various classifications.

General Program

Support of Planning Agencies

American Council of Learned Societies

The American Council of Learned Societies has been in existence for fifteen years. It is composed of two delegates from each of eighteen national learned organizations devoted to humanistic and social studies, and it has the following aims: to advance the interests of humanistic sciences in America, especially by encouraging, initiating, and promoting research in those stud-

ies, and by maintaining and strengthening the relations between the national societies devoted to them; and further, through its membership in the International Union of Academies, to serve as an agency for the conduct of continued relations between its constituent societies and other American organizations of scholars and such academies and analogous bodies in foreign countries.

Careful planning for the advancement of the humanities is the most important function of the council. In addition to its executive officers, executive committee, and advisory board, the chief agencies for this purpose are various standing committees appointed to consider specified types of problems or to devise effective means of advancing certain important fields of study to which American scholarship has given little or insufficient attention. During the past year the council's executive committee initiated a national inquiry into the status of humanistic studies in American universities for the purpose of defining more sharply the usefulness of these studies in contemporary life.

Since 1925 the Foundation has given support to the American Council of Learned Societies for research aid grants and fellowships awarded by a committee of the council and for its general activities and the expenses of maintaining its ex-

ecutive offices. In 1933 the Foundation granted the council \$100,000 for its general activities and executive offices during the year beginning July 1, 1934, and in December 1934 grants totaling \$75,000 were made for the same purposes for use during the period July 1, 1935, to June 30, 1936.

International Committee of Historical Sciences

The International Committee of Historical Sciences operates continuously through the work of subcommittees that have a professional membership in various countries. At intervals of five years it also reviews the progress of its plans before an international congress of historians.

The committee is a composite organization devoted to the advancement of the historical sciences through international cooperation. Delegates from its forty-two constituent societies held a conference in Warsaw, Poland, in 1933. In support of its general budget during a three-year period beginning January 1, 1935, it has received from the Foundation an appropriation of \$10,000.

In recent years the committee has taken an active interest in the revision of history texts for use in European schools in order to give them a more international point of view. Through its Commission on the Teaching of History the com-

mittee is attempting to induce governments to sanction such a revision. Because of the intense nationalistic feeling which exists today in Europe results are slow; but some progress has been made, notably in the Scandinavian countries. The Commission on the Teaching of History has published reports on the teaching of this subject in elementary schools and is preparing other reports concerning higher schools and universities for publication in 1935.

Additional publications of the committee issued during 1934 include the following: two volumes of the *Annual International Bibliography of Historical Sciences*; the *Bulletin of the International Committee of Historical Sciences*, which contains historical articles and reports of the various commissions and (in the current issue) an instalment of the bibliography of the history of the press of all countries; and the second volume of a *History of Banking in All Countries*. The Commission on Modern Constitutions published one volume of *La Costituzione degli Stati nell'Eta Moderna*; a second volume will appear in 1935.

University Research Funds

University of Michigan

For the past five years advanced humanistic research at the University of Michigan has re-

ceived support from the General Education Board and from The Rockefeller Foundation. The General Education Board has made available to the university for this purpose \$50,000 annually, and the Foundation in 1933 made a special grant of \$35,000 in order that the site of excavations at Karanis in the Fayum region of Egypt might be uncovered before being abandoned.

In 1934 the Foundation appropriated \$25,000 for a general research fund in the humanities, part of which was for the completion of the excavations at Karanis. It is expected that excavation on this site will come to an end in 1935, and that the results will be made known promptly through publication. The work in Greco-Egyptian antiquities is one of the major activities of the committee in charge of the humanities program at the University of Michigan.

The other major activity of the humanities program of the University of Michigan is an intensive study of sixteenth and seventeenth century English supervised by Professor C. C. Fries. The purpose of this study is the compilation of an early modern English dictionary. When completed this dictionary will deal with variant forms and meanings of the English vocabulary, excluding proper nouns, for the period 1475 to 1700.

Princeton University

An appropriation of \$15,000 was made to Princeton University to be used as a research fund for advanced work in the humanities during the year beginning July 1, 1934. Humanistic studies at Princeton University have received support from the General Education Board since 1927. The Foundation grant is being used to carry forward the work begun under the previous program.

For the year 1934-35, twenty-eight projects were submitted to the council which administers grants in this field for the university: eight in art and archeology, three in English, three in the classics, seven in modern languages, one in oriental languages, two in history, and four in philosophy. All these projects have bearing on methods of graduate instruction, and those in art and archeology are particularly important for scholars and teachers working in the field of the history of art.

Fellowships and Research Aid Grants

For the past five years, the Foundation has made annual appropriations to the American Council of Learned Societies in support of post-doctoral fellowships and research aid grants, to be administered by the council for American scholars working in humanistic fields. These ap-

appropriations are separate grants, given in addition to the funds allocated for the council's executive expenses.

Since the fellowship appropriation for 1933 was designated for a two-year period, no new appropriation for this purpose was made during 1934. With the funds previously made available by the Foundation, the council supported during the past year a total of thirty-one fellowships. The following fields of study were the particular interests of the holders of these fellowships: art and archeology, 5; paleography, 2; philosophy and history of science, 3; history, 2; literature and philology, 9; linguistics, 3; and Far Eastern studies, 7. Work under these appointments was carried on in China, France, Germany, Greece, England, Persia, Switzerland, and the United States.

For the administration of research aid grants to scholars in the humanities, the council received from the Foundation an appropriation of \$20,000, for use during the year 1934-35. During the calendar year 1934, fifty-one American scholars were actively engaged in humanistic research supported through these grants in aid: 8 in art and archeology; 28 in philology and literature; 2 in linguistics; 7 in history; 1 in the history of science; 1 in Near Eastern studies; 1 in Far Eastern studies; and 3 on miscellaneous projects.

During the past year, a certain number of fellowships and research aid grants were administered directly by the Foundation. A total of seven fellowships and twenty-one grants in aid was thus awarded. The fellowships were distributed as follows: China, 3; England, 2; France and Hawaii, 1 each. Five of these fellows studied the administrative practice of American libraries. One was engaged in the study of Japanese history, and another in Chinese history and the Russian and Japanese languages.

Though a greater variety of interests appears in the record of research aid grants for the year, they fall within the special fields of concentration with which the humanities program is at present concerned. The following are representative: \$1,000 to the London School of Economics and Political Science to permit Professor W. C. Dickinson to study administrative methods of American libraries; \$2,000 to Professor Daniel Jones at the University of London, for research in American phonetics; \$3,750 to Professor Napier Wilt of the University of Chicago, for completion of a record of theatrical productions in Chicago; \$4,000 to Professor Garrett H. Leverton of Northwestern University, for completion of text materials on stage-craft for use in schools and colleges; and \$2,000 to the Museum of Modern Art in New York City, to provide a

permanent photographic record of an exhibit of theater art.

**Program of Specific Concentration
International Cultural Relations**

**Institute of Pacific Relations, American Council
Russian Language Instruction**

The American Council of the Institute of Pacific Relations received two appropriations from the Foundation during 1934 for the development in American universities of instruction in Russian language and literature. In January, the sum of \$2,500 was appropriated to the Institute to be used in connection with a seminar in Russian that was held at Harvard University from June 25 to September 15, 1934. This grant was intended for the concentration, at an advantageous center, of a selected class of advanced students for a period of intensive study of the Russian language under native and American teachers. As a result of the experience gained through the work at Harvard University, an appropriation of \$5,000 was made later in the year for a second seminar to be held at Columbia University during the summer of 1935. The grant provided for preparing materials of instruction.

This fresh preparation of materials was needed to meet the unusual requirements of a group of

adult students during an eight-week period of intensive instruction. Although Russian is taught as an elementary subject in several American universities, the demands of students had never forced a direct investigation of the way to train intensively and rigorously for reading, writing, and speech in a wide range of subjects. In this case the training was to give to adults of high ability in many fields the qualifications for original investigation in contemporary Russian documents, for speech, and for rapid reading on many subjects. Four texts have already been prepared by George Z. Patrick, Associate Professor of Russian at the University of California: an elementary Russian reader, a list of abbreviations commonly used in the Union of Socialist Soviet Republics, a list of one thousand commonly used Russian words (with illustrative sentences), and an advanced Russian reader.

At Columbia, as at Harvard, membership will be limited to thirty persons chosen from a large number of applicants. Applications will be reviewed by a special committee that assigns aid when that is necessary to ensure the attendance of those nominated as members.

Columbia University
Development of Far Eastern Studies

For the development of work in Chinese and Japanese at Columbia University during the

two-year period ending December 31, 1936, the Foundation made an appropriation of \$10,000. This will give greater effect to the work in Russian that is supported there for the summer session of 1935, by bringing to a single center a number of students having similar interests.

This assistance to Columbia University realizes some of the plans for Far Eastern studies that have long engaged the interest of students and other persons in New York City. It also advances the plans of the Institute of Pacific Relations and the Committee on Far Eastern Studies of the American Council of Learned Societies. These organizations have fostered Japanese and Chinese studies by summer seminars at Harvard University and at the University of California. This third session, in 1935, will open to advanced students another well-balanced program on Far Eastern language, literature, art, philosophy, and religion. It also will prepare for an entirely new offering in the history of Japanese culture that Columbia University has in readiness for the autumn and winter months of 1935-36.

To enable scholars in many fields of study to advance their knowledge of Japanese culture, the university has secured the services for the first half of that academic year, of George Sansom, of the British Embassy in Tokyo, author of an authoritative history of Japanese culture.

He will lecture in regular courses while directing the studies of special workers. His understanding of Japan, derived from a life-long residence there, assures a real advance, even within a brief period, of American appreciation of the Japanese people and their traditions.

The Foundation's grant will be used for the preparation for the Far Eastern seminars of the summer session of 1935 and for the special program of 1935-36. Library collections will be increased, particularly in current journals and books, and new courses will be given by visiting instructors in art, language, literature, history, and philosophy.

**University of Oxford
The Bodleian Library**

The Librarian of the Bodleian Library at the University of Oxford in England and the architect of the new extension of the library were invited by The Rockefeller Foundation to visit libraries on the Continent and in the United States and Canada during the summer of 1934. An appropriation of \$4,000 was made for this purpose. This action supplements that enabling the Bodleian Commission to study library construction in other countries by providing a similar experience for those officers now intimately concerned with the detailed planning. Dr. H. H. E. Craster, the librarian, and Sir Giles G. Scott,

the architect, visited libraries in Switzerland, Germany, and Sweden during the second half of July; Dr. Craster visited libraries in the United States and Canada during September.

In 1931 the Foundation made to the University of Oxford an appropriation of \$2,300,000 toward the development of the Bodleian and other university libraries. On November 3, 1934, the new wing of the Radcliffe (Science) Library was opened, constituting the first stage in the broad reconstruction and extension of Oxford's library facilities. Work is going forward on the development of other parts of the library services, including a revision of the catalogue. It is estimated that the operations in which the Foundation is interested will be completed in 1941.

**Bibliothèque Nationale
Catalogue Général**

As a bibliographical tool, the Catalogue Général of the Bibliothèque Nationale in Paris ranks in importance to scholars throughout the world with the Catalogue of Printed Books in the British Museum and the Catalogue of the Prussian Staatsbibliothek. The Foundation has appropriated funds to all three of these enterprises, chiefly for the expenses of preparing and printing the copies.

The Catalogue Général has received Founda-

tion aid since 1929, when the American Conference of Eastern College Librarians presented to the Foundation a plan for the distribution to American libraries, on a subscription basis, of the volumes from L to Z. In May of that year an appropriation of \$12,000 was made, payable at the rate of \$1,000 a year, to assist in the preparation of materials. With the assurance of a steady rate of production of eight volumes annually, 100 American libraries agreed to pay \$10 a volume for the estimated ninety-six volumes necessary to complete the set. Until the autumn of 1933 this plan worked satisfactorily, but the increase in the value of the franc since that time resulted in an increased price in dollars, with a consequent loss of subscribers in this country. The Foundation therefore appropriated \$5,000, in 1934, as an emergency measure, to remedy this situation and to permit the sale of the catalogue to American libraries at the previous rate of \$10 a volume. This will make it possible for the stipulated price to be maintained until July 1, 1935.

Preservation and Interpretation of American Cultural Traditions

**American Council of Learned Societies
Dictionary of American Biography**

By reason of its general service to the public as well as to scholarship, the *Dictionary of Amer-*

ican Biography is perhaps the most notable product of the American Council of Learned Societies. It was proposed in 1921, shortly after the organization of the council, at the suggestion of the late Professor F. J. Turner, then of Harvard University, and Dr. J. F. Jameson, now Chief of the Division of Manuscripts of the Library of Congress, both of whom recognized the importance of such a work to American culture. It is a comprehensive collection of facts on the lives of leaders in American life from the time of the colonies to the present day, and forms an inclusive biographical record for the United States comparable to that of the *Dictionary of National Biography* for England. Each article in the dictionary is prepared under assignment by the most competent student of those phases of American life embodied in the career of his subject. The biographical sketches are accompanied by bibliographical material which is, in most instances, the first listing of sources of information on these persons. About 14,000 names will be included in the finished work.

Hitherto the aid of the Foundation to this project has been by way of its appropriations to the council for general purposes. The appropriation of \$35,000 made in 1934 is to be applied to the cost of completing the work within the period January 1, 1935, to December 31, 1936.

University of Chicago

Historical Dictionary of American English

The University of Chicago received an appropriation of \$12,500 toward the further cost of preparing materials for the *Historical Dictionary of American English*. This sum will be available for a period of one year, beginning July 1, 1934, when an earlier appropriation will come to the end of its term.

The *Historical Dictionary of American English* is one of the two major projects in the University of Chicago's program of humanistic research, begun in 1927. It is being constructed on the historical plan made familiar through *The Oxford English Dictionary*. It will record English words native to the United States, with examples and definitions covering the history of each word from the date of its first appearance to the present day, and will constitute an addition to the Oxford volumes recently completed after many years of labor by successive editors. The task of preparing the *Historical Dictionary of American English* is in the hands of Sir William Craigie, who was in charge of the English work during the last sixteen years of its preparation and printing. The two dictionaries therefore will be harmonized in every detail, to give an authoritative record of usage for twelve centuries of written and printed English in Great Britain and

for more than three centuries in the United States.

**Library of Congress
Source Materials for American History**

The Foundation renewed a grant of \$20,000 to the Library of Congress toward its project for securing photographic copies of source materials for American history from national archives and various libraries in Europe. This sum will be available during the year beginning July 1, 1934. As in the preceding year the grant of the Foundation is one half of the amount to be used during the year; the other half is provided from funds in the control of the Librarian of Congress.

The library mission carrying on the work abroad has been directed by Worthington C. Ford. His research assistants have been stationed in every country of western and Central Europe and in Russia while the resources of each nation were being canvassed and the copies of American documents secured. In this routine they have had full cooperation from governmental and public officials. Now, after seven years of gathering these raw materials of American history, particularly on our foreign relations, the Library of Congress holds over two million separate items that are available for the use of scholars in Washington or on loan, by arrangement, within the United States. Work is still going on at the

+**Fall goods.** [FALL *n.* 7 b.] Goods suitable for or requisite in the fall.

1788 FRANKLIN *Autobiog.* I 286 The orders . . . for insurance . . . for fall goods. 1807 *Maryland Hist. Mag.* I 355 Several of our inward bound vessels, particularly the American Ship Othello from Liverpool, with Fall Goods. 1902 G. H. LORIMER *Lett. fr. Merchant* ix 122 Mose Greenebaum, who happened to be going up to town for his fall goods, got into the parlor car with them.

Falling, *vbl. n. [FALL *v.*]

*1. The felling of trees or timber. {1580}

1644 *Doc. & Rec. New-Hampshire* I 176 Penning us up & denying us falling of any timber without their leave. 1661 *Rec. Springfield (Mass.)* I 204 Whosoever of this Township shall fall any Trees in y^e Towne Comons: His falling of them . . . shall give him right to them for worke six months. 1706 *Cal. Virginia St. Papers* I 101 Jones . . . hath comitted diverse great Wastes . . . upon the said land, by falling of Timber, grubbing up of Trees [etc.].

*2. *Falling of the leaf:* see FALL *n.* 6. {1503}

1821 COOPER *Spy v.* (1831) 51 Those lovely, mild days, which occur about the time of the falling of the leaf.

+**Falling-ax, -axe, *n.*** [FALLING *vbl. n.* 1.] = FELLING-AX.

1678 *Rec. Court New Castle (Pa.)* 362, 3 falling axes. 1703 *Col. Rec. N. Carolina* I 579 One falling ax, one Tomahawk. 1729 *Maryland Hist. Mag.* XVIII 332, 1 Doz. falling axes. 1787 A. ELLICOTT in *Life & Lett.* 64 We immediately set out . . . with no other implements than three falling axes, two or three Tomahawks and a chisel. 1805 PIKE *Sources Mississ.* (1810) 35 We . . . cut 60 logs for huts and worked at the canoes. This, considering we had only two falling-axes and three hatchets, was pretty good work. 1899 GREEN *Virginia Word-Bk.* 135 *Falling-axe, n.*, a narrow, thin-bladed axe for falling trees; distinguished from hewing-axe.

Falling weather. [FALL *v.*] Weather marked by the fall of rain, snow, or hail; esp. rainy, wet, or damp weather. {Also E. dial. 1884-}

“We are going to have falling weather,” means that we are going to have rain, snow or hail” (Bartlett '59). “Falling weather is . . . almost universally used in the United States to designate, if not absolute rain, any kind of damp, misty, or drizzling weather” (De Vere).

1732 FRANKLIN *Poor Richard's Alm.* (1733) 6 Windy & falling weath[er]. 1760 WASHINGTON *Diaries* I 112 The Morning . . . promised much rain or other falling weather. *Ib.* 114 In the Evening it . . . promised falling weather but no appearance of a thaw. 1780 *Coll. N.H. Hist. Soc.* IX 176 Cloudy but no falling weather. 1838 C. GILMAN *Recollections* xxv 172 It looks like falling weather, and my old drab will come in well today. 1888 ‘C. E. CRADDOCK’ *Broomsedge Cove* xxiv. 438 The dank smell of moisture in the air, for there had been “falling weather” somewhere in the vicinity. 1903 A. ADAMS *Log Cowboy* viii 110 In trail work there is nothing that depresses the spirits of men like falling weather. 1919 H. L. WILSON *Ma Pettengill* v 165 Will you look at that mess of clouds? I bet it's falling weather over in Surprise Valley.

Section of a page of the *Historical Dictionary of American English*. This dictionary, which is being prepared by Sir William Craigie, under the auspices of the University of Chicago, follows the plan of *The Oxford English Dictionary*. It will record English words native to the United States, with examples and definitions covering the history of each word from the date of its first appearance to the present time.

Record Office in London, in Paris, and in Seville. It is estimated that the project will be completed in 1935.

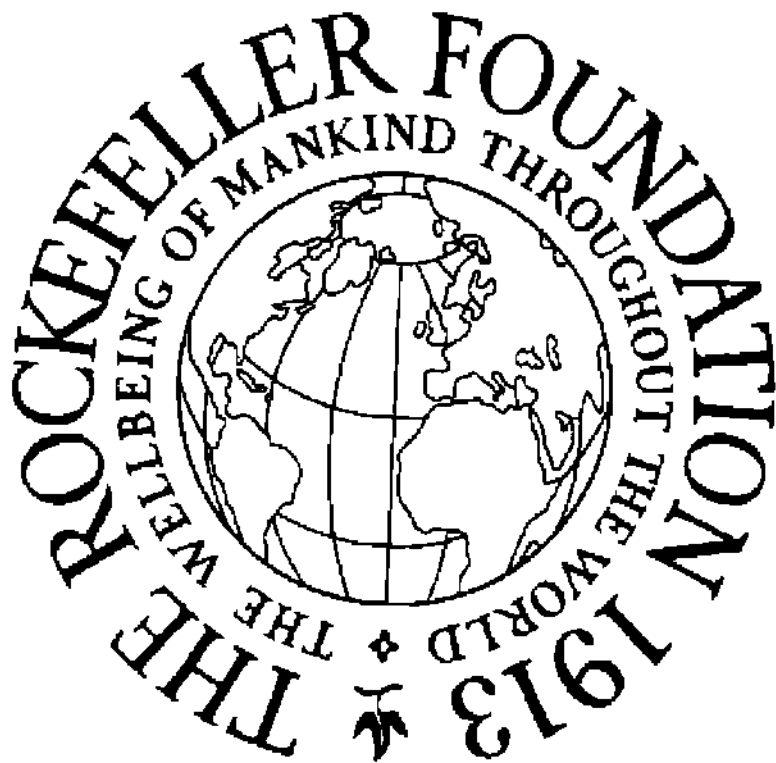
Virginia Historical Index

For six years there has been in preparation, under the auspices of the Virginia Historical Society, an index of source materials relating to 300 years of Virginia life.

The index gives exact reference to every item noted in 120 volumes of early Virginia records. It is being compiled by Earl G. Swem, Librarian of William and Mary College, and his staff of collaborators. It will be of value to all who may be seeking accurate information concerning incidents in the early history of the South. It will contain a dated entry for every common and proper name recorded in the earliest documents of Virginia. The volumes will be essential tools of all workers dealing with the political, social, and economic development of the state and of the earlier periods of American history. The preparation of the index was made possible through subscriptions from members of the Virginia Historical Society, supplemented by two grants from the Foundation.

**Yale University
Drama Library**

One essential of work in drama is accurate information on the theater in earlier times and in



Photograph Excised Here

Outside of a letter from John Rolfe, husband of Pocahontas, to Sir Edwin Sandys of the Virginia Company in London, written from Jamestown, Virginia, June 8, 1617. Above the address is Sandys' endorsed memorandum of the contents of the letter. This is one of the items in the Library of Congress collection of photographic copies of source materials for American history. The original letter is in the library of Magdalene College, Cambridge, England.

other countries. Within its program in the humanities the Foundation has recognized the usefulness for American students of the drama of photographic collections that display stage settings, costumes, and acting in notable productions. For this purpose portfolios of photographs made from the Lee Simonson exhibit of stage settings at the Museum of Modern Art in New York City were made available recently to several institutions through a small grant from the Foundation. During 1934 aid to the amount of \$4,500 was granted for a more extensive plan of the same nature drawn up by the Department of Drama in the School of Fine Arts in Yale University.

The photographic record of theatrical history to be built up in a uniform size of prints, fully documented, will be derived from original sketches and early printed books in European collections. These will be described and classified in such manner that students of dramatic history and producers will have new, authentic data on stage settings, costumes, and acting traditions in Europe. These resources will enable American workers to review theatrical history of the past three centuries for a great variety of purposes, including the revival of important plays and the development of new practices in the modern theater.

**State University of Iowa
Work in Dramatic Art**

One of the aims of the humanities program is to support for special purposes a few major centers offering combined values of training for directors, teachers, and community leaders in drama, who will later find outlets for their services in schools, colleges, and communities or in non-professional dramatic groups. With this aim in view, the Foundation has appropriated \$32,500 to the State University of Iowa, which will be used during the year beginning July 1, 1934, toward the erection of a new building for dramatic work, for laboratory work in speech, for assistance in direction of the theater, and for a study of the place of drama in secondary education.

The work in drama is under the direction of Professor Edward C. Mabie, who has attempted to provide for graduate students essential courses of instruction in all phases of dramatic production. The department has given public performances of 126 long plays, among them being works of historical significance as well as new plays of well-known playwrights and of promising younger writers. The department has also supervised productions in secondary schools throughout the state and each year has organized a large play festival for the schools. Graduates of Pro-

fessor Mabie's course who are now teaching in Iowa and the surrounding states are cooperating in controlled experiments. Two staff members are now bringing the results of this experimental work into final form.

**Laboratory of Anthropology, Santa Fe
Interpretative Studies of Indian Art**

Since 1926 Kenneth M. Chapman, curator of the Laboratory of Anthropology in Santa Fe, New Mexico, has conducted courses in Indian art at the University of New Mexico for teachers in the Indian Service and for art teachers from different states. His courses deal with the development of design among certain tribes from pre-Columbian times to the present day. The laboratory has in its collections fine specimens of pottery, basketry, textiles, ornaments, and paintings. It is, however, impossible to transport such materials. Mr. Chapman is therefore carrying out an experiment in recording, in still and motion pictures, his various historical sequences of material with accompanying sound records. The hope is to produce a sight and sound record that can be presented anywhere at nominal expense. If successful, this experiment will provide, for general use in schools, the first comprehensive account of the origin and growth of certain Indian decorative styles. It would thus be possible to give students and artists materials of



Photograph Excised Here

Architect's drawing of the new University Theater building which is being erected by the State University of Iowa. The Rockefeller Foundation made a grant to the university in 1954 for the provision of certain workshop facilities in the building.

study that could not otherwise be obtained except through expensive publication. Motion pictures of Mr. Chapman's sketches illustrating the development of the elements of design, and pictures of actual craft work in the Southwest, will be included in the collection.

The Foundation appropriated \$5,000 to the Laboratory of Anthropology to make possible the carrying out of this experiment by providing salaries, technical assistance, equipment, and materials.

University of New Mexico
Studies of Hispanic-American Culture

As exploratory grants in new fields, to stimulate attention toward the opportunities for using American cultural values as a medium of international understanding, the Foundation has chosen a few Southwestern centers as points of contact with Mexico. During 1934, grants were made to two such centers—the University of New Mexico and the University of Texas.

From the days of the conquistadors, New Mexico has had impresses of Spanish, Mexican, and Indian civilizations. These are most evident in the region about Albuquerque, where the University of New Mexico is situated, and have had a strong influence on the teaching of cultural subjects at the university. Under the leadership of President J. F. Zimmerman, studies in



Photograph Excised Here

Two stage settings of the Carolina Playmakers' production of Paul Green's play, *Shroud My Body Down*. The world première of the play took place at the Playmakers' Theater at the University of North Carolina on December 7 and 8, 1934. The Foundation made a small grant to the University of North Carolina in 1933 for its creative work in the drama.

Hispanic-American culture at the university have been extended, student interest has been stimulated, and understandings between the university and other research centers in New Mexico and in Arizona have brought about an effective and economical division of fields, particularly in archeology, anthropology, and modern languages. Unusual advantages for the teaching of art are also being utilized.

The Foundation has granted the University of New Mexico \$5,000 in support, during the year beginning July 1, 1934, of projects that have a unique place in the development of humanistic studies in the Southwest. The grant will be employed for the furtherance of a number of small projects in Hispanic-American subjects.

University of Texas

Studies of Hispanic-American Culture

At the University of Texas a similar interest in regional culture has been shown through the systematic gathering of local records, scholarly research in Hispanic-American history, and the collection of folk materials from the oldest residents. Indian and Mexican cultures, and the culture of New England and the Old South still live in the descendants of Texas colonists. Recognizing the literary and artistic possibilities of this inheritance, the authorities of the state university have shown an increasing interest in the

creative use of native materials. One immediate incentive to the use of these cultural records is the centenary of Texas, which will be held in 1936.

Stores of unworked materials have been gathered by the faculty of the university, especially by J. Evetts Haley of the Department of History, who is particularly interested in the growth of the cattle industry and the changing of western Texas from ranches into farms and towns. A volume that will deal with domestic architecture as a social expression of successive settlements at the time of the Civil War is being prepared by Miss F. E. Ratchford, a research worker in the Wrenn Library.

Professor J. F. Dobie, of the Department of English, is interested in preserving Hispanic-American folklore, which exists chiefly in oral tradition. With the aid of a number of students of Mexican and Spanish origin, and through acquaintance with all racial groups of northern Mexico and Texas, he has access to this ephemeral material, which will eventually be collected and published.

The Foundation has appropriated \$7,500 to the University of Texas for the collection of materials, for brief leaves of absence for the staff, and for secretarial services during the year beginning July 1, 1934.

Former Program**University of Chicago, Oriental Institute**

During the years 1932-34, the Foundation expended a total of \$936,263 for foreign field and research work conducted by the Oriental Institute of the University of Chicago. For the year beginning July 1, 1934, the additional amount made available for this work was \$370,000. The Foundation also appropriated during the year \$35,000 to serve as an equalization fund to compensate for losses in exchange sustained by the institute's budget for foreign projects during the academic year 1933-34.

The work of the Oriental Institute was described in the Foundation's Annual Report for 1933. During 1934, work continued along previous lines and much additional material was uncovered. The contributions of the institute's field expeditions in Anatolia, Syria, Palestine, Assyria, Babylonia, Persia, and Egypt have made possible, for the first time, the correlation of the different centers of civilization and the construction of a picture of civilized development in Western Asia as a whole. Important observations from the beginning of this development reach back into the Stone Age. There is evidently radiation and diffusion of civilized influences from Babylonia toward India, and the discoveries of the institute's Babylonian expedi-

tion have made it possible for the first time to date the extraordinary early civilization recently discovered in Northwestern India in the Indus Valley.

For the past fifteen years the Oriental Institute has been conducting excavations in Northeast Africa and Western Asia to widen our knowledge of human origins. The prehistoric survey, extending along the Nile Valley for a thousand miles from the mouth of the river, has revealed for the first time the geological history of the valley, heretofore unknown to science. It also has determined the geological stage at which man first appeared in Northeast Africa and has established the date of the dessication of North Africa in terms of the human advance and the effect of this dessication on the rise of man. The full results of this survey are to be published in six or seven volumes, three of which have already appeared.

In addition to the Nile Valley, the survey has covered large areas of Northeast Africa, penetrating especially westward and southwestward, where the expeditions found hand-mills for grinding grain lying in great numbers in the rock and sand in the heart of the waterless Sahara, many hundreds of miles from the Nile. As soon as the African researches are published, the prehistoric survey expedition may be transferred to West-

ern Asia. Meanwhile, the field staffs now engaged in excavation in Western Asia have found important evidences from the prehistoric age in Palestine, Persia, and Anatolia. Other expeditions in this region have been strategically placed to disclose the human development that followed the prehistoric stages.

Emergency Grant

Special Research Fund for European Scholars

In addition to the regular appropriation for grants in aid, the Foundation set aside \$20,000 as an emergency research fund in aid of deposed European scholars in the field of the humanities. In 1934, this fund made possible the placement of twenty German scholars in various institutions of Europe and the United States.

Summary of Appropriations Made in 1934

GENERAL PROGRAM

Support of Planning Agencies

American Council of Learned Societies, Washington, D.C. Support of general activities and executive offices.....	\$75,000
International Committee of Historical Sciences, Zurich, Switzerland. General budget.....	10,000

\$85,000

University Research Funds

University of Michigan, Ann Arbor.....	25,000
Princeton University, New Jersey.....	15,000

\$40,000

Research Aid Grants

American Council of Learned Societies, Washington, D.C.....	20,000
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Grants administered by The Rockefeller Foundation.	\$25,000	
	<hr/>	
	\$45,000	\$170,000
PROGRAM OF SPECIFIC CONCENTRATION		
International Cultural Relations		
Institute of Pacific Relations, American Council, New York City. Russian language school at Harvard, summer of 1934.	\$2,500	
Institute of Pacific Relations, American Council, New York City. Development of instruction in Russian language.	5,000	
Columbia University, New York City. Development of Far Eastern studies.	10,000	
University of Oxford, England. Bodleian Library. Visits of architect and librarian.	4,000	
Bibliothèque Nationale (Société des Amis de la), Paris, France. Expenses of printing Catalogue Général.	5,000	
	<hr/>	
	\$26,500	
Preservation and Interpretation of American Cultural Traditions		
American Council of Learned Societies, Washington, D.C. <i>Dictionary of American Biography</i>	35,000	
University of Chicago, Illinois, <i>Historical Dictionary of American English</i>	12,500	
Library of Congress, Washington, D.C. Accumulation of source materials for American history.	20,000	
Virginia Historical Society, Richmond. <i>Virginia Historical Index</i>	6,000	
Yale University, New Haven, Connecticut. Development of library on stage productions. . .	4,500	
State University of Iowa, Iowa City. Development of work in dramatic art.	32,500	
Laboratory of Anthropology, Santa Fe, New Mexico. Interpretative studies of Indian art. .	5,000	
University of New Mexico, Albuquerque. Studies in Hispanic-American culture.	5,000	
University of Texas, Austin. Studies in Hispanic-American culture.	7,500	
	<hr/>	
	\$128,000	\$154,500
FORMER PROGRAM		
Archeology		
University of Chicago, Illinois. Oriental Institute. Support of research and field work.	\$370,000	

University of Chicago, Illinois. Oriental Institute. Loss in exchange	\$35,000	
		<u>\$405,000</u> \$405,000
EMERGENCY GRANT		
Special Research Aid Fund for European Scholars	\$20,000	\$20,000
		<u>\$749,500</u>
TOTAL APPROPRIATIONS		\$749,500

In addition to the above amount an appropriation of \$10,000 was made for returned fellows of The Rockefeller Foundation working in all fields.

1934 Payments

Abraham Lincoln Foundation, Dresden, Germany. Continuance of program in humanistic studies	\$5,000.00
American Council of Learned Societies, Washington, D.C. Fellowships in the field of humanistic studies . .	42,620.62
American Council of Learned Societies, Washington, D.C. Research and administration	168,610.41
American Council of Learned Societies, Washington, D.C. Research in paleography	10,478.37
American Council of Learned Societies, Washington, D.C. Development of a training center for Far Eastern studies at the Library of Congress	5,614.86
American Historical Association, Washington, D.C. Support of International Committee of Historical Sciences, Zurich, Switzerland	4,496.20
American School of Classical Studies at Athens, Greece. Fellowships in archeology in connection with excavation of Athenian Agora	16,650.00
American Schools of Oriental Research, Baghdad and Jerusalem. Current expenses	35,000.00
American Schools of Oriental Research, Baghdad and Jerusalem. Endowment	9,385.92
Bibliographical Society of America, Buffalo, New York. Index of American newspaper files	8,500.00
British Museum, London, England. Service in connection with new edition of the Catalogue of Printed Books	880.95
Columbia University, New York City. General research fund for development of advanced humanistic work .	25,000.00
Fellowships in humanities administered by The Rockefeller Foundation	9,447.08
Grants in aid of research	23,085.36
Harvard University, Cambridge, Massachusetts. Advanced research in humanities	25,000.00

Institute of Pacific Relations, American Council, New York City. Development of instruction in the Russian language.....	\$2,500.00
International Committee of Historical Sciences, Zurich, Switzerland. General expenses.....	14,000.00
Johns Hopkins University, Baltimore, Maryland. General research fund in humanities.....	20,000.00
Laboratory of Anthropology, Santa Fe, New Mexico. Interpretative studies in Indian art.....	1,250.00
Library of Congress, Washington, D.C. Accumulation of source materials for American history.....	20,000.00
Orthological Institute, London, England. Basic English in the Orient.....	12,500.00
Princeton University, New Jersey. Research in field of humanities.....	7,500.00
✓ Prussian State Library, Berlin, Germany. Preparation of material for Union Catalogue of Prussian Libraries	10,000.00
Research aid fund, Special, for European scholars.....	22,200.31
Society of the Friends of the Bibliothèque Nationale, Paris, France. Expenses of printing Catalogue Général.....	3,303.77
State University of Iowa, Iowa City. Development of work in dramatic art.....	3,750.00
v <i>Thesaurus Linguae Latinae</i> , Munich, Germany. General budget.....	4,861.86
University of Chicago, Illinois. General research fund in humanities.....	37,500.00
University of Chicago, Illinois. Oriental Institute. Support of foreign work.....	384,431.42
University of Chicago, Illinois. Preparation of <i>Historical Dictionary of American English</i>	6,250.00
University of London, England. School of Oriental Studies. Research in African linguistics.....	7,165.00
University of Michigan, Ann Arbor. Archeological research at Karanis, Egypt.....	17,500.00
University of Michigan, Ann Arbor. Research fund in humanities.....	12,500.00
University of New Mexico, Albuquerque. Studies in Hispanic-American culture.....	2,000.00
University of North Carolina, Chapel Hill. Work in the drama.....	7,500.00
University of Oxford, England. Development of the Bodleian and other libraries.....	109,708.66
University of Oxford, England. Visits of architect and librarian.....	1,642.46
University of Texas, Austin. Studies in Hispanic-American culture.....	3,750.00

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Virginia Historical Society, Richmond. <i>Virginia Historical Index</i>	\$7,500.00
Yale University, New Haven, Connecticut. Research fund in humanities.....	50,000.00
Yale University, New Haven, Connecticut. Development of library in Department of Drama.....	1,494.48
	<hr/>
TOTAL PAYMENTS.....	\$1,160,577.73

In addition to the above amount, payments totaling \$74,418.65, for all fields, were made on appropriations of a general type in which the particular field of activity was not specified (general research aid funds, aid for returned Rockefeller Foundation fellows, visitors, etc.).

**THE HUMANITIES
STAFF DURING 1934**

**Director
David H. Stevens**

**Assistant Director
John Marshall**

REPORT OF THE TREASURER

TREASURER'S REPORT

In the following pages is submitted a report of the financial transactions of The Rockefeller Foundation for the year ended December 31, 1934.

A condensed summary of appropriations and funds available for appropriation follows:

Balance of appropriations, pledges, and authorizations at December 31, 1933		
Prior Obligations Account	\$7,621,722.91	
Current Appropriations Account	32,538,581.48	\$40,160,304.39

Funds provided for appropriations, pledges, and authorizations made during the year, as shown hereunder		7,826,887.50
		\$47,987,191.89

Less		
Payments made during the year	\$12,679,774.59	
Sum of authorizations allowed to lapse returned to Principal Fund	31,156.50	
Sum of unused appropriations, pledges, and authorizations allowed to lapse, becoming available for appropriation	1,609,625.18	14,320,556.27

Balance of appropriations, pledges, and authorizations at December 31, 1934		\$33,666,635.62

This balance consists of		
Prior Obligations Account	\$6,030,851.25	
Current Appropriations Account	27,635,784.37	
		\$33,666,635.62

Balance available for appropriation at December 31, 1933.....		\$3,006,884.17
Income and refunds received during the year.....	\$8,207,622.56	
Unused balance of appropriations, pledges, and authorizations allowed to lapse, returned as above.....	1,609,625.18	9,817,247.74
		<u>\$12,824,131.91</u>
Less funds provided, as above, for Appropriations made during the year not previously pledged or authorized.....	\$7,636,447.50	
Pledges made during the year.	190,440.00	7,826,887.50
		<u>\$4,997,244.41</u>
Balance available for appropriation at December 31, 1934.....		<u>\$4,997,244.41</u>

The balance in Principal Fund December 31, 1933, amounted to \$153,578,785.59. Transactions during the year resulted in an increase of \$31,156.50, or a balance December 31, 1934, of \$153,609,942.09. The Reserve for Contingent Projects Account, amounting to \$1,500,000 at December 31, 1933, remained unchanged during the year.

By action of the Board of Trustees at its meeting of April 11, 1934, land in Shanghai, China, carried on the books December 31, 1933, at \$298,331.95, was conveyed to the Chase Bank, Shanghai, for the sole and exclusive benefit of the Board of Directors of the Shanghai Medical Center.

Since the close of the year the accounts of the

Comptroller, the accounts of the Treasurer, and the securities owned by the Corporation have been examined by Messrs. Haskins and Sells, Certified Public Accountants, who have rendered a report to the Chairman.

The financial condition and operations are set forth in the appended exhibits as follows:

Balance Sheet.....	Exhibit A
Foreign Currencies Held December 31, 1934.	Exhibit A1
Consolidated Statement of Funds Available for Appropriation and Disbursement.....	Exhibit B
Statement of Appropriations Made during the Year 1934.....	Exhibit C
Statement of Payments during 1934 on Ap- propriations Made in 1934 and Prior Years	Exhibit D
Statement of International Health Division Designations and Payments.....	Exhibit E
Summary of Prior Obligations Account.....	Exhibit F
Summary of Appropriations Account.....	Exhibit G
Statement of Principal Fund.....	Exhibit H
Statement of Reserve for Contingent Proj- ects.....	Exhibit H
Statement of Land, Buildings, and Equip- ment Fund.....	Exhibit I
Schedule of Securities.....	Exhibit J

EXHIBIT A
BALANCE SHEET—DECEMBER 31, 1934

ASSETS

INVESTMENTS

Securities (ledger valuation)..... \$182,184,268.55

CURRENT ASSETS

Certificates of deposit.....	\$4,500,000.00	
Cash on deposit.....	1,803,149.20	
Foreign currencies purchased to meet specific appropriations payable in foreign exchange of at least the same dollar amount (Exhibit A1)....	3,237,340.43	
Advances and deferred charges under appropriations and sundry accounts receivable.....	2,063,855.78	11,604,345.41

BUILDINGS AND EQUIPMENT

In New York.....	\$52,446.74	
In Paris.....	65,307.94	117,754.68
		\$193,906,368.64
		\$193,906,368.64

TREASURER'S REPORT

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EXHIBIT A
BALANCE SHEET—DECEMBER 31, 1934

FUNDS

PRINCIPAL FUND.....			\$153,609,942.09
RESERVE FOR CONTINGENT PROJECTS.....			1,500,000.00
APPROPRIATIONS FUNDS			
Appropriations, pledges, and authorizations made prior to January 3, 1929			
Unpaid appropriations..	\$ 5,003,851.25		
Unpaid pledges and au- thorizations.....	1,027,000.00	\$ 6,030,851.25	
	<hr/>		
Appropriations, pledges, and authorizations made on or subsequent to January 3, 1929			
Unpaid appropriations..	\$23,874,107.44		
Unpaid pledges and au- thorizations.....	3,761,676.93	27,635,784.37	33,666,635.62
	<hr/>	<hr/>	
BALANCE AVAILABLE FOR APPROPRIATION.....			4,997,244.41
CURRENT LIABILITIES			
Accounts payable.....			14,791.84
BUILDINGS AND EQUIPMENT FUND.....			117,754.68
			<hr/>
			<u>\$193,906,368.64</u>

EXHIBIT A1
FOREIGN CURRENCIES HELD DECEMBER 31, 1934

		AMOUNT IN LOCAL CURRENCY	RATE	COST IN U.S. DOLLARS
Albania	Gold francs	29,600.00	.316067567	\$9,355.60
Australia	Pounds	500/0/0	3.955	1,977.50
Austria	Schillings	40,530.00	.189251665	7,670.37
Bulgaria	Leva (blocked)	1,340,000.00	.009017992	12,084.11
Canada	Dollars	121,339.83	.940987308	114,179.24
China	Shanghai dollars	36,111.50	.344481674	12,439.75
Colombia	Pesos	6,375.00	.5980	3,812.25
Denmark	Kroner	15,508.40	.222812153	3,455.46
Egypt	Pounds	485/0/0	5.10	2,473.50
England	Pounds sterling	474,054/16/5	3.6040113	1,708,498.94
Fiji Islands	Pounds	425/0/0	4.46	1,895.50
France	Francs	1,503,171.00	.062976361	94,664.24
Germany	Reichsmarks	4,010.00	.4024	1,613.62
Greece	Drachmas	2,605,000.00	.009014226	23,482.06
Hungary	Pengos (blocked)	14,513.00	.137660028	1,997.86
India	Rupees	22,311/9/1	.379026	8,456.67
Italy	Lire	485,085.55	.083668375	40,586.32
Jamaica	Pounds	4,632/15/4	5.0796	23,532.64
Japan	Yen	2,997,510.12	.309333821	927,231.26
Java	Guilders	6,485.00	.6814	4,418.88
Netherlands	Guilders	162,387.50	.676198167	109,806.13
Norway	Kroner	2,000.00	.2485	497.00
Poland	Zloty	280.64	.177487172	49.81
Portugal	Escudos	65,000.00	.045965384	2,987.75
Rumania	Lei (blocked)	7,620,434.00	.007422201	56,560.40
Siam	Ticals	834.58	.420558843	350.99
Spain	Pesetas	28,040.00	.137202211	3,847.15
Sweden	Kronor	14,500.00	.255296551	3,701.80
Switzerland	Francs	172,500.00	.322977565	55,713.63
				<u>\$3,237,340.43</u>

EXHIBIT B
CONSOLIDATED STATEMENT OF FUNDS AVAILABLE FOR APPROPRIATION AND DISBURSEMENT

AMOUNTS AVAILABLE

PRIOR OBLIGATIONS ACCOUNT			
Balance, December 31, 1933		\$7,621,722.91	
Less			
Unused balances of appropriations allowed to lapse, credited to Appropriations Account	\$673,610.86		
Authorizations allowed to lapse, returned to Principal Fund	31,156.50	704,767.36	\$6,916,955.55
APPROPRIATIONS ACCOUNT			
Balance, December 31, 1933 ..		\$35,545,465.65	
Income received during the year 1934 ..		8,111,971.95	
Refunds received during the year ..		95,650.61	
Unused balance of appropriations allowed to lapse (prior obligations) ..		673,610.86	44,426,699.07
			\$51,343,654.62

DISBURSEMENTS

Universities and Other Educational Institutions			
Education			
Medical sciences	\$233,899.04		
Public health	3,813.10		
Nursing	35,713.15		
Social sciences	192,191.43		
Natural sciences ..	52,500.00		
Departmental development	1,478,781.23		
Research programs	2,205,310.23		
Land and buildings	437,481.41	\$4,639,689.59	
Research Institutions and Organizations			
Education			
Medical sciences	\$4,119.83		
Social sciences	14,209.95		
Humanities	2,500.00		

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EXHIBIT B—Continued

Research Institutions and Organizations—Continued

General development	\$510,678.19	
Research programs	657,459.07	
Land and buildings	24,936.20	\$1,213,903.24
		<hr/>
Special committees and commissions	160,963.39	
Fellowships and grants in aid	1,735,817.22	
Studies of pressing economic problems recommended by special trustee committee	481,334.66	
Miscellaneous	442,576.10	
Public health	2,799,296.79	
General	366,982.75	
Administration	839,210.85	\$12,679,774.59
		<hr/>
Balance, December 31, 1934		\$38,663,880.03
		<hr/>
This balance is available as follows:		
Amount due on appropriations, pledges, and authorizations made prior to January 3, 1929		\$6,030,851.25
Amount due on appropriations, pledges, and authorizations made on or subsequent to January 3, 1929		27,635,784.37
		<hr/>
		\$33,666,635.62
This sum is due in the following years:		
1935	\$15,650,436.62	
1936	8,514,410.00	
1937	3,371,881.00	
1938	3,289,666.00	
1939	1,573,313.00	
1940	1,266,929.00	
		<hr/>
		\$33,666,635.62
		<hr/>
Balance available for appropriation		4,997,244.41
		<hr/>
		\$38,663,880.03
		<hr/>
This sum is accounted for in securities and cash.		

EXHIBIT C
 APPROPRIATIONS MADE DURING THE YEAR 1934

American Council of Learned Societies, Washington, D.C.....	\$130,000.00
American Geographical Society, New York City.....	25,000.00
American Mathematical Society, New York City.....	8,500.00
American Municipal Association, Chicago, Illinois.....	130,000.00
American Public Welfare Association, Chicago, Illinois.....	70,000.00
American Society of Naturalists. <i>Drosophila</i> stock center, Cold Spring Harbor, New York.....	9,000.00
American Statistical Association, New York City.....	7,500.00
American University of Beirut, Republic of Lebanon.....	16,000.00
Amherst College, Massachusetts.....	21,000.00
Brookings Institution, Inc., Washington, D.C.....	61,000.00
California Institute of Technology, Pasadena.....	35,000.00
Central Medical School for Native Medical Students, Suva, Fiji.....	11,440.00
Chicago Area Project, Illinois.....	22,500.00
Citizens Family Welfare Committee, New York City.....	100,000.00
Columbia University, New York City.....	63,000.00
Commission on Interracial Cooperation, Atlanta, Georgia.....	50,000.00
Community Council of Philadelphia, Pennsylvania.....	7,500.00
Dartmouth College Medical School, Hanover, New Hampshire.....	20,000.00
Emergency fund for research personnel for government projects.....	15,000.00
Emergency grants in the natural sciences to institutions in China.....	35,000.00
Fellowships	
China.....	20,000.00
Medical sciences.....	85,000.00
Natural sciences.....	65,000.00
Social sciences.....	185,000.00
Foreign Policy Association, New York City.....	67,500.00

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EXHIBIT C—Continued

Grants in aid	
General	\$10,000.00
Humanities	25,000.00
Medical sciences	30,000.00
Natural sciences	30,000.00
Great Smoky Mountains Memorial Fund, Washington, D.C.	500.00
Harvard Medical School, Boston, Massachusetts	3,000.00
Harvard Medical School and Massachusetts Institute of Technology, Cambridge	4,000.00
Industrial Relations Counselors, New York City	25,000.00
Institute of Pacific Relations, American Council, New York City	32,500.00
Institute of the Pennsylvania Hospital, Philadelphia	18,000.00
International Commission for the Polar Year 1932-33, Copenhagen, Denmark	15,000.00
International Committee of Historical Sciences, Zurich, Switzerland	10,000.00
International Health Division of The Rockefeller Foundation, New York City	2,200,000.00
Jean Jacques Rousseau Institute, Geneva, Switzerland	5,000.00
Johns Hopkins University School of Medicine, Baltimore, Maryland	14,600.00
Laboratory of Anthropology, Santa Fe, New Mexico	5,000.00
League of Nations, Geneva, Switzerland	200,000.00
Leland Stanford, Jr., University, Stanford University, California	10,000.00
Library of Congress, Washington, D.C.	20,000.00
Lister Institute of Preventive Medicine, London, England	18,000.00
Long Island Biological Association, Cold Spring Harbor, New York	53,000.00
McGill University, Montreal, Canada	64,600.00
Massachusetts Department of Mental Diseases, Boston	41,100.00
Medical literature for Russia	10,000.00
Medical Research Council, London, England	15,000.00
Nankai University, Institute of Economics, Tientsin, China	7,500.00
National Association of Housing Officials, Chicago, Illinois	75,000.00
National Committee for Mental Hygiene, New York City	30,000.00

National Conference on Nomenclature of Disease, New York City ...	\$5,000.00
National Research Council, Washington, D.C.....	520,000.00
Neurophysiology in Europe. Survey ..	5,000.00
New Hampshire Foundation, Concord.....	18,000.00
New York State College of Agriculture, at Cornell University, Ithaca, New York.	5,000.00
New York University and Bellevue Hospital Medical College, New York City.....	5,000.00
New Zealand Department of Scientific and Industrial Research (Apia Observatory, Western Samoa)....	2,500.00
Northwestern University Medical School, Chicago, Illinois.....	4,000.00
Ohio State University, Columbus.....	9,000.00
Peiping Union Medical College, China.....	50,000.00
Princeton University, New Jersey ..	15,000.00
Research aid	
Humanities	20,000.00
Medical sciences	230,000.00
Natural sciences	150,000.00
Social sciences.....	75,000.00
Research and developmental aid in the medical and natural sciences, China	15,000.00
Roscoe B. Jackson Memorial Laboratory, Bar Harbor, Maine.....	12,500.00
Royal Caroline Institute, Stockholm, Sweden	22,400.00
Royal Institute of International Affairs, London, England.....	17,240.00
Shanghai, China. Land.....	5,500.00
Slum Clearance Committee of New York, New York City.	5,000.00
Social Science Research Council, New York City	154,500.00
Society of the Friends of the Bibliothèque Nationale, Paris, France	5,000.00
State Hygienic Institute, Budapest, Hungary.....	17,050.00
State University of Iowa, Iowa City.....	42,500.00
Tulane University of Louisiana, New Orleans.....	27,500.00
University of California Medical School, San Francisco ..	20,000.00
University of Chicago, Illinois.....	735,250.00
University of Colorado School of Medicine, Denver	10,000.00

EXHIBIT C—Continued

University of Copenhagen, Institute of General Pathology, Denmark.....	\$8,500.00
University of Leiden, Netherlands.....	48,700.00
University of Michigan, Ann Arbor.....	53,800.00
University of Montreal, Faculty of Medicine, Canada.....	25,000.00
University of New Mexico, Albuquerque.....	5,000.00
University of Oslo, Institute of Theoretical Astrophysics, Norway.....	7,100.00
University of Oxford, England.....	134,000.00
University of Paris, France.....	26,000.00
University of Pennsylvania, Philadelphia.....	32,500.00
University of Rochester, School of Medicine and Dentistry, New York.....	65,000.00
University of Stockholm, Sweden.....	3,750.00
University of Texas, Austin.....	7,500.00
University of Uppsala, Sweden.....	11,000.00
University of Virginia, Charlottesville.....	65,000.00
University of Wisconsin, Madison.....	4,000.00
Vanderbilt University, School of Nursing, Nashville, Tennessee.....	500,000.00
Virginia Historical Index, Richmond.....	6,000.00
Visits by teachers of public health and hygiene.....	3,500.00
Walter and Eliza Hall Institute of Research in Pathology and Medicine, Melbourne, Australia...	12,600.00
Welfare Council of New York City.....	75,000.00
Western Reserve University, School of Applied Social Science, Cleveland, Ohio...	10,000.00
Worcester State Hospital, Massachusetts.....	16,500.00
World Peace Foundation, Boston, Massachusetts.....	7,500.00
Yale University, New Haven, Connecticut.....	24,500.00
Yenching University, College of Public Affairs, Peiping, China.....	5,000.00
Administration.....	859,817.50
	<u>\$8,451,947.50</u>

NOTE: In addition to making the foregoing appropriations, land in Shanghai, China, owned by the Foundation and costing \$298,331.95, was conveyed in trust by action of the trustees for the exclusive benefit of the Shanghai Medical Center.

EXHIBIT D
PAYMENTS DURING 1934 ON APPROPRIATIONS MADE IN 1934 AND PRIOR YEARS

	1934 APPROPRIATIONS	1934 PAYMENTS	TREASURER'S REPORT
UNIVERSITIES AND OTHER EDUCATIONAL INSTITUTIONS			
Medical Science Education			
Albany Medical College, New York			
Organization of extension teaching in medicine (RF 33017)	\$5,000.00	\$5,000.00	
Cheeloo University, Tsinan, China. School of Medicine.			
Maintenance (RF 33015, 33102)	17,450.00	12,318.75	
China Medical Board, Inc., New York City			
Maintenance of Peiping Union Medical College for the year 1934-35 (RF 33101)	398,000.00	175,000.00	
Salary and expenses of director (RF 29067)	152.65	152.65	
Chulalongkorn University, Bangkok, Siam			
Equipment and supplies for medical, premedical, and nursing schools (ME 21059, 21093, 21148)	592.68	154.34	
Visiting professors and nurse leaders (ME 28039, RF 29110, 30063, 31113)	48,638.90	5,870.63	
National College of Medicine of Shanghai, China			
Maintenance (RF 29039)	4,809.16	3,374.64	
University of Colorado, School of Medicine, Denver			
Teaching of psychiatry (RF 34021)	10,000.00	5,000.00	
University of Lyon, France. Faculty of Medicine and Pharmacy			
Endowment for maintenance of improved facilities for teaching (RF 33036, 33054, 33082)	2,028.03	2,028.03	
University of Montreal, Canada. Faculty of Medicine			
Development of laboratories (RF 33035, 34075)	37,500.00	25,000.00	
Public Health Education			
Dalhousie University, Halifax, Nova Scotia			
Development of teaching in public health and preventive medicine (RF 33044)	39,352.81	3,813.10	285

EXHIBIT D—(Continued)

UNIVERSITIES AND OTHER EDUCATIONAL INSTITUTIONS—Continued

Nursing Education

	APPROPRIATIONS	1934 PAYMENTS
Emergency aid to schools of nursing in Europe to the development of which the Foundation has previously contributed (RF 31099).....	\$27,445.30	\$2,368.01
School for Public Health Nurses, Cluj, Rumania		
Improvement of teaching facilities (RF 29112).....	7,767.35	.....
State Central School of Nursing, Budapest, Hungary		
Maintenance (ME 28089).....	1,000.00	750.00
State Institute of Public Health, Prague, Czechoslovakia. School of Nurses for Public Health and Social Welfare.		
Improvement of teaching services (RF 30082).....	25,000.00	.....
University of Cracow, Poland. School of Public Health and Bedside Nursing		
Salaries and scholarships (ME 2927).....	785.85	331.30
University of Lyon, France. School of Nursing		
Health center for field training courses (ME 28027).....	8,000.00	8,000.00
University of Toronto, Canada. School of Nursing		
Maintenance (RF 32080).....	63,382.81	24,263.84
Vanderbilt University, Nashville, Tennessee. School of Nursing		
Endowment (RF 34177).....	500,000.00	.....
Social Science Education		
American University of Beirut, Republic of Lebanon		
Work in the social sciences (RF 31014, 34085).....	21,000.00	13,000.00
National Catholic School of Social Service, Washington, D.C.		
Budget for instruction (RF 31040).....	10,000.00	7,500.00
New York School of Social Work, New York City		
General budget (RF 32043).....	120,000.00	30,000.00
Tulane University of Louisiana, New Orleans. School of Social Work		
General budget (RF 32044).....	48,000.00	12,000.00

University of Chicago, Illinois. School of Social Service Administration		
General endowment (RF 34057).....	\$500,000.00	\$.....
Current expenses (RF 31039, 34058, 34059).....	210,046.43	51,191.43
University of Stockholm, Sweden		
Special faculty appointment in the social sciences (RF 34070).....	3,750.00	750.00
University of Vienna, Austria. Psychological Institute		
General program (RF 31093).....	4,000.00	4,000.00
Western Reserve University, Cleveland, Ohio. School of Applied Social Sciences		
Support (RF 32042, 33064, 34087).....	75,000.00	31,250.00
Yenching University, Peiping, China. College of Public Affairs		
Strengthening of work (LS 946, RF 34081).....	50,000.00	42,500.00
Natural Science Education		
China		
Maintenance of science departments		
Cheeloo University, Tsinan (RF 34082).....	4,375.00	4,375.00
Fukien Christian University, Foochow (RF 32026).....	7,500.00	5,000.00
Ginling College, Nanking (RF 34082).....	1,250.00	1,250.00
Lingnan University, Canton (RF 33013, 33068, 34082).....	30,000.00	20,000.00
Soochow University (RF 34082).....	4,375.00	4,375.00
University of Nanking (RF 34082).....	5,000.00	5,000.00
Yenching University, Peiping (RF 30020, 30064).....	18,750.00	12,500.00
Emergency aid		
Equipment and maintenance for Chinese institutions (RF 33013).....	3,000.00	.....
Departmental Development		
American University of Beirut, Republic of Lebanon		
Improvement of teaching facilities in the medical sciences, nursing, and the pre-medical subjects (RF 31124).....	354,166.66	49,999.92
California Institute of Technology, Pasadena		
Development of natural sciences, including buildings and equipment (RF 30080)	500,000.00	.....
Harvard University, Cambridge, Massachusetts		
School of City Planning. Support (RF 29072).....	90,113.34	30,062.70
Teaching and research in psychiatry (RF 33103).....	42,000.00	21,000.00

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EXHIBIT D—Continued

	APPROPRIATIONS	1934 PAYMENTS
UNIVERSITIES AND OTHER EDUCATIONAL INSTITUTIONS—Continued		
<i>Departmental Development—Continued</i>		
Institute of the Pennsylvania Hospital, Philadelphia		
Development of research and teaching in psychiatry (RF 34061).	\$18,000.00	\$9,000.00
Johns Hopkins University School of Medicine, Baltimore, Maryland		
Study and teaching in child psychiatry (RF 34047).	14,600.00	7,300.00
Keio Gijuku University, Tokyo, Japan		
Salary and expenses of visiting professors in the biological sciences (ME 21168, 28432).	11,594.54	5,032.37
London School of Economics and Political Science, England		
Library development (RF 31030).	43,283.16	7,898.01
Improving facilities for research and postgraduate teaching (RF 31031, 33082) ..	132,178.00	31,452.00
Massachusetts General Hospital, Boston		
Development of teaching and research in psychiatry (RF 33103)	38,000.00	23,000.00
McGill University, Montreal, Canada		
Teaching and research in neurology		
Support 1932-34 (RF 32041, 34109).	62,556.02	53,390.61
Endowment (RF 32040).	1,000,000.00	951,280.00
Nankai University, Tientsin, China		
Support of Institute of Economics (RF 31123, 34080).	70,435.15	8,273.07
State University of Iowa, Iowa City		
Development of work in dramatic art (RF 34055).	32,500.00	3,750.00
Syracuse University, New York. School of Citizenship and Public Affairs		
Research and training (RF 32037).	35,000.00	10,000.00
Tohoku Imperial University, Sendai, Japan		
Salary and expenses of visiting professors in the biological sciences (ME 21167)	11,051.92	2,815.98
University of California, Berkeley. Bureau of Public Administration		
Program of graduate training and research (RF 29108).	75,000.00	20,000.00

University of Chicago, Illinois		
Endowment for development of Faculty of the Social Sciences (RF 31032)....	\$111,000.00	\$.....
Interest on RF 31032 (RF 34016).....	1,000.00	1,000.00
Training and research in public administration (RF 32035).....	87,500.00	25,000.00
University of Cincinnati, Ohio		
Training in public administration (RF 32036).....	60,000.00	20,000.00
✓ University of Leipzig, Germany. Institute of Physiological Chemistry		
Research assistants, fellows, and aid (RF 31016).....	42,825.00	10,825.00
University of Michigan, Ann Arbor		
Development of teaching and investigative work in psychiatry (RF 34046)....	15,000.00	7,500.00
University of Minnesota, Minneapolis		
Establishment of a laboratory for rock analysis (RF 29058).....	1,667.20	101.27
University of Oslo, Norway. Institute of Theoretical Astrophysics.		
Equipment (RF 31035).....	14,882.81	2,742.82
University of Oxford, England		
Development of program in the social sciences (RF 34154).....	130,000.00	.....
University of Paris, France. Department of Parasitology		
Support (RF 30065, 33082, 34119).....	21,278.70	4,528.70
University of Stockholm, Sweden		
Development of social science library (RF 33025, 33082).....	17,000.00	5,000.00
University of Szeged, Hungary. Departments of science and medicine		
Maintenance (RF 31026).....	12,197.97	6,384.00
Scientific equipment (RF 31025).....	27,834.21	16,345.95
University of Washington, Seattle		
Building and equipment of laboratory and boat, and maintenance of boat for oceanographic work (RF 30079, 32011).....	9,828.39	5,098.81
Yale University, New Haven, Connecticut. Institute of Human Relations		
Development of psychiatry and care of individuals under observation (RF 29002)	567,302.01	100,000.00
Maintenance of an anthropoid experiment station, Orange Park, Florida (RF 29090).....	235,021.86	40,000.02

EXHIBIT D—Continued

UNIVERSITIES AND OTHER EDUCATIONAL INSTITUTIONS—Continued

Research Programs

Alaska Agricultural College and School of Mines, Fairbanks

Study of the aurora (RF 29118).....

\$5,115.89

\$.....

Amherst College, Massachusetts

Research in genetics and experimental embryology (RF 34130).....

21,000.00

.....

Brown University, Providence, Rhode Island

Study of the international gold standard (RF 32073).....

8,011.24

7,849.73

California Institute of Technology, Pasadena

Research in biology (RF 33106).....

50,000.00

15,000.00

Research in chemistry (RF 33109, 34151).....

40,000.00

5,000.00

Research in physics and chemistry (RF 32060).....

10,000.00

10,000.00

Support of meteorological program (RF 34089).....

5,000.00

5,000.00

China Medical Board, Inc., New York City

Peiping Union Medical College. Human paleontological research in Asia (RF 32100).....

80,000.00

14,231.84

Columbia University, New York City

Development of Far Eastern studies (RF 34116).....

10,000.00

.....

General research fund for development of advanced humanistic work (RF 33031)

50,000.00

25,000.00

Research and field training in anthropology (RF 33011, 34072).....

11,442.88

7,692.88

Research in the biological effects of heavy hydrogen (RF 34101).....

22,500.00

11,250.00

Research in medical mycology (RF 34077).....

3,000.00

3,000.00

Research in pituitary-gonad interrelationship (RF 34090).....

5,000.00

2,500.00

Research in social sciences (RF 30036-37).....

411,950.00

76,665.22

Research in virus diseases (RF 32055).....

12,439.85

4,180.40

Studies in the School of Tropical Medicine, University of Puerto Rico, on nutrition in Puerto Rico (RF 30089).....

4,000.00

4,000.00

Studies of the common cold (RF 31086, 33062, 34073).....

22,500.00

16,500.00

Cornell University Medical College, New York City		
Studies of the rôle of the glands of internal secretion in relation to growth and inheritance (RF 30006).....	\$163,108.56	\$24,990.40
Dartmouth College Medical School, Hanover, New Hampshire		
Research in physiological optics (RF 34064).....	20,000.00	10,000.00
Hannover Polytechnic School, Germany		
Scientific equipment for research in inorganic chemistry (RF 31151).....	6,550.10	2,872.66
Harvard University, Cambridge, Massachusetts		
Advanced research in the humanities (RF 33030).....	50,000.00	25,000.00
Biochemical studies of synovial fluid (RF 34065).....	3,000.00	1,500.00
Chemical research to determine the heats of organic reactions (RF 32098)....	35,000.00	8,000.00
Geophysical research (RF 31134).....	25,000.00	10,000.00
Research fund for social sciences (RF 32032).....	284,208.33	65,575.01
Research in anthropology (RF 31042).....	35,000.00	15,000.00
Research in industrial hazards (RF 30031).....	\$75,854.36	115,819.77
Research in physiology and physical chemistry (RF 30028).....	99,420.98	26,382.82
Research on the spectroscopic analysis of the blood serum of anemic children (RF 34110).....	2,000.00	.....
Harvard University and Radcliffe College, Cambridge, Massachusetts		
Research in the field of international relations (LS 993).....	301,371.15	42,610.60
Iowa State College of Agriculture and Mechanic Arts, Ames		
General research fund in the natural sciences (RF 31077).....	11,250.00	6,250.00
Johns Hopkins University, Baltimore, Maryland		
Biological research (RF 30005).....	245,000.00	42,500.00
General research fund in the humanities (RF 30035).....	30,000.00	20,000.00
Research in psychiatry (RF 33043).....	70,000.00	20,000.00
Study of deafness (RF 32024).....	92,831.91	10,754.60
Study of obstetrical records (RF 29041).....	15,430.62	6,600.00
Leland Stanford, Jr., University, Stanford University, California		
General research fund in the medical sciences (RF 30070).....	30,000.00	15,000.00
Research fund for the social sciences (RF 32031).....	152,200.00	65,000.00
Research in chemophysical biology (RF 34052).....	10,000.00	7,000.00

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EXHIBIT D—Continued

UNIVERSITIES AND OTHER EDUCATIONAL INSTITUTIONS—Continued
 Research Programs—Continued

	APPROPRIATIONS	1934 PAYMENTS
London School of Economics and Political Science, England		
Research fund (LS 994, RF 33007, 33082).....	\$35,576.91	\$26,494.41
Massachusetts Institute of Technology, Cambridge		
Aerological research (RF 33110).....	8,300.00	8,300.00
General research fund for physics, chemistry, geology, and biology (RF 31050)	60,000.00	30,000.00
Research on the spectroscopic analysis of the blood serum of anemic children (RF 34110).....	2,000.00	.....
McGill University, Montreal, Canada		
Research in the applications of spectroscopic methods to biological and medical problems (RF 34051).....	10,000.00	7,500.00
Research in the social sciences (RF 30107).....	54,013.80	25,000.00
Northwestern University Medical School, Chicago, Illinois		
Research in neuroanatomy (RF 34023).....	4,000.00	2,000.00
New York University Medical College, New York City		
Research in experimental neurology (RF 34063).....	5,000.00	2,916.62
Ohio State University, Columbus		
Research in endocrinology (RF 34148).....	9,000.00	.....
Ohio Wesleyan University, Delaware, Ohio		
Support of the Perkins Observatory (RF 32074).....	7,817.32	2,645.23
Peiping Union Medical College, China		
Field studies in kala-azar (CM 2733).....	1,335.12	.....
Human paleontological research in Asia (RF 29047, 32021).....	6,615.10	2,349.19
Princeton University, New Jersey		
Research in the field of the humanities (RF 34093).....	15,000.00	7,500.00
Research work of the Department of Geology (RF 29079).....	100,000.00	.....

Royal Caroline Institute, Stockholm, Sweden		
Research in biochemistry (RF 34144).....	\$22,400.00	\$.....
Royal Joseph Technical University, Budapest, Hungary		
Support of investigations of problems in the chemistry of carbohydrates (RF 30074).....	500.00	500.00
State University of Iowa, Iowa City		
Support of investigations on the physiology of the normal cell (RF 34053)....	10,000.00	5,000.00
Tulane University of Louisiana, New Orleans		
Department of Middle American Research. Support (RF 31043, 34030).....	38,750.00	17,500.00
University of California, Berkeley		
Institute of Social Sciences. Research (RF 33112).....	30,000.00	30,000.00
Study of chemical aspects of vitamins and hormones (RF 29099, 34024, 34084)...	25,000.00	11,000.94
University of Chicago, Illinois		
Aid to social science facilities (RF 31133).....	267,425.00	67,928.90
General research fund in the humanities (RF 31132, 33123).....	50,000.00	37,500.00
Oriental Institute. Support of foreign work (RF 32094, 33021, 34032, 34096)...	569,431.42	384,431.42
Program of local community research (RF 31131).....	187,522.50	37,800.00
Research program of the Department of Anthropology (RF 29069, 34029)....	37,500.00	15,000.00
Research in application of spectroscopic methods to biological problems (RF 34020).....	11,750.00	8,812.50
Research in the biological sciences (RF 29083, 33105).....	66,415.42	39,971.47
Studies in comparative philology (RF 29135).....	26,764.24	.....
University of Copenhagen, Denmark. Institute of General Pathology		
Research on inheritance in relation to blood groupings (RF 34112).....	8,500.00	.....
University of Freiburg im Breisgau, Germany		
Equipment for research work in physical chemistry (RF 30093).....	17,374.03	.....
University of Hawaii, Honolulu		
Racial research (RF 33050).....	36,666.68	16,666.68
University of Leiden, Netherlands		
Purchase and endowment of a photographic telescope for the Union Observatory, Johannesburg, Union of South Africa (RF 30021, 34100).....	112,673.02
Research in child psychiatry (RF 34145).....	19,700.00

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EXHIBIT D—Continued

	APPROPRIATIONS	1934 PAYMENTS
UNIVERSITIES AND OTHER EDUCATIONAL INSTITUTIONS—Continued		
<i>Research Programs—Continued</i>		
University of Liverpool, England		
Social survey of Merseyside. Publication of report (RF 32014).....	\$2,400.00	\$.....
University of London, England. School of Oriental Studies		
Research in African linguistics (RF 32072, 33082).....	24,207.50	7,165.00
University of Louvain, Belgium. Institute of Economics		
Business cycle research (RF 33010).....	4,854.65	835.87
University of Michigan, Ann Arbor		
Archeological research at Karanis, Egypt (RF 32103).....	17,500.00	17,500.00
Research in the applications of spectroscopic methods to biological and medical problems (RF 34050).....	8,800.00	4,400.00
Research fund in the humanities (RF 34037).....	25,000.00	12,500.00
Research in the physiology of respiration (RF 34049).....	5,000.00	2,500.00
University of Minnesota, Minneapolis		
General research fund (RF 31007).....	120,000.00	52,500.00
University of New Mexico, Albuquerque		
Studies in Hispanic-American culture (RF 34097).....	5,000.00	2,000.00
University of North Carolina, Chapel Hill		
Program in the social sciences (RF 32029).....	45,000.00	30,000.00
Research in the natural sciences (RF 32034).....	7,500.00	5,000.00
University of Oregon, School of Medicine, Portland		
General research fund (RF 32051).....	3,250.00	3,250.00
University of Oslo, Norway		
Research program of the Institute of Economics (RF 31122).....	35,205.00	8,914.12
University of Paris, France		
General research fund in the social sciences (RF 34114).....	21,000.00	4,990.02
Radium Institute. Division of Physics (RF 32076).....	108,582.03	14,268.00

University of Pennsylvania, Philadelphia		
Excavations at Ur of the Chaldees (RF 31073).....	\$4,000.00	\$.....
General research fund (RF 30094).....	22,500.00	12,500.00
Study of living tissues (RF 29064, 34025).....	34,796.08	18,730.62
Wharton School of Finance and Commerce		
Support of the Industrial Research Department (RF 32050, 34092).....	37,500.00	25,000.00
University of Rochester, New York. School of Medicine and Dentistry		
Development of the Child Guidance Clinic in the Department of Psychiatry (RF 29063, 34103).....	32,500.02	26,000.02
General research fund (RF 29026).....	5,000.00	5,000.00
Research on physiology of reproduction (RF 34091).....	3,300.00	1,650.00
Special research in dental pathology (RF 32015, 33019-20, 34102, 34146).....	49,699.98	13,374.49
Special research on pulmonary capacity (RF 34104).....	2,500.00	1,250.00
Studies on the biological effects of heat (RF 34074).....	6,200.00	3,100.00
University of Stockholm, Sweden		
General research program in the social sciences (RF 31034, 33026).....	18,000.00	9,000.00
Increased facilities for investigations in zoophysiology (RF 31149).....	1,843.88	372.08
University of Texas, Austin		
Development of program in the social sciences (RF 32030).....	100,000.00	25,000.00
Studies in Hispanic-American culture (RF 34098).....	7,500.00	3,750.00
University of Uppsala, Sweden. Institute of Physical Chemistry		
Additional research assistants (RF 31150).....	4,894.63	4,011.87
Research on the physical-chemical properties of proteins and other heavy molecules (RF 34111).....	11,000.00	.....
University of Virginia, Charlottesville		
Graduate research in the natural sciences (RF 34153).....	35,000.00	.....
Research in the social sciences (RF 30106, 34175).....	52,500.00	12,500.00
University of Warsaw, Poland. Institute of Physics		
Research apparatus (RF 31027).....	3,494.69	1,943.08
University of Wisconsin, Madison		
Researches in endocrinology (RF 34099).....	4,000.00	2,000.00

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EXHIBIT D—Continued

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THE ROCKEFELLER FOUNDATION

UNIVERSITIES AND OTHER EDUCATIONAL INSTITUTIONS—Continued

Research Programs—Continued

Vanderbilt University, Nashville, Tennessee. School of Medicine.

General research fund in the medical sciences (RF 31136)..... \$150,000.00 \$45,000.00

Washington University, St. Louis, Missouri

General research fund (RF 30038)..... 60,000.00 30,000.00

Research on virus diseases (RF 32056)..... 7,500.00 5,326.69

Research in neurophysiology (RF 33061)..... 52,650.00 11,185.08

Western Reserve University, Cleveland, Ohio

Research on whooping cough (RF 32025).... 17,500.00 6,000.00

Yale University, New Haven, Connecticut

Research fund in the humanities (RF 32033) 200,000.00 50,000.00

Institute of Human Relations

Research in psychology, child development, and social sciences (RF 29008) 825,000.00 150,000.00

School of Medicine

General research fund (RF 29147)..... 55,000.00 18,750.00

Special research in dental pathology (RF 33034, 34076) ... 32,500.00 22,500.00

Land and Buildings

Chulalongkorn University, Bangkok, Siam

Addition to pathology building, and a building for the School of Nursing (RF 30023)..... 40,017.73 11,656.22

London School of Economics and Political Science, England

Erection and equipment of library building (RF 31029) . 34,712.28 33,272.78

Purchase of land for expansion of school plant (RF 31028) 58,128.92 1.26

McGill University, Montreal, Canada

Construction and equipment of a laboratory in the Royal Victoria Hospital (RF 32040) 129,065.65 112,853.87

Shanghai, China. Purchase of land for a medical school and expenses in connection therewith (CM 2269, RF 34056, 34137)..... 7,531.65 622.23

State Institute of Public Health, Prague, Czechoslovakia Building and equipment for School of Nurses for Public Health and Social Welfare (RF 30082).....	\$3,994.99	\$.....
University College, London, England. Department of Physiology Building and equipment (RF 33042).....	7,187.06	7,187.06
University of Geneva, Switzerland. Station of Experimental Zoology Construction and equipment (RF 31036, 33054).....	16,426.45	16,426.45
University of Göttingen, Germany. Institute of Inorganic Chemistry Construction and equipment (RF 32049, 33054).....	8,295.00	8,295.00
University of Lyon, France Faculty of Medicine and Pharmacy. Land and buildings (ME 21242, 28138, RF 29152).....	133,643.46	Cr. .97
School of Nursing. Building and equipment (RF 32064, 33054).....	69,055.75	64,533.33
University of Oslo, Norway. Institute of Theoretical Astrophysics Construction and equipment (RF 31035, 34033).....	32,971.47	32,957.02
University of Oxford, England Development of the Bodleian and other libraries (RF 31121).....	2,195,071.91	109,708.66
University of Utrecht, Netherlands. Institute of Comparative Physiology Construction of building (RF 33038, 33081).....	101,000.00	39,968.50
RESEARCH INSTITUTIONS AND ORGANIZATIONS		
Medical Science Education		
Chinese Medical Association, Shanghai. General budget (RF 33045).....	9,750.00	4,119.83
Social Science Education		
Laboratory of Anthropology, Santa Fe, New Mexico Support of field training course in anthropology (RF 29116).....	24,655.25	8,749.95
Social Science Research Council, New York City Instruction in agricultural economics (RF 30104).....	22,880.53	5,460.00
Humanities Education		
Institute of Pacific Relations. American Council, New York City Support of Russian language instruction (RF 34006, 34136).....	7,500.00	2,500.00
General Education		
Canadian National Committee for Mental Hygiene, Toronto Development of training centers for advanced students (RF 30088).....	20,587.50	.....

EXHIBIT D—Continued

RESEARCH INSTITUTIONS AND ORGANIZATIONS—Continued

General Development

American Historical Association, Washington, D.C.

Support of the International Committee of Historical Sciences, Zurich, Switzerland (LS 951)

\$4,496.20

\$4,496.20

American Schools of Oriental Research, Baghdad and Jerusalem

Current expenses (RF 29134)

90,000.00

35,000.00

Endowment (RF 29134)

220,454.70

9,385.92

Brookings Institution, Washington, D.C.

General endowment (LS 929)

2,000,000.00

.....

Support of research (RF 31125)

112,500.00

75,000.00

Canton of Geneva, Switzerland, Department of Public Instruction

Postgraduate Institute of International Studies, Maintenance (RF 29136)

706,602.43

69,102.43

Hungarian Biological Research Institute, Tihany

Maintenance (RF 31061)

3,477.59

1,596.00

Institute of Comparative Research in Human Culture, Oslo, Norway

General budget (RF 30086)

2,500.00

2,500.00

Institute of Economic and Social Research, Paris, France

Establishment and support (RF 33072)

350,000.00

33,690.48

Institute of Economics and History, Copenhagen, Denmark

General budget (RF 33071)

18,000.00

5,365.00

Institute of Pacific Relations, American Council, New York City

General program (RF 33114, 34156)

50,000.00

25,000.00

International Institute of African Languages and Cultures, London, England

General budget (RF 31041)

176,495.07

31,228.36

Long Island Biological Association, Cold Spring Harbor, New York

Work of the Biological Laboratory (RF 34004, 34149)

46,000.00

20,000.00

National Bureau of Economic Research, New York City		
General budget (RF 29073, 33063).....	\$322,410.05	\$83,851.80
Social Science Research Council, New York City. General budget (LS 875).....	250,000.00	50,000.00
Woods Hole Oceanographic Institution, Massachusetts		
Current expenses (RF 30004).....	310,000.00	55,000.00
Zoological Station of Naples, Italy		
Current expenses (RF 32087).....	14,462.00	9,462.00
Research Programs		
American Council of Learned Societies, Washington, D.C.		
Development of a training center for Far Eastern studies at the Library of Congress, Washington, D.C. (RF 33094).....	14,000.00	5,614.86
General activities (RF 34157).....	50,000.00	.....
Research in paleography (RF 29133).....	20,353.06	10,478.37
Australian National Research Council, Sydney		
Anthropological studies (RF 31095).....	29,875.00	13,697.51
Ethnological research in the Melanesian Islands (RF 32059).....	47.78	Cr. 157.22
Austrian Institute for Trade Cycle Research, Vienna		
Research program (RF 30087, 33082).....	9,701.98	5,132.71
Behavior Research Fund, Chicago, Illinois. General budget (RF 32054).....	9,533.98	9,533.98
Bernice P. Bishop Museum, Honolulu, Hawaii		
Research in Polynesian anthropology (RF 32058).....	1,000.00	.....
Canadian National Committee for Mental Hygiene, Toronto		
Program of mental hygiene and social research in Canadian universities (LS 943, RF 33049).....	64,495.41	9,415.06
Central Institute for the Deaf, St. Louis, Missouri		
Research in neurology (RF 33006).....	1,337.79	346.46
Chicago Area Project. General budget (RF 34120).....	22,500.00	7,097.84
Community Council of Philadelphia, Pennsylvania		
Support of the Department of Research (RF 33073, 34122).....	12,500.00	7,500.00
Council on Foreign Relations, New York City		
Research program (RF 32105).....	50,000.00	25,000.00

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EXHIBIT D—Continued

	APPROPRIATIONS	1934 PAYMENTS
RESEARCH INSTITUTIONS AND ORGANIZATIONS—Continued		
Research Programs—Continued		
Dutch Economic Institute, Rotterdam, Netherlands		
Research program (RF 31046)	\$15,000.00	\$5,000.00
Economic Foundation, New York City		
International study of the history of prices (RF 29138, 33113)	148,689.00	51,123.05
Foreign Policy Association, New York City		
Study of economic and social conditions in Cuba (RF 34066)	35,000.00	20,701.23
Support of Research Department (RF 33003, 34155)	50,000.00	25,000.00
Geneva Research Center, Switzerland		
General research budget (RF 33027, 33082)	23,880.00	9,901.53
✓ Institute of International Economics and Maritime Trade, Kiel, Germany		
Research program (RF 32083)	5,000.00	5,000.00
✓ Institute for Psychiatric Research, Munich, Germany		
Research in neurohistology, serology, and biochemistry (RF 31045, 33082)	71,417.18	15,369.94
✓ Institute of Social and Political Sciences, Heidelberg University, Germany		
Research in the social and political sciences (LS 984)	2,115.44	2,115.44
Institute of Pacific Relations, Honolulu, Hawaii		
Program of research in the social sciences (RF 30084)	100,000.00	50,000.00
International Institute of Public Law, Paris, France		
Research program (RF 31001)	10,091.28	6,119.59
✓ Kaiser Wilhelm Institute of Anthropology, Human Heredity, and Genetics, Berlin-Dahlem, Germany		
Research on twins and the effect of poisons on germ plasm (RF 32077, 33054)	3,406.48	3,406.48
✓ Kaiser Wilhelm Institute for Brain Research, Berlin-Buch, Germany		
Special apparatus and maintenance (RF 32063)	1,092.43	.....
Laboratory of Anthropology, Santa Fe, New Mexico		
Interpretative studies in Indian art (RF 34115)	5,000.00	1,250.00

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Lister Institute of Preventive Medicine, London, England Purchase of ultracentrifuge for use in medical research, particularly the bio-physical aspects of body fluids (RF 34126).....	\$18,000.00	\$.....
Marine Biological Association of China, Amoy Support of a marine institute of biology (RF 33039).....	1,446.63	853.05
Massachusetts Department of Mental Diseases, Boston Research in psychiatry at Boston State Hospital (RF 34142).....	41,100.00	.....
Statistical and record study (RF 31082).....	5,984.65	5,980.78
Massachusetts Society for Mental Hygiene, Boston Work in the field of mental disorders (RF 30032).....	3,216.44	1,455.93
Medical Research Council, London, England Research in puerperal fever (RF 31044).....	84,239.56	14,271.55
Research on virus diseases (RF 31153).....	7,780.16	5,393.38
National Committee for Mental Hygiene, New York City Support of activities (RF 34143).....	30,000.00	.....
National Institute of Industrial Psychology, London, England Research program (RF 32085, 33054).....	12,000.00	3,596.26
National Research Council, Washington, D.C. Committee for Research in Problems of Sex (RF 32099, 33104, 34147).....	204,076.20	73,327.90
Conferences (RF 32010).....	10,000.00	.....
New Hampshire Foundation, Concord. Research program (RF 34067).....	18,000.00	13,500.00
New Zealand Department of Scientific and Industrial Research Work of the Apia Observatory, Western Samoa (RF 34088).....	2,500.00	2,500.00
✓ Notgemeinschaft der Deutschen Wissenschaft, Berlin, Germany Anthropological study of the German population (RF 29137).....	25,000.00	25,000.00
Research in international relations (RF 31135).....	6,820.16	6,199.18
Orthological Institute, London, England. Research in the Chinese and Japanese languages in relation to Basic English (RF 33005).....	20,392.20	12,500.00
Roscoe B. Jackson Memorial Laboratory, Bar Harbor, Maine Research in mammalian genetics (RF 33107, 34131).....	23,500.00	11,000.00
Royal Anthropological Institute of Great Britain and Ireland, London, England General budget (RF 31110).....	3,000.00

TREASURER'S REPORT

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EXHIBIT D—Continued

	APPROPRIATIONS	1934 PAYMENTS
RESEARCH INSTITUTIONS AND ORGANIZATIONS—Continued		
Research Programs—Continued		
Royal Institute of International Affairs, London, England		
Research program (RF 32038, 33082, 34031, 34129).....	\$112,800.00	\$41,397.52
Rumanian Institute of Social Science, Bucharest		
General administration and research program (RF 31094, 33082).....	15,000.00	12,500.00
Social Science Research Council, New York City		
Conferences and planning (RF 31127).....	216,328.70	29,416.30
General research projects (RF 31126).....	225,000.00	18,976.00
Research planning in the field of international relations (RF 31049).....	12,500.00	12,500.00
— <i>Thesaurus Linguae Latinae</i> , Munich, Germany		
General budget (RF 32104).....	16,861.86	4,861.86
Trudeau Foundation, Trudeau, New York		
Research in tuberculosis (RF 30034).....	12,844.39	10,000.03
Walter and Eliza Hall Institute of Research in Pathology and Medicine, Melbourne, Australia		
Research in virus diseases (RF 34083).....	12,600.00	4,082.50
Welfare Council of New York City		
Support of Research Bureau (RF 31048, 34071).....	107,500.00	47,500.00
Worcester State Hospital, Massachusetts		
Research in dementia praecox (RF 34062).....	16,500.00	12,000.00
Land and Buildings		
Jungfrauoch Scientific Station, Switzerland		
Construction and equipment (RF 33111).....	35,700.00	24,936.20
Kaiser Wilhelm Institutes of Cell Physiology and Physics, Berlin-Dahlem, Germany		
— Land, buildings, and equipment (RF 30027).....	360,436.75	.....

SPECIAL COMMITTEES AND COMMISSIONS

American Institute of Mining and Metallurgical Engineers, New York City Mineral inquiry (RF 31019).....	\$2,540.34	\$.....
Committee on the Grading of Nursing Schools, New York City Publication (RF 32008).....	10,000.00	4,989.08
International Commission for the Polar Year 1932-33, Copenhagen, Denmark Equipment and expenses (RF 32022, 34132).....	17,425.00	.....
International Committee of Historical Sciences, Zurich, Switzerland General expenses (RF 33116, 34135).....	24,000.00	14,000.00
National Research Council, Washington, D.C. Work of the Committee on Drug Addiction (RF 31130, 34127).....	164,698.17	47,292.26
Work of Committee on Effects of Radiation on Living Organisms (RF 33108).....	10,000.00	7,500.00
Research Committee on Social Trends, Washington, D.C. Research on recent social changes (RF 29154).....	48,310.34	9,094.28
Science Advisory Board, Washington, D.C. General expenses (RF 33086).....	42,000.00	27,000.00
Social Science Research Council, New York City Committee on Government Statistics and Information Services, Washington, D.C. Expenses (RF 33065).....	63,171.75	51,087.77
FELLOWSHIPS AND GRANTS IN AID		
American Council of Learned Societies, Washington, D.C. Fellowships in the field of humanistic studies (RF 31055, 33032).....	110,526.22	42,620.62
Grants in aid, support of projects, and administration (RF 29085, 31056, 31129, 33122, 34095).....	293,554.30	168,610.41

TREASURER'S REPORT

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EXHIBIT D—Continued

	APPROPRIATIONS	1934 PAYMENTS
FELLOWSHIPS AND GRANTS IN AID—Continued		
American School of Classical Studies at Athens, Greece		
Fellowships in archeology in connection with the excavation of the Athenian Agora (RF 31020, 32093).....	\$29,000.00	\$16,650.00
Developmental Aid		
Europe. Constructive program of aid to medical education without capital expenditure (ME 28369).....	2,125.29	.....
Fellowships Administered by The Rockefeller Foundation		
China, Foreign and local (RF 34160).....	20,000.00	.....
Humanities (RF 29142).....	48,989.50	9,447.08
Medical sciences (RF 29140, 30099, 31141, 32110, 34162).....	413,153.59	115,186.08
Natural sciences (RF 30039, 31142, 32111, 33029, 34168).....	340,097.99	99,647.52
Nursing (ME 28373, 28376, RF 29149, 30100, 31143, 33018).....	79,342.73	25,116.43
Psychiatry (RF 32046, 32113).....	52,313.01	34,535.10
Social sciences (RF 29141, 31057, 32045, 32112, 34044, 34173).....	570,765.61	218,375.59
Grants in Aid		
Returned fellows of the Rockefeller boards, Research (RF 32048, 34107).....	18,418.82	5,803.76
Medical sciences		
In the fields of psychiatry and public health (RF 33075, 34041, 34167).....	98,698.01	27,298.01
Natural sciences		
In fields of vital processes and the earth sciences (RF 33074, 34042, 34133, 34171).....	106,800.00	35,367.52
Humanities (RF 33095, 34043).....	54,000.00	23,085.36
Hungarian Scholarship Council, Budapest		
Foreign scholarships in medicine (RF 32069).....	6,194.41	4,113.16
Kaiser Wilhelm Institute of Physical Chemistry and Electrical Chemistry, Berlin-Dahlem, Germany. Scientific equipment (RF 32086).....	2,441.69	1,684.45

London Hospital, England		
Development of neurosurgery (RF 31073).....	\$34,141.67	\$.....
Medical Research Council, London, England		
Fellowships (RF 32004, 33076, 34165).....	42,164.13	16,011.33
National Research Council, Washington, D.C.		
Fellowships		
Biological sciences (RF 29132, 31053).....	110,298.40	110,298.40
Medical sciences (RF 31054, 33041, 34164).....	86,119.11	53,295.34
Physical sciences (RF 29131, 31052).....	129,211.86	129,211.86
Physical and biological sciences (RF 33040, 34169).....	250,000.00	28,967.42
Research aid fund (RF 33121, 34172).....	130,000.00	50,000.00
Notgemeinschaft der Deutschen Wissenschaft, Berlin, Germany		
Fellowships in the medical sciences (RF 32005).....	16,039.64	8,375.73
Peiping Union Medical College, China		
Fellowships and grants in aid to graduate and departmental students in Peiping		
Union Medical College (RF 29128, 33033, 34105, 34163).....	30,439.69	9,000.00
Foreign fellowships (RF 29128, 33033, 34105, 34163).....	60,182.76	17,878.32
Research Aid Funds		
Europe		
Humanities (RF 30008, 32108).....	30,496.25	14,053.44
Medical sciences (RF 29127, 30097, 31139, 32106, 34027, 34038, 34166).....	386,379.33	99,917.52
Natural sciences (RF 31140, 32107, 34039, 34170).....	142,445.15	38,365.67
Social sciences (RF 32047, 33009, 34040, 34174).....	132,260.39	60,917.57
Special fund for European scholars (RF 33055, 33077, 34018, 34028).....	315,927.05	142,733.19
Research and Developmental Aid in China		
Medical and natural sciences (RF 32027, 32028, 33028).....	15,562.75	8,181.26
General (RF 34161).....	15,000.00

TREASURER'S REPORT

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EXHIBIT D—Continued

	APPROPRIATIONS	1934 PAYMENTS
FELLOWSHIPS AND GRANTS IN AID—Continued		
Social Science Research Council, New York City		
Fellowships in the social sciences (RF 31109, 33053, 34045)	\$245,793.38	\$88,056.26
Grants in aid of research (RF 31128)	78,900.00	24,600.00
University of Padua, Italy. Institute of Histology and Embryology		
Research (RF 31074)	6,492.72	1,942.35
University of Turin, Italy. Institute of Anatomy		
Research in problems of growth (RF 31068)	7,090.05	2,855.58
Visits		
By individuals and commissions (RF 30101)	19,564.57	3,614.89
By teachers of public health and hygiene in the United States and Canada (RF 34124)	3,500.00	.....
STUDIES OF PRESSING ECONOMIC PROBLEMS		
Appraisal and Planning Projects		
Brookings Institution, Washington, D.C.		
Concurrent study of Agricultural Adjustment Administration (RF 33060,34113)	121,343.65	70,505.21
Concurrent study of government financial policies (RF 33066)	26,836.29	23,023.83
Concurrent study of National Industrial Recovery Administration (RF 33067, 34078)	121,847.43	65,248.34
Social Science Research Council, New York City		
Commission of Inquiry on National Policy in International Economic Relations (RF 33089)	60,000.00	45,915.93
Study of population redistribution (RF 34001)	78,000.00	20,664.89
Study of unemployment reserves and relief (RF 33088)	2,000.00	405.36
Tennessee Valley Authority (RF 33058)	10,000.00	9,962.81

University of California, Berkeley		
Field study of barter groups (RF 33087).....	\$3,000.00	\$3,000.00
Visits of foreign authorities (RF 33057).....	7,053.17	1,872.84
Direct Grants to Operating Government Agencies		
Federal Emergency Relief Administration, Washington, D.C. Detailed studies of relief cases (RF 33090).....	37,000.00	35,000.00
Subventions to Cooperating Private Agencies		
American Municipal Association, Chicago, Illinois		
Advisory service to municipalities (RF 33070, 33097, 34141).....	241,153.60	90,331.92
American Public Welfare Association, Chicago, Illinois		
Support of service to public welfare agencies (RF 34002, 34138).....	70,000.00	35,000.00
Commission on Interracial Cooperation, Atlanta, Georgia		
Forwarding the interests of the American Negro in the present economic emergency (RF 34008).....	50,000.00	28,298.98
Emergency fund for research personnel on government projects (RF 34014).....	15,000.00	1,230.00
Foreign Policy Association, New York City		
For publicizing the conflicting issues of economic nationalism and internationalism (RF 34012).....	7,500.00	6,074.60
Industrial Relations Counselors, New York City		
Services to governmental agencies (RF 34003).....	25,000.00	16,223.32
National Association of Housing Officials, Chicago, Illinois		
For expert consultative services to low cost housing projects (RF 34015, 34140)..	20,000.00	7,501.85
To enable European authorities to attend a conference in the United States on housing program (RF 34079).....	15,000.00	.....
Emergency training course in management of housing developments (RF 34139)	40,000.00

TREASURER'S REPORT

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EXHIBIT D—Continued

	APPROPRIATIONS	1934 PAYMENTS
STUDIES OF PRESSING ECONOMIC PROBLEMS—Continued		
Subventions to Cooperating Private Agencies—Continued		
New York Adult Education Council, New York City		
Advisory services in New York area (RF 33093)	\$10,000.00	\$10,000.00
Slum Clearance Committee of New York, New York City		
Survey (RF 34011)	5,000.00	5,000.00
Social Science Research Council, New York City		
Services of a director for a retail price reporting project under Federal Interde- partmental Committee on Retail Prices (RF 34010)	1,500.00	1,373.68
World Peace Foundation, Boston, Massachusetts		
For publicizing the conflicting issues of economic nationalism and international- ism (RF 34013)	7,500.00	4,147.50
Administration		
Special staff (RF 33056)	19,197.36	553.60
MISCELLANEOUS		
✓ Abraham Lincoln Foundation, Dresden, Germany		
Continuance of program in humanistic studies (RF 30096)	5,000.00	5,000.00
American Council of Learned Societies, Washington, D. C.		
Toward completion of <i>Dictionary of American Biography</i> (RF 34134)	35,000.00	.....
Support of executive offices (RF 34158)	25,000.00	.....
American Geographical Society, New York City		
Preparation and publication of Millionth Map of Hispanic America (RF 33051, 34086)	36,000.00	23,000.00

American Institute of Physics, New York City Scientific publications (RF 32017).....	\$11,431.32	\$3,979.78
American Mathematical Society, New York City Scientific publications (RF 32018, 33014, 34019).....	19,750.00	13,000.00
Support of <i>Annals of Mathematics</i> (RF 32019).....	750.00	750.00
American Psychological Association, Princeton, New Jersey <i>Psychological Abstracts</i> (LS 694).....	22,724.50	6,577.06
American Society of Naturalists Establishment of <i>Drosophila</i> stock center at Cold Spring Harbor, New York (RF 34035).....	9,000.00	9,000.00
American Statistical Association, New York City General budget (RF 34128).....	7,500.00	.....
Bibliographical Society of America, Buffalo, New York Index of American newspaper files (RF 33084).....	25,000.00	8,500.00
British Museum, London, England To enable the museum to offer to American libraries, at a discount, subscriptions to the new edition of the Catalogue of Printed Books (RF 29086, 30076).....	92,693.23	.....
Additional service in connection with the new edition of the Catalogue of Printed Books (RF 29087).....	6,524.47	880.95
Citizens Family Welfare Committee of New York City (RF 33092, 34123).....	150,000.00	150,000.00
<i>Encyclopaedia of the Social Sciences</i> , New York City Expenses of production and distribution (RF 32114).....	63,000.00	38,000.00
Exchange Fund (RF 33054, 33082).....	48,258.73	.....
League of Nations, Geneva, Switzerland Analytical research work of the Financial Section and Economic Intelligence Service (RF 33023).....	125,000.00	..
Fiscal Committee. Study of international double taxation problems (RF 33004) .	50,000.00	..
Publication of monetary and banking laws (RF 29076).....	2,000.00	.....

EXHIBIT D—Continued

	APPROPRIATIONS	1934 PAYMENTS
<i>MISCELLANEOUS—Continued</i>		
Library of Congress, Washington, D.C.		
Accumulation of source materials for American history (RF 33024, 34054)	\$30,000.00	\$20,000.00
Library of the Society of Physicians, Vienna, Austria		
Medical literature (ME 21153)	64.15	64.15
Long Island Biological Association, Cold Spring Harbor, New York		
Support of a symposium on quantitative biology (RF 34150)	7,000.00	.....
Medical literature for Russia (RF 32092, 33085, 34125)	25,079.78	14,939.32
National Academy of Sciences, Washington, D.C.		
General expenses of National Research Council (RF 34106)	30,000.00	8,000.00
Work of the Committee in Aid of Research Publications (RF 31058)	11,375.00	10,310.00
National Conference on the Nomenclature of Disease, New York City		
General budget (RF 34068)	5,000.00	3,750.00
National Research Council, Washington, D.C.		
<i>Annual Tables of Constants and Numerical Data</i> . Publication (RF 32020)	6,000.00	3,000.00
<i>Biological Abstracts</i> (RF 33002, 34005, 34152)	165,914.22	77,754.66
Neurophysiology in European countries. Survey (RF 34026)	5,000.00	3,379.47
New York State College of Agriculture at Cornell University, Ithaca, New York		
Support of clearing house for maize genetics (RF 34034)	5,000.00	5,000.00
✓ Prussian State Library, Berlin, Germany		
Preparation of material for the Union Catalogue of Prussian Libraries (RF 32102) ..	40,000.00	10,000.00
Social Science Research Council, New York City		
<i>Social Science Abstracts</i> (LS 877)	162,349.04	.....
Society of the Friends of the Bibliothèque Nationale, Paris, France		
Expenses of printing its General Catalogue (RF 29089, 34094)	12,000.00	3,303.77

University of Chicago, Illinois		
Preparation of <i>Historical Dictionary of American English</i> (RF 34060)	\$12,500.00	\$6,250.00
Purchase of basic documents in the social sciences (RF 34036)	100,000.00	.....
University of North Carolina, Chapel Hill		
Work in the drama (RF 33115)	7,500.00	7,500.00
University of Oxford, England		
Visits of architect and librarian to the Continent, the United States, and Canada (RF 34069)	4,000.00	1,642.46
Virginia Historical Society, Richmond		
<i>Virginia Historical Index</i> (RF 33046, 34159)	13,500.00	7,500.00
Yale University, New Haven, Connecticut		
Development of library in Department of Drama (RF 34017)	4,500.00	1,494.48
PUBLIC HEALTH		
Central Medical School for Native Medical Students, Suva, Fiji Islands		
Construction of a new wing (RF 34117)	11,440.00	2,227.50
Development of Child Health Measures in County Health Programs in Cooperation with United States Public Health Service (RF 29107)	5,921.46	.....
International Health Division, Rockefeller Foundation		
For work in prior years (See Exhibit E)	1,875,450.97}	2,317,692.86
For work in 1934 (See Exhibit E)	2,200,000.00}	
For work in 1935 (RF 34176)	2,200,000.00	
Revolving fund. To provide working capital for the International Health Division (RF 29093)	200,000.00	.....
League of Nations, Health Organization, Geneva, Switzerland		
Epidemiological intelligence, public health documentation, international inter- change of public health personnel (RF 29092, 33100, 34178)	492,410.87	143,425.15
Nervous and Mental Diseases Hospital, "Socola," Jassy, Rumania		
Construction of a station for malaria studies (RF 31117)	6,955.07	6,377.26
Schools and Institutes of Hygiene and Public Health		
Bulgaria. Sofia. Land, building, and equipment (RF 30059)	32,977.30	30,367.66

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EXHIBIT D—Continued

	APPROPRIATIONS	1934 PAYMENTS	312 THE ROCKEFELLER FOUNDATION
PUBLIC HEALTH—Continued			
Schools and Institutes of Hygiene and Public Health—Continued			
Hungary. Budapest. Construction and equipment of a new floor (RF 34118)	\$17,050.00	\$	
Italy. Rome. Buildings and equipment (RF 30024, 33080, 33082)	291,105.82	262,084.96	
Japan. Tokyo. Construction and equipment (RF 32116)	891,725.01	. . . . .
Rumania. Bucharest			
Construction and equipment (RF 33078)	110,000.00	37,121.40	
Health Center (RF 33079)	15,000.00	. . . . .
GENERAL*			
Agricultural Club Work			
Finland (RF 30044)	3,413.57	3,413.55	
Sweden (RF 30043)	1,635.51	1,635.51	
Commission on Interracial Cooperation, Atlanta, Georgia			
General budget (LS 999)	215,184.03	38,946.06	
East Harlem Nursing and Health Service, New York City			
Nursing and health demonstration (RF 32062)	57,500.00	29,166.66	
Great Smoky Mountains Memorial Fund, Washington, D.C.			
Expenses of Chase National Bank in administering funds (RF 34009)	500.00	. . . . .
Harvard University, Cambridge, Massachusetts			
Purchase of Beyer collection of Philippiniana (LS 638)	47,000.00	. . . . .
Institute of International Education, New York City			
General budget (LS 911)	98,000.00	31,000.00	
Iowa State College of Agriculture and Mechanic Arts, Ames			
Work in child study and parent education (LS 906)	2,500.00	2,500.00	
Jean Jacques Rousseau Institute, Geneva, Switzerland			
General budget (RF 32002, 34121)	21,000.00	7,000.00	
Joint Vocational Service, New York City			
(For social workers and public health nurses)			
Administrative expenses (RF 31092)	1,800.00	1,800.00	

* These appropriations, while administered by The Rockefeller Foundation under the terms of the consolidation agreement, represent items which would not, in general, be included in the present program of the Foundation.

Peiping Union Medical College, China			
Allowance for widow of staff member (RF 29034)	\$12,540.46	\$1,207.06	
Playground and Recreation Association of America, New York City			
General budget (LS 1000)	250,000.00	50,000.00	
Regents of the University of the State of New York, Albany			
Work in child study and parent education (LS 902)	10,000.00	10,000.00	
State University of Iowa, Iowa City			
Work in child study and parent education (LS 905,931-32)	320,212.25	86,383.05	
Teachers College, Columbia University, New York City			
Maintenance of Child Development Institute (LS 998)	25,000.00	25,000.00	
University of California, Berkeley			
Maintenance of Institute of Child Welfare (LS 829)	1,194.20	784.43	
University of Chicago, Illinois			
Toward expense of establishing cooperative mailing lists for university presses (RF 32095)	1,500.00	1,000.00	
University of Minnesota, Minneapolis			
Child study and parent education (LS 909, 933-34)	234,299.69	49,767.80	
University of Toronto, Canada			
Development of child research and parent education (RF 30054)	102,328.29	27,378.63	
ADMINISTRATION			
Executive Offices			
1933 (RF 2824, 32118)	75,544.45	26,974.44	
1934 (RF 29037, 29115, 30009-10, 30078, 32070, 33117, 34007, 34022, 34108)	717,090.84	656,960.08	
1935 (RF 34179)	657,170.00	.....
Treasurer's Office			
1933 (RF 32119, 33069, 33098)	11,335.64	10,287.71	
1934 (RF 33118)	33,463.21	23,838.62	
1935 (RF 34180)	31,610.00	.....
Paris Office			
1933 (RF 32120, 33083)	26,116.90	22,178.43	
1934 (RF 33119)	117,700.00	84,533.66	
1935 (RF 34181)	132,300.00	

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EXHIBIT D—Continued

	APPROPRIATIONS	1934 PAYMENTS
ADMINISTRATION—Continued		
Shanghai Office		
1933 (RF 32121).....	\$2,001.91	\$1,099.09
1934 (RF 33120).....	8,700.00	5,018.23
1935 (RF 34182).....	13,700.00	.....
Surveys by Others than Officers (RF 29096, 31003).....	30,611.85	3,655.48
Moving of Foundation's Offices (RF 33037).....	5,245.60	4,665.11
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Total Appropriations.....	\$42,281,858.46	
Unused balances of appropriations allowed to lapse		
Rockefeller Foundation.....	\$457,084.87	
International Health Division.....	267,040.31	
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Total Net Appropriations and Expenditures.....	\$41,557,733.28	\$12,679,774.59
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REFUNDS ON PRIOR YEAR APPROPRIATIONS		
American Library Association. International conference (RF 33047).....	\$23.33	
American School of Classical Studies at Athens. Museum building (RF 31037)....	16.10	
Johns Hopkins University. Department of Chemistry (RF 29101).....	.56	
National Research Fund (RF 30057).....	93,874.12	
Paris office building (RF 21151).....	593.67	
Research and teaching in hospitals and clinic service (RF 29122).....	260.00	
Resident fellowships in natural sciences (RF 32023).....	551.96	
St. Bartholomew's Hospital and College, London (RF 31072).....	155.87	
Venezuela. Malaria investigations, 1931 (IH 30123).....	167.00	
Y.M.C.A. and Y.W.C.A. Foreign work and field service (RF 29035).....	8.00	
	<hr/>	
		<u>\$95,650.61</u>

EXHIBIT E
INTERNATIONAL HEALTH DIVISION DESIGNATIONS AND PAYMENTS

	PRIOR DESIGNATIONS	1934 DESIGNATIONS	1934 PAYMENTS	TREASURER'S REPORT
STATE AND LOCAL HEALTH SERVICES				
Public Health Administration				
United States				
Alabama				
1933-35 (IH 33014, 33147).....	\$3,300.00	\$.....	\$1,512.43	
Arkansas				
1932-33 (IH 31006, 32017, 33015)	1,800.00	.. .. .	1,703.57	
1934-35 (IH 34027).....	.....	1,000.00	250.00	
California				
1934-35 (IH 34034).....	.....	2,000.00	.. .. .
Georgia				
1933 (IH 30144, 32154)	1,625.00	.....	1,250.00	
1934 (IH 33143) .. . . .	.....	2,000.00	.....
Kentucky				
1932-34 (IH 32069, 32186)	5,550.00	.....	5,100.00	
1934-35 (IH 34028).....	.....	4,000.00	1,000.00	
Maryland				
1932-35 (IH 32001)	6,090.00		1,832.48	
Michigan				
1933-35 (IH 32003).....	8,392.01		2,645.22	
Mississippi				
1933 (IH 30146, 32175).....	2,143.36		1,313.38	
New York				
1931-33 (IH 30148).....	2,250.00		1,500.00	
North Carolina				
1933-34 (IH 33056).....	2,100.00	420.77	

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EXHIBIT E—Continued

	PRIOR DESIGNATIONS	1934 DESIGNATIONS	1934 PAYMENTS
<i>STATE AND LOCAL HEALTH SERVICES—Continued</i>			
<i>Public Health Administration—Continued</i>			
<i>United States—Continued</i>			
North Dakota			
1933-34 (IH 33016).....	\$1,700.00	\$.....	\$... ..
South Carolina			
1932-34 (IH 30006, 32018, 33066).....	1,650.00	.....	1,533.33
Tennessee			
1932-35 (IH 32005, 33017, 34011) ..	9,246.37	3,000.00	7,699.09
Utah			
1934-35 (IH 34010).....	.....	2,571.62	916.65
Virginia			
1932-34 (IH 33018).....	1,125.00	.....	1,125.00
West Virginia			
1933-35 (IH 30007, 32155, 33144) ..	6,350.00	.. ..	3,529.34
<i>Foreign countries</i>			
<i>Central America and Mexico</i>			
<i>Costa Rica. Office in San José</i>			
1933 (IH 32078-79)....	1,118.73	.....	828.73
1934 (IH 33108).....	.....	2,000.00	1,258.61
<i>Mexico</i>			
<i>Central administration</i>			
1933 (IH 32076).....	1,541.95	.....	403.60
1934 (IH 31020, 33145, 34006) ..	9.00	1,571.00	441.16
<i>Training station</i>			
1934 (IH 33146) ..	.....	2,900.00	538.97

The East			
Ceylon and India. Office assistance			
1933 (IH 32080)	\$1,223.80	\$.....	\$284.88
1934 (IH 33132)		1,500.00	1,022.73
China. Peiping office			
1934 (IH 33133)		1,368.00	455.95
India and Burma. Office assistance			
1933 (IH 32081)	237.72		149.59
1934 (IH 33134)		1,890.00	
Netherlands East Indies			
1933 (IH 32082)	1,811.45		1,284.86
1934 (IH 33135)		2,515.00	1,824.84
Philippine Islands			
1933 (IH 32083)	2,289.79		98.49
1934 (IH 33136)		2,900.00	1,358.17
West Indies			
Jamaica. Assistance in Bureau of Health Education			
1932-34 (IH 32046)	5,382.12		
Puerto Rico			
1933 (IH 32077)	353.11		
1934 (IH 33107)		1,500.00	164.83
Divisions of Vital Statistics			
United States			
Alabama			
1933-35 (IH 33008, 33148)	2,142.90		600.00
Georgia			
1933 (IH 33067)	1,307.50		1,307.50
Massachusetts			
1930-35 (IH 30022, 33009)	1,865.46		510.00
Mississippi			
1932-33 (IH 33019)	900.00		900.00

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EXHIBIT E—Continued

	PRIOR DESIGNATIONS	1934 DESIGNATIONS	1934 PAYMENTS
STATE AND LOCAL HEALTH SERVICES—Continued			
Divisions of Vital Statistics—Continued			
United States—Continued			
Missouri			
1933-34 (IH 33020).....	\$1,035.00	\$.....	\$1,035.00
1934-35 (IH 34018).....	.....	1,380.00	345.00
South Carolina			
1933-34 (IH 33021).....	2,700.00	.....	2,700.00
1934-35 (IH 34020).....	.....	2,700.00	675.00
Tennessee			
1931-34 (IH 33022).....	1,177.50	.....	1,177.50
1934-35 (IH 34012).....	.....	1,570.00	392.50
Foreign countries			
Europe			
Poland			
1933 (IH 32191).....	165.41	.....	.....
Rumania			
1930-35 (IH 30051, 30171, 32016, 32194, 34002).....	11,709.19	2,030.00	4,592.61
Spain			
1930-33 (IH 29094, 32059).....	19,814.54	.....	1,431.89
The East			
India. Travancore			
1932-33 (IH 32059, 32084).....	196.18	.....	.....
Divisions of Epidemiology			
United States			
Arizona			
1931-33 (IH 31025).....	2,418.75	.....	2,418.75
1934-35 (IH 34029).....	.....	2,700.00	675.00

Georgia			
1931-34 (IH 31029, 33023)	\$4,314.90	\$	\$1,835.96
1934-35 (IH 34045) . . . . .	.....	3,750.00	.....
Iowa			
1932-35 (IH 31140, 33149)	1,261.11	.. . . . .	150.00
Kentucky			
1931-34 (IH 31145, 32157, 33167)	3,952.12	.. . . . .	3,150.00
Maryland			
1931-34 (IH 31063, 33024)	4,311.65	.. . . . .	2,569.61
1934-35 (IH 34130) . . . . .	.....	2,750.00	.. . . . .
Massachusetts			
1932-35 (IH 32002)	1,050.00	.. . . . .	400.00
Michigan			
Detroit, City Department of Health			
1930-33 (IH 30058, 32156)	2,611.24	.. . . . .	1,102.18
1932-35 (IH 32004)	5,537.47	.. . . . .	2,463.04
Mississippi			
1932-35 (IH 32158, 33150)	8,368.68	.....	3,637.01
Missouri			
1933-34 (IH 33025)	1,665.00	.....	1,632.96
1934-35 (IH 34019) . . . . .	.....	2,220.00	555.00
Montana			
1931-34 (IH 33026, 33055)	2,250.00	.....	2,250.00
1934-35 (IH 34022) . . . . .	.....	3,000.00	750.00
New York			
1934-35 (IH 34046, 34131) . . . . .	.....	1,800.00	450.00
North Carolina			
1933-34 (IH 33027)	1,629.41	.....	1,371.26
1934-35 (IH 34023) . . . . .	.....	2,100.00	482.75
North Dakota			
1931-34 (IH 33028)	1,500.00	.....	.....

EXHIBIT E—Continued

	PRIOR DESIGNATIONS	1934 DESIGNATIONS	1934 PAYMENTS
STATE AND LOCAL HEALTH SERVICES—Continued			
Divisions of Epidemiology—Continued			
United States—Continued			
Tennessee			
1933-34 (IH 33029)...	\$2,947.50	\$.....	\$2,947.50
1934-35 (IH 34013)...	.....	2,985.00	975.00
Virginia			
1933-34 (IH 32159, 33069)	3,022.26	.. . . .	2,999.96
Foreign countries			
Canada			
British Columbia			
1933-35 (IH 32085, 33151)	4,721.99		1,657.79
Quebec			
1931-33 (IH 31054)	1,729.78		890.39
Europe			
Austria			
1931-35 (IH 30163)	2,153.89		1,227.26
Denmark			
1932-34 (IH 32074)	12,500.00		4,723.17
The East			
India. Travancore			
1933 (IH 32086)...	335.00		201.02
Public Health Laboratories			
United States			
Georgia			
1933 (IH 33068)...	3,697.00		3,697.00
Mississippi			
1932-34 (IH 32070)	1,575.00		1,575.00

North Carolina			
1934-35 (IH 34048)...	\$.	\$1,687.50	\$..
South Carolina			
1932-34 (IH 31147, 32022)	550.00		116.66
Tennessee			
1931-33 (IH 33030)...	1,237.50		1,237.50
1934-35 (IH 34014)...		1,500.00	350.00
Foreign countries			
Central America			
Costa Rica. Equipment (IH 33070).....	242.98		242.98
Nicaragua. Equipment (IH 33071, 34052).....	375.00	200.00	465.87
Salvador. Equipment (IH 32028, 33072)	245.83		
Europe			
Rumania. Equipment (IH 32041) ...	2,194.52		1,665.89
South America			
Colombia			
1933 (IH 32087).....	912.24		490.01
1934 (IH 33109).....		3,715.00	1,524.60
West Indies			
Puerto Rico. Equipment and supplies			
1933-34 (IH 33048).....	1,399.63		1,399.52
1934-35 (IH 34042).....		1,500.00	111.68
Divisions of Public Health Nursing			
Foreign countries			
Europe			
Denmark			
1931-34 (IH 30164).....	6,517.74		1,529.93
Hungary			
1930-35 (IH 30048, 33003, 33065, 34055) ..	20,220.86	1,365.00	6,465.55
Poland			
1932 (IH 31072).....	20.50		
1933 (IH 32088, 33052).....	2,023.07		2,023.07
1934 (IH 33142)		1,475.00	

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EXHIBIT E—Continued

	PRIOR DESIGNATIONS	1934 DESIGNATIONS	1934 PAYMENTS
STATE AND LOCAL HEALTH SERVICES—Continued			
Public health nursing films (IH 32035-36).....	\$300.00	\$.....	\$89.73
Divisions of Sanitary Engineering			
United States			
Arizona			
1933-35 (IH 31028, 33043).....	3,543.75	.....	2,025.00
Mississippi			
1932-33 (IH 33031).....	900.00	.....	900.00
North Dakota			
1934-35 (IH 34049).....	.....	1,500.00	.....
South Carolina			
1931-33 (IH 30150, 32021).....	887.50	.....	477.40
South Dakota			
1931-33 (IH 33032).....	2,484.58	.....	2,484.58
1934-35 (IH 34024).....	.....	3,200.00	719.28
Tennessee			
1933-34 (IH 33033).....	1,812.50	.....	1,725.00
1934-35 (IH 34015).....	.....	2,300.00	575.00
Foreign countries			
Canada			
Nova Scotia			
1934-37 (IH 34064).....	.....	8,500.00	.....
Central America			
Costa Rica and Nicaragua. Studies of water supplies (IH 32047).....	51.27	.....	.....
Europe			
Greece			
1932 (IH 31133).....	1,773.45
1933 (IH 32089).....	2,429.23	2,429.23
1934 (IH 33078).....	7,500.00	4,262.69

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Poland			
1932-33 (IH 31073, 32192).....	\$837.17	\$.....	\$787.89
The East			
Egypt			
1933 (IH 32090).....	8,210.00
1934 (IH 33137).....	.....	2,225.00	374.78
India and Burma			
1933 (IH 32091).....	484.18	.....	280.53
West Indies			
Jamaica			
1934 (IH 33110).....	.....	275.00	74.54
Other State Health Services			
Foreign countries			
Europe			
England. British Colonial Office, London. Bureau of Hygiene and Tropical Diseases			
1931-36 (IH 31016).....	2,312.00	.....	1,042.50
France. National Office of Social Hygiene, Paris			
1931-33 (IH 30165).....	8,429.60	.....	8,429.60
Norway. State Institute of Public Health, Oslo			
1929-34 (IH 29043).....	30,252.31	.....	1,609.78
Poland. Bureau of District Health Work, Warsaw			
1932 (IH 31132).....	76.34	.....	.....
1933-34 (IH 32095).....	2,157.17	.....	2,157.17
1934-35 (IH 33079).....	.....	1,635.00	.....
South America			
Colombia			
1933 (IH 32093).....	3,037.35	1,714.67
1934 (IH 33112).....	12,000.00	5,273.97
Venezuela			
1933 (IH 32094).....	1,021.82	542.49

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EXHIBIT E—Continued

	PRIOR DESIGNATIONS	1934 DESIGNATIONS	1934 PAYMENTS
STATE AND LOCAL HEALTH SERVICES—Continued			
Other State Health Services—Continued			
Foreign Countries—Continued			
The East			
India. Bureaus of Health Education			
Mysore 1931-33 (IH 31056)..... ..	\$2,818.42	\$	\$1,162.36
Travancore 1933 (IH 32096)..... ..	257.17		180.56
West Indies			
Jamaica. Bureau of Health Education, Kingston			
1933 (IH 32092)..... ..	571.79		571.79
1934 (IH 33111)..... ..		3,165.00	2,318.39
Local (County) Health Departments			
United States			
Alabama			
1932-34 Epidemiological unit (IH 32024, 33041).. ..	8,406.05		7,714.59
1934-35 (IH 34033)..... ..		4,484.41	2,176.28
Arizona			
1932-34 (IH 32025, 33041)..... ..	5,688.11		5,646.44
1934-35 (IH 34032)..... ..		2,000.00	2,000.00
Arkansas			
1932-34 (IH 31006, 32024, 33041)..... ..	6,800.00		6,450.00
1934-35 (IH 34032)..... ..		2,499.98	2,499.98
Florida			
1933-34 (IH 33041)..... ..	3,062.51		1,839.30
1934-35 (IH 34032)..... ..		1,250.00	625.00
Georgia			
1931-34 (IH 30144, 32024, 32160, 33034)..... ..	5,253.58		1,650.00
Idaho			
1932-33 (IH 31077, 32161)..... ..	900.00		300.00

Iowa			
1929-35 (IH 31141, 32162, 33152)	\$3,111.09	\$	\$766.66
Kansas			
1931-34 (IH 33035)	600.00	....	600.00
Kentucky			
1930-34 (IH 29261, 31006, 32024, 33041)	8,000.42	.....	7,141.57
1934-35 (IH 34032)	.....	3,750.00	2,339.98
Louisiana			
1932-34 (IH 31006, 32024, 33041)	10,000.00	....	10,000.00
Maryland			
1930-34 (IH 30024, 30145, 33036)	10,119.56	.....	4,965.52
Michigan			
1929-34 (IH 29046-49)	18,592.70	.....	6,369.77
Mississippi			
1931-34 (IH 30146, 31006, 32024, 32178-81, 33041, 33153)	18,264.54	9,000.00	13,354.57
Missouri			
1930-33 (IH 30025-26, 32024, 32163)	9,375.00	.....	150.00
Montana			
1933-34 (IH 33037)	1,050.00	.....	1,050.00
1934-35 (IH 34031)	.....	350.00	350.00
New York			
1935-39 (IH 34047, 34132)	.....	45,937.00	.....
North Carolina			
1932-34 (IH 32024, 33041)	7,790.82	.....	7,722.64
1934-35 (IH 34032)	.....	1,933.32	1,177.76
South Carolina			
1930-34 (IH 30006, 32024, 33041)	14,665.71	.....	13,430.51
1934-35 (IH 34021)	.....	2,674.09	2,674.09
Tennessee			
1930-35 (IH 32024, 32164-65, 33041, 33154-55, 34016)	8,880.59	2,666.66	10,472.25

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EXHIBIT E--Continued

	PRIOR DESIGNATIONS	1934 DESIGNATIONS	1934 PAYMENTS
STATE AND LOCAL HEALTH SERVICES--Continued			
Local (County) Health Departments--Continued			
United States--Continued			
Texas			
1930-35 (IH 30152, 31144, 32006, 32182-83, 33168)	\$11,928.77	\$.....	\$7,432.10
Virginia			
1930-34 (IH 32024, 32097, 32166, 33041, 33156)	8,050.00	.....	7,850.00
West Virginia			
1930-34 (IH 30007, 31152, 32024, 32172-74, 33041, 33157) ...	8,167.35	.....	7,288.75
1934-35 (IH 34037) .....	.....	2,935.00	1,185.00
Emergency aid			
1932-33 (IH 32024)	684.08	.....	.....
Mississippi flood area (1927-32)			
Training station	2,853.22	.....	.....
National Institute of Health of the United States Public Health Service			
Completion of survey in dental hygiene (IH 34062) .....	.....	15,000.00	15,000.00
<i>Record of County Health Organizations in the United States, 1908-1933</i>			
Publication (IH 34063) .....	.....	5,000.00	5,000.00
Purchase of copies (IH 33170)	2,000.00	.....	.....
Foreign countries			
Canada			
Alberta			
1931-34 (IH 31023-24, 33044-45)	6,218.66	.....	4,964.55
1934-37 (IH 34025-26) .....	.....	4,500.00	469.83
British Columbia			
1930-34 (IH 32167, 33038, 33048, 33158)	4,549.06	4,046.99
1934-35 (IH 34030)	2,540.00

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Manitoba			
1930-33 (IH 30027, 31004, 32044)	\$6,968.04	\$	\$3,928.07
Ontario			
1935-37 (IH 34065)	34,000.00
Quebec			
1930-34 (IH 29052, 31053, 32045)	22,550.79	. . . . .	14,818.05
Central America			
Costa Rica			
1933-34 (IH 33074)	1,600.00		1,338.46
1934-35 (IH 34136) . . . . .	. . . . .	900.00	. . . . .
Nicaragua			
1933-34 (IH 33076)	800.00	. . . . .	726 17
1934-35 (IH 34040) . . . . .	. . . . .	980.00	. . . . .
Panama			
1933 (IH 32103, 33006)	645.32	. . . . .	449.07
1934 (IH 33116) . . . . .	. . . . .	1,000.00	265.05
Europe			
Austria			
1929-33 (IH 31020, 32104)	2,850.00	. . . . .	2,555.87
1934 (IH 33173) . . . . .	. . . . .	875.00	. . . . .
Bulgaria			
1933 (IH 32073)	134.75	. . . . .	. . . . .
Czechoslovakia			
1929-32 (IH 31045)	10,000.00	. . . . .	. . . . .
France			
1929-32 (IH 30014, 30166)	143.69	. . . . .	. . . . .
Hungary			
1929-32 (IH 31087-90, 32105-109)	24,828.15	. . . . .	21,711.73
1934 (IH 33080-84)	20,620.00
Irish Free State			
1930-35 (IH 29245-46, 30050)	17,062.33

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EXHIBIT E—Continued

	PRIOR DESIGNATIONS	1934 DESIGNATIONS	1934 PAYMENTS
STATE AND LOCAL HEALTH SERVICES—Continued			
Local (County) Health Departments—Continued			
Foreign countries—Continued			
Europe—Continued			
Italy			
1931 (IH 33082, 31170).....	\$12,282.52	\$.....	\$5,723.37
Poland			
1929-34 (IH 29067, 29070, 32064).....	3,225.83	.....	2,607.49
Rumania			
1931-35 (IH 30170).....	4,284.54	.....	2,357.08
Spain			
1929-35 (IH 29251, 32065).....	21,669.65	.....	9,989.14
1934 (IH 33085).....	.....	2,800.00	.....
Turkey			
1934-35 (IH 34003).....	.....	5,000.00	2,481.43
Mexico			
1929-33 (IH 29030, 31158, 32168-71).....	11,349.85	.....	2,839.19
1934 (IH 33159, 33163).....	.....	3,495.00	763.06
South America			
Colombia			
1933-34 (IH 33058).....	5,000.00	.....	1,810.56
The East			
Ceylon			
1934-35 (IH 33177, 34053).....	.....	4,720.00	713.61
Fiji			
1932-35 (IH 31159).....	5,289.42	.....	2,521.95
India			
All India Institute of Hygiene and Public Health, Calcutta Survey. Field training area (IH 33175).....	.....	1,000.00	.....

EXHIBIT E—Continued

	PRIOR DESIGNATIONS	1934 DESIGNATIONS	1934 PAYMENTS
PUBLIC HEALTH EDUCATION—Continued			
Schools of Hygiene and Public Health—Continued			
Foreign countries—Continued			
Europe—Continued			
Hungary. State Hygienic Institute, Budapest			
School for Public Health Officers			
1931-33 (IH 30168, 31169, 32063).....	\$5,592.53	\$.....	\$4,781.12
1934 (IH 33089).....	.....	3,865.00	.....
Norway. School of Public Health, Oslo			
Maintenance 1930-35 (IH 30012).....	3,393.84	.....	2,025.67
Poland. State Institute and School of Hygiene, Warsaw			
Maintenance 1932 (IH 31136).....	153.08	.....	.....
Maintenance 1933-34 (IH 33005).....	15,224.57	.....	15,224.57
Maintenance 1934-35 (IH 33090).....	.....	5,400.00	.....
Yugoslavia. School of Public Health, Zagreb			
Maintenance 1932-33 (IH 32040).....	7,656.45	.....	6,057.92
Maintenance 1933-35 (IH 33050, 34004).....	10,000.00	925.00	.....
South America			
Brazil. Institute of Hygiene, São Paulo			
Equipment and supplies (IH 22672).....	125.53	.....	19.68
The East			
Japan. Institute of Public Health, Tokyo			
Field training area, 1933-35 (IH 32188).....	90,165.00	.....	.....
Schools of Nursing			
United States			
Skidmore College, Saratoga Springs, New York			
1934-35 (IH 34039).....	.....	10,000.00	.....
Vanderbilt University, Nashville, Tennessee			
1933-34 (IH 32197).....	17,500.00	.....	.....
1934-35 (IH 33172).....	.....	35,000.00	35,000.00

Foreign countries			
South America			
Brazil, School of Nursing, Rio de Janeiro			
Salary and travel of acting directress (IH 33171).....	\$.....	\$6,854.00	\$2,440.40
Other Schools			
The East			
First Midwifery School, Peiping, China			
1930-33 (IH 29257).....	8,939.44	.....	6,320.42
Training of Health Workers			
United States, Canada, and Mexico			
1933 (IH 32115).....	2,227.72	.....	210.54
United States			
Maryland			
1932-34 (IH 32042).....	1,523.27	.....	.....
Central America			
1933 (IH 32117).....	623.00	.....	623.00
Europe			
1932 (IH 31097).....	2,469.64	.....	200.00
1933 (IH 32116).....	2,983.96	.....	1,794.16
West Indies			
Puerto Rico			
1932 (IH 31099).....	.47	.....	.....
1933 (IH 32118).....	2,377.25	.....	1,797.02
Travel of Government Health Officials			
State health officials in United States, Canada, and Mexico			
1933 (IH 32112).....	2,057.13	.....	936.86
European health officials in Europe			
1932 (IH 31094).....	1,696.05	.....	.....
1933 (IH 32113).....	1,745.65	.....	470.67
Visiting health officials			
1932 (IH 31095).....	3,000.00	401.77
1933 (IH 32114).....	5,096.30	2,382.74

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EXHIBIT E—Continued

	PRIOR DESIGNATIONS	1934 DESIGNATIONS	1934 PAYMENTS
PUBLIC HEALTH EDUCATION—Continued			
Travel of Government Health Officials and Training of Health Workers 1934 (IH 33087, 34007).....	\$.....	\$15,000.00	\$4,944.20
Training Stations			
United States			
Harvard University, Cambridge, Massachusetts			
Field training and study area			
1935-39 (IH 34068).....	.....	25,000.00	.....
Johns Hopkins University, Baltimore, Maryland			
Field training and study area			
1932-36 (IH 32038, 32195, 32196).....	82,875.03	.....	25,283.69
1937 (IH 34050).....	.....	16,665.00	.....
Foreign countries			
Africa. Nigeria			
1931-34 (IH 31019).....	33,585.86	.....	15,609.11
Europe			
Italy			
1932 (IH 31131).....	59.32	.....	.....
1933 (IH 32119, 33052).....	1,036.40	.....	1,036.40
1934 (IH 33088).....	.....	3,150.00	2,314.14
Hungary. Aid to former fellows			
1933 (IH 30169, 32120).....	4,940.50	.....	4,939.46
1934 (IH 33091).....	.....	1,200.00	.....
Central America			
1934 (IH 33118).....	.....	500.00	254.36

West Indies.				
Puerto Rico				
1934 (IH 33117).....	\$.....	\$3,500.00	\$2,351.04	
South America				
Colombia				
1934 (IH 33059).....	2,000.00	.....	299.33	
Fellowships				
Grants to doctors for study of public health				
1931 (IH 30108).....	26,304.35	.....	Cr. 3.47	
1932 (IH 30169, 31092, 32199).....	19,265.05	.....	9,516.65	
1933 (IH 32111).....	153,516.22	.....	134,440.86	
1934 (IH 33086, 34008).....	.....	200,520.00	86,950.15	
<i>The Journal of Industrial Hygiene</i>				
1933-35 (IH 32198).....	3,000.00	.....	1,000.00	
CONTROL AND INVESTIGATIONS OF SPECIFIC DISEASES				
Hookworm Disease				
Control				
South America				
Paraguay				
1929 (IH 28197).....	726.11	.....	.....
The East				
Egypt				
1933 (IH 32121).....	1,685.32	.....	608.55	
1934 (IH 33139).....	.....	5,990.00	3,267.36	
India, Travancore				
1933 (IH 32122).....	678.15	.....	477.02	
Investigations and surveys				
United States				
Alabama				
1932 (IH 31020, 31102).....	511.20	
1933 (IH 32123, 33054).....	6,136.46	5,541.41	

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EXHIBIT E—Continued

	PRIOR DESIGNATIONS	1934 DESIGNATIONS	1934 PAYMENTS
CONTROL AND INVESTIGATIONS OF SPECIFIC DISEASES—Continued			
Hookworm Disease—Continued			
Investigations and surveys—Continued			
United States—Continued			
Johns Hopkins University. School of Hygiene and Public Health, Baltimore, Maryland			
1933-34 (IH 33011)	\$2,463.95	\$.....	\$2,310.52
1935-36 (IH 34067)	.....	1,200.00	.....
Mississippi			
1932-33 (IH 32043)	173.83	.....	173.83
1934 (IH 34035)	.....	1,090.00	.....
South Carolina			
1934-35 (IH 34036)	.....	3,500.00	291.66
Vanderbilt University, Nashville, Tennessee			
Research on carbon tetrachloride			
1932-35 (IH 32039, 33174, 34038)	16,415.80	4,000.00	14,084.86
Foreign countries			
Egypt			
1933 (IH 32124)	2,144.86	.....	1,425.73
1934 (IH 33140)	.....	4,915.00	3,590.58
Western Samoa. Hookworm and yaws campaign			
1932-34 (IH 31161, 33007)	745.94	.....	529.38
Malaria			
Control			
United States			
Florida			
1932-34 (IH 32068)	1,875.00	.....	1,650.00

Georgia			
1933-34 (IH 32125, 33165).....	\$4,895.83	\$.....	\$1,458.33
Mississippi			
1933-34 (IH 32126, 33166).....	7,557.23	.....	5,326.81
Foreign countries			
Central America			
Costa Rica			
1933-34 (IH 32129, 33073).....	1,100.00	.....	949.59
1934 (IH 33120).....	.....	900.00	450.00
Nicaragua			
1933-34 (IH 33075).....	1,500.00	.....	1,072.00
1934-35 (IH 34137).....	.....	400.00	.....
Panama			
1933 (IH 32128, 33006).....	505.16	.....	351.41
1934 (IH 33121).....	.....	3,100.00	794.12
Salvador			
1934-35 (IH 34061).....	.....	600.00	.....
Europe			
Albania			
1932 (IH 31110).....	15.67	.....	.....
1933 (IH 32131).....	4,936.40	.....	4,936.40
1934 (IH 33092).....	.....	16,995.00	8,835.09
Italy			
1932 (IH 31111).....	447.00	.....	.....
1933 (IH 32132, 33077).....	4,656.24	.....	4,656.24
1934 (IH 33052, 33093).....	153.20	16,245.00	16,398.20
Spain			
1932 (IH 31112).....	2,887.68	.....	.....
South America			
Brazil			
1929-30 (IH 28183, 29217).....	15,174.19	.....	.....

EXHIBIT E—Continued

	PRIOR DESIGNATIONS	1934 DESIGNATIONS	1934 PAYMENTS
CONTROL AND INVESTIGATIONS OF SPECIFIC DISEASES—Continued			
<i>Malaria—Continued</i>			
<i>Control—Continued</i>			
<i>Foreign countries—Continued</i>			
<i>South America—Continued</i>			
<i>Colombia</i>			
1933 (IH 32127).....	\$1,392.66	\$	\$ 903.01
1934 (IH 33119).....	.....	3,660.00	1,709.75
<i>Venezuela</i>			
1933 (IH 32130).....	411.15	.....	399.30
<i>The East</i>			
<i>India, Sawantwadi</i>			
1933 (IH 32133).....	307.30	.....	196.20
<i>West Indies</i>			
<i>Puerto Rico</i>			
1932-33 (IH 32013, 32050).....	.99	.....	.....
<i>Investigations and Surveys</i>			
<i>United States</i>			
<i>Florida</i>			
1933 (IH 31020, 32134).....	5,220.53	.....	4,964.37
1934 (IH 33164).....	.....	10,000.00	7,727.50
<i>Rockefeller Institute for Medical Research, New York City</i>			
1933 (IH 33013, 33063).....	432.35	.....	318.66
<i>University of Chicago, Illinois</i>			
1933 (IH 32075).....	725.84	.....	458.75
1934 (IH 33103).....	.....	2,700.00	2,684.50
<i>Foreign countries</i>			
<i>Central America</i>			
<i>Panama</i>			
1932-33 (IH 32049).....	250.65	.....	.....

Europe			
Albania			
1933 (IH 32136, 33077).....	\$402.34	\$.....	\$402.34
1934 (IH 33094).....		7,590.00	4,458.61
Bulgaria			
1932 (IH 31118).....	702.96		
1933 (IH 32137).....	10,028.85		10,028.85
1934 (IH 33095).....		17,000.00	11,481.37
Greece			
1932 (IH 31121).....	3,365.51		
1933 (IH 32138, 33002).....	12,118.81		10,781.49
1934 (IH 33096).....		30,030.00	18,300.14
Italy			
Experiment station for malaria control			
1932 (IH 31111).....	972.99		
1933 (IH 32139, 33077).....	11,189.68		11,189.68
1934 (IH 33097, 34056).....		57,885.00	20,003.87
Special studies in therapeutic malaria			
1932 (IH 31120).....	66.64		
1933 (IH 32140).....	343.57		343.57
1934 (IH 33098).....		3,420.00	2,786.80
Italy and Germany			
1932 (IH 31119).....	3.39		
1933 (IH 32141).....	666.74		472.49
Netherlands, Amsterdam			
1929-33 (IH 29091).....	4,369.89		2,486.56
Portugal			
1933 (IH 32193).....	54.36		
1934 (IH 33099).....		7,050.00	4,921.53
Spain			
1933 (IH 32142).....	2,112.48		786.84
1934 (IH 33100).....		5,900.00	3,918.83

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EXHIBIT E—Continued

	PRIOR DESIGNATIONS	1934 DESIGNATIONS	1934 PAYMENTS
CONTROL AND INVESTIGATIONS OF SPECIFIC DISEASES—Continued			
Malaria—Continued			
Investigations and Surveys—Continued			
The East			
India, Travancore			
1933 (IH 32144).....	\$1,192.04	\$.....	\$1,169.32
Philippine Islands			
1933 (IH 32143).....	3,277.23	.....	3,175.73
1934 (IH 33141, 34043).....	.....	7,250.00	5,559.60
West Indies			
Jamaica			
1933 (IH 32135).....	156.63	.....	144.92
Puerto Rico			
1932-33 (IH 32030, 32187).....	9,115.94	.....	9,088.26
1933-34 (IH 33047, 34041).....	.....	4,500.00	2,384.64
Yellow Fever			
Control			
Brazil			
1933 (IH 32145).....	109,847.83	.....	109,847.83
1934 (IH 33106).....	.....	256,800.00	146,733.22
Investigations			
Bolivia			
1932-33 (IH 32061).....	8,529.13	.....	2,362.58
1934 (IH 33106).....	.....	12,000.00	4,099.65
Brazil, Bahia			
1933 (IH 32145).....	31,992.08	.....	10,058.89
1934 (IH 33106).....	.....	50,500.00	18,591.24
Colombia			
1934 (IH 33106).....	.....	1,000.00	.....

Ecuador			
1933 (IH 33061).....	\$899.35	\$.....	\$791.68
France. Paris, Pasteur Institute			
1933-34 (IH 33062).....	3,300.00	.....	3,289.48
Laboratory of the International Health Division, New York City			
1933 (IH 32145).....	13,077.58	.....	7,584.14
Paraguay			
1933 (IH 32145).....	12,323.25	.....	4,155.65
1934 (IH 33106).....	.....	2,000.00	197.52
Peru			
1933 (IH 33051).....	500.00	.....	37.00
1934 (IH 33106).....	.....	1,000.00	17.20
West Africa			
1933 (IH 32145).....	25,115.10	.....	11,054.89
1934 (IH 33106).....	.....	10,700.00	Cr. 19,618.68
Surveys in any region; equipment			
(IH 33106).....	.....	22,000.00	3,387.28
Tuberculosis			
United States			
Alabama			
1933-34 (IH 33053).....	22,303.75	.....	16,581.19
Cornell University Medical College, New York City			
1932-35 (IH 32037).....	29,395.53	.....	15,352.17
New York Hospital-Cornell Medical College Association			
1933-34 (IH 33012).....	2,821.47	.....	2,659.75
1934-35 (IH 34005).....	.....	4,100.00	.....
Tennessee			
1933-34 (IH 33039).....	11,216.35	.....	11,047.04
1934-35 (IH 34017).....	.....	10,000.00	2,464.34
Foreign countries			
Central America			
Panama			
Survey 1934 (IH 33127).....	1,000.00	750.00

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Field units			
1933 (IH 32152).....	\$3,219.20	\$.....	\$1,640.78
1934 (IH 33130-31).....	12,100.00	7,966.54
Undulant Fever			
France			
Investigations			
1932-33 (IH 31168, 32190).....	6,631.81	.....	5,395.49
1934 (IH 33102).....	.....	15,600.00	7,910.49
Sanitation			
Cook Islands. Soil sanitation			
1931-35 (IH 31160, 34066)...	4,206.59	700.00	2,161.31
Epidemiological Studies			
United States			
Alabama			
Study of typhus fever			
1932-35 (IH 32067, 33169).....	8,064.46	4,000.00	5,874.34
Massachusetts			
Study of cancer			
1932-35 (IH 31154).....	6,303.19	.....	1,418.17
Tennessee			
Research, development of methods, and training of personnel			
1933-34 (IH 33040).....	2,250.00	...	2,075.00
Field study of <i>Endamoeba histolytica</i>			
1933-34 (IH 33010).....	2,115.00	.....	2,115.00
Study of smallpox vaccine virus			
1932-33 (IH 32071).....	333.34	.....	333.34
1933-34 (IH 33057).....	2,166.67	.....	1,666.67
Virginia			
Field study of dysentery			
1932-33 (IH 31157).....	2,740.05	2,539.84
Study of scarlet fever			
1932-34 (IH 31156).....	8,067.71	3,506.64

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EXHIBIT E—Continued

	PRIOR DESIGNATIONS	1934 DESIGNATIONS	1934 PAYMENTS
CONTROL AND INVESTIGATIONS OF SPECIFIC DISEASES—Continued			
Epidemiological Studies—Continued			
Foreign countries			
Europe			
Austria. Diphtheria research			
1933-34 (IH 33001, 33064).....	\$1,127.87	\$.....	\$696.80
1934-35 (IH 34001).....		4,070.00	388.52
Rumania. Scarlet fever studies			
1934-35 (IH 34057).....		20,000.00	
Spain. Smallpox Vaccine Laboratory			
1934 (IH 34058).....		5,100.00	
Mexico			
Anthelmintics; malaria and yellow fever studies			
1932-33 (IH 32026, 33046).....	2,554.43		767.08
LABORATORIES OF THE INTERNATIONAL HEALTH DIVISION AT THE ROCKE- FELLER INSTITUTE FOR MEDICAL RESEARCH, NEW YORK CITY			
1934 (IH 33105, 34009, 34044, 34059).....		100,000.00	76,262.26
FIELD SERVICE			
Salaries and Expenses of Staff 1933-34 (IH 30167, 32153, 33104)			
Salaries.....	37,299.76	487,000.00	503,517.59
Commutation.....	11,213.68	49,300.00	40,691.57
Travel.....	40,964.31	137,700.00	148,119.22
Medical examinations.....	98.59	1,000.00	565.25
Field equipment and supplies.....	2,741.74	4,000.00	4,394.89
Pamphlets and charts.....	2,022.35	7,500.00	7,067.12
Express, freight, and exchange.....	795.90	1,000.00	Cr. 503.87

Insurance and retirement allowances	\$26,491.49	\$56,000.00	\$52,357.10
Bonding	450.08	3,000.00	1,480.17
Automobiles	1,000.00	1,000.00	.....
DIRECTOR'S FUND FOR BUDGET REVISION			
(IH 34006) . . . . .	.....	4,879.00	.....
EXCHANGE FUND (IH 33052, 33077)	27,355.31	.....	.....
AUTHORIZATION FOR WHICH DESIGNATION HAS AS YET NOT BEEN MADE	15,000.00	.....	.....
Totals	<u>\$1,875,450.97</u>	<u>\$2,198,911.58*</u>	<u>\$2,317,692.86</u>

* The Foundation appropriated during 1934 for the work of the International Health Division \$2,200,000, the undesignated balance of \$1,088.42 being allowed to lapse as of December 31, 1934.

EXHIBIT F
SUMMARY OF PRIOR OBLIGATIONS ACCOUNT
December 31, 1934

PRIOR OBLIGATIONS ACCOUNT		
Unpaid appropriations, pledges, and authorizations, December 31, 1933		
Appropriations	\$6,563,566.41	
Pledges and authorizations	1,058,156.50	\$7,621,722.91
Less		
Payments made during the year 1934	\$886,104.30	
Unused balances of appropriations allowed to lapse	673,610.86	
Authorizations allowed to lapse	31,156.50	1,590,871.66
Balance on December 31, 1934, payable on appropriations, pledges, and authorizations made prior to January 3, 1929		<u>\$6,030,851.25</u>

EXHIBIT G
SUMMARY OF APPROPRIATIONS ACCOUNT
December 31, 1934

CURRENT APPROPRIATIONS ACCOUNT

Unpaid appropriations, pledges, and authorizations, December 31, 1933			
Appropriations.....	\$27,266,344.55		
Pledges and authorizations.....	5,272,236.93		\$32,538,581.48
Appropriations, pledges, and authorizations made during the year 1934			
Appropriations.....	\$8,451,947.50		
Appropriation conditioned on cancellation of like amount in Prior Obligations Account.....	500,000.00		
	\$8,951,947.50		
Less appropriations previously included as pledges and authorizations.....	1,315,500.00	\$7,636,447.50	
Pledges.....		190,440.00	7,826,887.50
			\$40,365,468.98
Less			
Payments made during the year 1934.....	\$11,793,670.29		
Unused balances of appropriations allowed to lapse.....	550,514.32		
Pledges and authorizations allowed to lapse.....	385,500.00		12,729,684.61
Balance on December 31, 1934, payable on appropriations, pledges, and authorizations made on or subsequent to January 3, 1929.....			\$27,635,784.37

TREASURER'S REPORT

EXHIBIT H

STATEMENT OF PRINCIPAL FUND

Unappropriated Principal, December 31, 1933	\$153,578,785.59
Authorizations allowed to lapse (prior obligations)	31,156.50
Balance, December 31, 1934	<u>\$153,609,942.09</u>

This fund is accounted for in securities.

STATEMENT OF RESERVE FOR CONTINGENT PROJECTS

Balance, December 31, 1933 (unchanged)	<u>\$1,500,000.00</u>
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This fund is accounted for in securities.

EXHIBIT I
STATEMENT OF LAND, BUILDINGS, AND EQUIPMENT FUND

	TOTAL DEC. 31, 1933	EXPENDI- TURES 1934	TOTAL DEC. 31, 1934
New York Office			
Library.....	\$13,920.97	\$957.13	\$14,878.10
Equipment.....	\$36,934.85		
Less depreciation 1934.....	4,183.91	4,817.70	37,568.64
Paris Office			
Part interest in building occupied by Paris office.....	65,901.61	Cr. 593.67	65,307.94
	<u>\$112,573.52</u>	<u>\$5,181.16</u>	<u>\$117,754.68</u>

TREASURER'S REPORT

NOTE: By action of the trustees at meeting of April 11, 1934, land in Shanghai owned by the Foundation was conveyed to the Chase Bank, Shanghai, for the sole and exclusive benefit of the Board of Directors of the Shanghai Medical Center.

Land, December 31, 1933..... \$298,331.95

EXHIBIT J
SCHEDULE OF SECURITIES ON DECEMBER 31, 1934

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BONDS

NAME	INTEREST RATE PER CENT	DATE OF MATURITY	AMOUNT	FOUNDATION'S LEDGER VALUE PER CENT	FOUNDATION'S TOTAL LEDGER VALUE
American Telephone & Telegraph Co. Thirty-Year Collateral Trust	5	Dec. 1946	\$98,000.00	97.75	\$95,795.00
Armour & Co. (Illinois) Real Estate First Mortgage Gold	4½	June 1939	1,142,000.00	87.	993,540.00
Atchison, Topeka, & Santa Fe Ry. Twenty- Year Convertible Gold	4½	Dec. 1948	274,000.00	118.	323,320.00
Atchison, Topeka, & Santa Fe Ry. One- Hundred-Year Adjustment Mortgage Gold (Stamped)	4	July 1995	420,000.00	75.	315,000.00
Baltimore & Ohio R.R. Refunding & General Mortgage Gold Series "A"	5	Dec. 1995	1,750,000.00	80.	1,400,000.00
Baltimore & Ohio R.R. Refunding & General Mortgage Series "F"	5	Mar. 1996	495,500.00	101.8848	504,839.38
Burlington, Cedar Rapids, & Northern Ry. Consolidated First Gold	5	Apr. 1934	64,000.00	101.5625	65,000.00
Calgary Protestant Public School District No. 19, Province of Alberta	5	Serially June 2, 1935-48	123,750.00	85.	105,187.50
Carolina, Clinchfield, & Ohio Ry. First Mort- gage Thirty-Year Gold	5	June 1938	1,488,000.00	75.	1,116,000.00
Chesapeake & Ohio Ry. Equipment Gold of 1930	4½	May 1936	125,000.00	100.381032	125,476.29

THE ROCKEFELLER FOUNDATION

Chicago & Alton R.R. Refunding Mortgage Gold	3	Oct. 1949	\$551,000.00	65.	\$358,150.00
Chicago City & Connecting Rys. Collateral Trust (Certificates of Deposit)	5	Jan. 1927	1,305,000.00	52.	678,600.00
Chicago & Erie R.R. First Mortgage Gold	5	May 1982	156,000.00	93.	145,080.00
Chicago Gas Light & Coke Co. First Mortgage	5	July 1937	22,000.00	102.3892272	22,525.63
Chicago, Junction Rys., & Union Stockyards Co. Forty-Year Mortgage and Collateral Refunding	5	Apr. 1940	500,000.00	93.	465,000.00
Chicago, Milwaukee, & St. Paul Ry. Receivers' Equipment Gold Series "D"	5	\$133,000 due Aug. 1 each year, 1935-40	798,000.00	98.25	784,035.00
Chicago, Milwaukee, & St. Paul Ry. General Mortgage Gold Series "C"	4½	May 1989	500,000.00	103.	515,000.00
Chicago, Milwaukee, St. Paul, & Pacific R.R. Fifty-Year Mortgage Series "A"	5	Feb. 1975	446,300.00	95.	423,985.00
Chicago, Milwaukee, St. Paul, & Pacific R.R. Convertible Adjustment Mortgage Series "A"	5	Jan. 2000	1,785,200.00	62.50	1,115,750.00
Chicago & North Western Ry. General Mortgage	5	Nov. 1987	201,000.00	98.097	197,175.00
Chicago Rys. Co. First Mortgage Gold (25% paid) (Certificates of Deposit)	5	Feb. 1927	500 bonds @ \$750 each or 375,000.00	96.	360,000.00
Chicago, Rock Island, & Pacific Ry. Equipment Gold Series "Q"	4½	June 1935	100,000.00	100.456268	100,456.27
Chicago, Rock Island, & Pacific Ry. Equipment Gold Series "Q"	4½	Dec. 1935	100,000.00	100.49664	100,496.64
Chicago, Rock Island, & Pacific Ry. Equipment Gold Series "Q"	4½	June 1936	100,000.00	100.53614	100,536.14

TREASURER'S REPORT

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EXHIBIT J—Continued

NAME	INTEREST RATE PER CENT	DATE OF MATURITY	AMOUNT	FOUNDATION'S LEDGER VALUE PER CENT	FOUNDATION'S TOTAL LEDGER VALUE
Chicago, Rock Island, & Pacific Ry. Equipment of 1927 Series "O".....	4½	July 1936	\$129,000.00	100.549186	\$129,708.45
Chicago, Rock Island, & Pacific Ry. Equipment of 1927 Series "O".....	4½	July 1937	143,000.00	100.061573	143,088.05
Chicago, Rock Island, & Pacific Ry. Equipment Gold of 1929 Series "P" (Stamped)..	4½	Aug. 1937	128,000.00	100.66364	128,849.46
Chicago, Rock Island, & Pacific Ry. First and Refunding Mortgage Gold.....	4	Apr. 1934	2,732,000.00	95.92119	2,620,566.93
Chicago, St. Louis, & New Orleans R.R. Consolidated Mortgage Gold.....	3½	June 15, 1951	200,000.00	66.	132,000.00
Cleveland, Cincinnati, Chicago, & St. Louis Ry. General Mortgage.....	4	June 1933	700,000.00	83.89285	587,250.00
Cleveland Short Line Ry. First Mortgage Gold.....	4½	Apr. 1961	500,000.00	95.	475,000.00
Colorado & Southern Ry. Refunding and Extension Mortgage Gold.....	4½	May 1935	480,000.00	92.377477	443,411.89
Consolidated Gas, Electric Light, & Power Co. (Baltimore) General Mortgage Gold..	4½	Feb. 14, 1935	63,000.00	101.169635	63,736.87
Consolidation Coal Co. Secured Gold Notes (Stamped) (Extended).....	5	July 1935	500,000.00	100.	500,000.00
The Delaware & Hudson Co. Fifteen-Year Gold.....	5½	May 1937	178,000.00	105.380623	187,577.51
Denver & Rio Grande R.R. First Consolidated Mortgage Gold.....	4	Jan. 1936	810,000.00	96.4238456	781,033.15

Denver & Rio Grande Western R.R. General Mortgage (Stamped).....	5	Aug. 1955	\$574,000.00	59.	\$338,660.00
Edmonton Public School District No. 7 of the Province of Alberta, Debenture.....	5	Apr. 15, 1953	350,000.00	81.	283,500.00
Erie R.R. General Mortgage Convertible Gold Series "B".....	4	Apr. 1953	1,065,000.00	74.717586	795,742.30
General Motors Acceptance Corp. Serial Gold Notes Series "I".....	5	Mar. 1935	163,000.00	100.455147	163,741.89
Great Northern Ry. General Mortgage Gold Series "A".....	7	July 1936	1,095,000.00	110.910052	1,214,465.07
Houston Belt & Terminal Ry. First Mortgage Sinking Fund Gold.....	5	July 1937	5,000.00	100.5	5,025.00
Illinois Central R.R. Equipment Series "M"	4½	\$80,000 due May 1 each year, 1935-41	560,000.00	98.5	551,600.00
Illinois Central R.R. Fifteen-Year Secured Gold.....	6½	July 1936	89,000.00	108.8055	96,836.89
Illinois Central R.R. Refunding Mortgage Gold.....	4	Nov. 1955	1,233,000.00	82.45985	1,016,730.00
Illinois Central R.R. & Chicago, St. Louis, New Orleans R.R. Joint First Refunding Gold Series "A".....	5	Dec. 1963	1,000,000.00	90.	900,000.00
Imperial Chinese Government Hu Kuang Rys. Sinking Fund Loan of 1911.....	5	June 15, 1951	£189,000	34.	321,300.00
Interborough Rapid Transit Co. First & Refunding Mortgage (Stamped) Gold (Certificates of Deposit).....	5	Jan. 1966	\$1,750,000.00	96.85713	1,695,000.00
Kansas City, Fort Scott, & Memphis Ry. Refunding Mortgage Gold.....	4	Oct. 1936	274,000.00	95.755708	262,370.64
Kansas City Southern Ry. Refunding & Improvement Mortgage Gold.....	5	Apr. 1950	550,000.00	84.	462,000.00

EXHIBIT J—Continued

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NAME	INTEREST RATE PER CENT	DATE OF MATURITY	AMOUNT	FOUNDATION'S LEDGER VALUE PER CENT	FOUNDATION'S TOTAL LEDGER VALUE
Kansas City-Terminal Ry. First Mortgage Gold	4	Jan. 1960	\$500,000.00	75.	\$375,000.00
The Laclede Gas Light Co. Refunding & Extension Mortgage Gold	5	Apr. 1939	200,000.00	102.3797	204,759.41
Lake Erie & Western R.R. Second Mortgage Gold	5	July 1941	100,000.00	100.	100,000.00
Lake Shore & Michigan Southern Ry. First Mortgage Gold	3½	June 1997	926,000.00	87.	805,620.00
Louisville & Nashville-Southern Ry. Monon Collateral Joint Fifty-Year Gold	4	July 1952	775,000.00	72.	558,000.00
Mexico, Republic of, Consolidated External Loan, Series "C" (Assenting bonds)	5	June 1945	354,000.00	34.	120,360.00
Class "A" Certificates for interest in arrears			150,228.75	6.	9,013.73
Middle West Utilities Co. Serial Convertible Gold Notes (Certificates of Deposit)	5	June 1932	2,132,000.00	100.113539	2,134,420.66
Missouri-Kansas-Texas R.R. Prior Lien Gold Series "A"	5	Jan. 1962	331,250.00	78.5	260,031.25
Missouri-Kansas-Texas R.R. Prior Lien Gold Series "B"	4	Jan. 1962	331,250.00	64.5	213,656.25
Morris & Essex R.R. First Refunding Mortgage Gold	3½	Dec. 2000	175,000.00	82.75	144,812.50
Mutual Fuel Gas Co. First Mortgage Gold ..	5	Nov. 1947	250,000.00	100.	250,000.00
National Rys. of Mexico Prior Lien Fifty-Year Sinking Fund (Assenting Bonds)	4½	July 1957	350,000.00	13.	45,500.00
Secured 6% Notes for coupon due January 1, 1914		Jan. 1933	1,125.00	59.	663.75

National Rys. of Mexico Certificates Series "A" Interest in arrears.....			\$47,857.50	5.50	\$2,632.16
National Rys. of Mexico Certificates Series "B" Interest in arrears.....			94,500.00	.50	472.50
New Orleans, Texas, & Mexico Ry. Non Cumulative Income Gold Series "A" (Certificates of Deposit).....	5	Oct. 1935	75,000.00	99.05	74,287.52
New York Central R.R.—New York Central Lines Equipment Gold Series of 1922.	5	June 1937	29,000.00	103.3310689	29,966.01
New York Central R.R.—New York Central Lines Equipment Gold Series of 1923.	5	June 1937	14,000.00	103.4270714	14,479.79
New York Central R.R. Equipment Gold of 1930.....	4½	May 15, 1935	15,000.00	100.674666	15,101.20
New York Central R.R. Equipment Gold of 1930.....	4½	May 15, 1936	50,000.00	100.835	50,417.50
New York Central R.R. Equipment Gold of 1930.....	4½	May 15, 1937	125,000.00	100.988664	126,235.83
New York Central R.R. Twenty-Year Convertible Debenture Gold.....	6	May 1935	235,000.00	106.485377	250,240.64
New York Central R.R. Co. Ten-Year Convertible Secured.....	6	May 10, 1944	631,600.00	118.75	750,025.00
New York Connecting R.R. First Mortgage Gold Series "A".....	4½	Aug. 1953	500,000.00	95.69073	478,453.65
New York, Lake Erie, & Western Docks & Improvement Co. First Extended Gold..	5	July 1943	400,000.00	90.	360,000.00
Northern Pacific Ry. Refunding & Improvement Mortgage Gold Series "A".....	4½	July 2047	1,390,000.00	85.04675	1,182,150.00
Northwestern Elevated R.R. First Mortgage Gold.....	5	Sept. 1941	500,000.00	70.	350,000.00

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EXHIBIT J—Continued

NAME	INTEREST RATE PER CENT	DATE OF MATURITY	AMOUNT	FOUNDATION'S LEDGER VALUE PER CENT	FOUNDATION'S TOTAL LEDGER VALUE
The Pacific Telephone & Telegraph Co. First & Collateral Mortgage Gold.....	5	Jan. 2, 1937	\$500,000.00	89.5	\$447,500.00
Pennsylvania R.R. General Equipment Trust Certificates Series "D".....	4½	\$30,000 due May 15 each year, 1935-41	210,000.00	98.5	206,850.00
Pennsylvania R.R. General Mortgage Gold Series "A".....	4½	June 1965	1,500,000.00	98.25	1,473,750.00
Philadelphia & Reading Coal & Iron Co. Refunding Mortgage Sinking Fund Gold....	5	Jan. 1973	167,000.00	94.252347	157,401.42
Pittsburgh, Cincinnati, Chicago, & St Louis Ry. Consolidated Mortgage Gold Series "I".....	4½	Aug. 1963	500,000.00	103.	515,000.00
Portland General Electric Co. First Mortgage Gold Sinking Fund.....	5	July 1935	124,000.00	101.92692	126,389.38
Public Service Corporation of New Jersey Perpetual Interest Bearing Certificates....	6		550,000.00	84.	462,000.00
Raleigh & Gaston R.R. First Mortgage Gold Fifty-Year (Certificates of Deposit).....	5	Jan. 1947	250,000.00	95.	237,500.00
Reading Co. Equipment Trust Gold Series "M".....	4½	Nov. 1937	100,000.00	102.10579	102,105.79
Reading Co. General & Refunding Mortgage Gold Series "A".....	4½	Jan. 1997	333,000.00	94.25	313,852.50
Rock Island, Arkansas, & Louisiana R.R. First Mortgage Gold.....	4½	Mar. 1934	613,000.00	100.279368	614,712.53

St. Louis-San Francisco Ry. Equipment Gold Series "CC".....	4	\$50,000 due May 15 each year, 1934-43	\$500,000.00	92.179906	\$460,899.53
St. Louis-San Francisco Ry. Prior Lien Gold Series "A".....	4	July 1950	1,500,000.00	72.75	1,091,250.00
St. Louis-San Francisco Ry. Consolidated Mortgage Gold Series "A".....	4½	Mar. 1978	2,500,000.00	14.	350,000.00
St. Louis Southwestern Ry. General & Refunding Mortgage Gold Series "A".....	5	July 1990	1,918,500.00	66.792749	1,281,418.80
Seaboard Air Line Ry. First & Consolidated Mortgage Gold Series "A".....	6	Sept. 1945	227,500.00	40.	91,000.00
Southern Pacific Co. Equipment Gold Series "I".....	4½	\$100,000 due June 1 each year, 1935-41	700,000.00	98.5	689,500.00
Southern Pacific Co. Equipment Gold Series "E".....	7	June 1935	32,000.00	110.771375	35,446.84
Southern Pacific Co.—Central Pacific Stock Collateral Gold.....	4	Aug. 1949	100,000.00	76.	76,000.00
Southern Pacific R.R. First Refunding Mortgage Gold.....	4	Jan. 1955	100,000.00	86.	86,000.00
Standard Oil Co. (New Jersey) Twenty-Year Gold Debenture.....	5	Dec. 15, 1946	10,273,000.00	100.5	10,324,365.00
Standard Oil Co. of New York Serial Debenture Gold.....	4½	Feb. 15, 1935	10,000.00	100.3125	10,031.25
Standard Oil Co. of New York Serial Debenture Gold.....	4½	Feb. 15, 1936	20,000.00	100.50	20,100.00
Standard Oil Co. of New York Serial Debenture Gold.....	4½	Feb. 15, 1937	39,000.00	99.9823589	38,993.12
Tennessee Coal, Iron, & R.R. Co. General Mortgage.....	5	July 1951	400,000.00	92.	368,000.00

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EXHIBIT J—Continued

NAME	INTEREST RATE PER CENT	DATE OF MATURITY	AMOUNT	FOUNDATION'S LEDGER VALUE PER CENT	FOUNDATION'S TOTAL LEDGER VALUE
United Electric Co. of New Jersey First Mortgage Gold.....	4	June 1949	\$500,000.00	72.	\$360,000.00
United States of America Fourth Liberty Loan Gold Series "E," "F," and "G"....	4½	Apr. 15, 1935	2,070,000.00	96.82635	2,004,305.45
United States of America Fourth Liberty Loan Gold.....	4½	Oct. 15, 1935- 38	1,311,000.00	96.82635	1,269,393.47
United States of America Treasury Notes, Series "B" dated June 15, 1933.....	2½	June 15, 1938	7,000,000.00	100.986272	7,069,039.06
United States of America Treasury Notes, Series "D" dated Sept. 15, 1934.....	2½	Sept. 15, 1938	1,305,000.00	100.	1,305,000.00
United States Rubber Co. First & Refunding Mortgage Gold Series "A".....	5	Jan. 1947	3,820,000.00	85.	3,247,000.00
Wabash R.R. Second Mortgage Gold.....	5	Feb. 1939	120,000.00	97.8	117,360.00
Washington Ry. & Electric Co. Consolidated Mortgage Gold.....	4	Dec. 1951	450,000.00	83.5	375,750.00
Western Maryland R.R. First Mortgage Gold.....	4	Oct. 1952	4,130,000.00	59.	2,436,700.00
Western Pacific R.R. First Mortgage Gold Series "A" (Assenting).....	5	Mar. 1946	200,800.00	83.	166,664.00
TOTAL BONDS.....					\$ 71,547,719.44

STOCKS

NAME	NUMBER OF SHARES	FOUNDATION'S LEDGER VALUE PER SHARE	FOUNDATION'S TOTAL LEDGER VALUE
Atchison, Topeka, & Santa Fe Ry. 5% Non-Cumulative Preferred	5,000	\$98.25	\$491,250.00
Atchison, Topeka, & Santa Fe Ry. Common	21,944	93.18882	2,044,935.53
Atlanta, Birmingham, & Coast R.R. 5% Guaranteed Cumulative Preferred	4,062	94.	381,828.00
The Buckeye Pipe Line Co. Capital (Par value \$50)	49,693	79.277299	3,939,526.82
Central United Co. Capital (No par value)	8,104		0
Central United National Bank of Cleveland Common (Par value \$20)	8,104	33.613909	272,407.12
Chehalis & Pacific Land Co. Capital	220		1.00
Chicago City & Connecting Rys. Participation Certificates, Preferred (Certificates of Deposit) (No par value)	17,530		1.00
Chicago City & Connecting Rys. Participation Certificates, Common (No par value)	10,518		1.00
Chicago & Eastern Illinois Ry. 6% Cumulative Preferred	3,000	5.	15,000.00
Cleveland Arcade Co. Capital	2,500	98.62222	246,555.56
Cleveland Trust Co. Capital	638	192.2282	122,641.62
Colorado & Southern Ry. 4% First Non-Cumulative Preferred	4,800	54.	259,200.00
Consolidated Gas Co. of New York \$5. Cumulative Preferred (No par value)	13,333	91.75	1,223,302.76
Consolidation Coal Co. 7% Cumulative Preferred	5,875	12.	70,500.00
Consolidation Coal Co. Common	23,500		0
Continental Oil Co. (Delaware) Capital (Par value \$5)	60,627	11.46601	695,149.77
Cumberland Pipe Line Co. Liquidation Receipt Certificate	6,000		0
Denver & Rio Grande Western R.R. 6% Cumulative Preferred	3,280	5.	16,400.00
Eureka Pipe Line Co. Capital (Par value \$100)	12,357	54.30	670,985.10
Illinois Central R.R. 6% Non-Cumulative Preferred "A"	2,857	15.50	44,283.50

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EXHIBIT J—Continued

STOCKS

NAME	NUMBER OF SHARES	FOUNDATION'S LEDGER VALUE PER SHARE	FOUNDATION'S TOTAL LEDGER VALUE
Illinois Central R.R. Common	4,070	\$9.625	\$39,173.75
Indiana Pipe Line Co. Capital (Par value \$10)	74,535	20.65221	1,539,312.93
International Harvester Co. 7% Cumulative Preferred	45,721	115.	5,257,915.00
Interstate Natural Gas Co. Inc. Capital (No par value)	33,763	14.95845	505,042.25
Kanawha & Hocking Coal & Coke Co. 7% Cumulative Preferred	202	20.	4,040.00
Kanawha & Hocking Coal & Coke Co. Common	668	4.	2,672.00
Manhattan Ry. Capital (Modified Guarantee)	10,000	60.	600,000.00
Missouri-Kansas-Texas R.R. 7% Cumulative Preferred, Series "A"	10,499	41.98228	440,772.00
National Fuel Gas Co. Capital (No par value)	847,060	7.75	6,564,715.00
National Transit Co. Capital (Par value \$12.50)	126,481	21.50	2,719,341.50
New York Central R.R. Capital	52,635	16.875	888,215.78
New York Transit Co. Capital (Par value \$5)	24,784	11.72913	290,694.86
Northern Pipe Line Co. Capital (Par value \$10)	27,000	8.3333	225,000.00
The Ohio Oil Co. Non-Voting Cumulative 6% Preferred	15,000	103.5	1,552,500.00
The Ohio Oil Co. Common (No par value)	94,684	35.375	3,349,446.50
Pere Marquette Ry. Cumulative 5% Preferred	5,740	49.6600627	285,048.76
Provident Loan Society of New York 6% Certificates	266,000	100.	266,000.00
Seaboard Air Line Ry. Common (No par value)	6,825	.50	3,412.50
Southern Pipe Line Co. Capital (Par value \$10)	24,845	6.25	155,281.25
South West Pennsylvania Pipe Lines, Capital (Par value \$50)	8,000	62.	496,000.00
Standard Oil Co. (California) Capital (No par value)	60,967	17.25	1,051,680.75
Standard Oil Co. of Indiana, Capital (Par value \$25)	691,140	28.90	19,973,946.00
Standard Oil Co. (N.J.) Capital (Par value \$25)	1,077,005	34.826401	37,508,208.80
The Standard Oil Co. (Ohio) Cumulative 5% Preferred	15,000	101.	1,515,000.00

The Standard Oil Co. (Ohio) Common (Par value \$25).....	135,648	\$25.50	\$3,459,024.00
Standard Oil Export Corporation (Delaware) Cumulative 5% Non-Voting Guaranteed Preferred.....	87,964	99.	8,708,436.00
Tilden Iron Mining Co. Capital.....	890	27.350258	24,341.73
Underwood Elliott Fisher Co. 7% Cumulative Preferred.....	2,300	110.	253,000.00
Union Tank Car Co. Capital (No par value).....	240,000	6.692033	1,606,087.97
Western Pacific R.R. Corporation 6% Preferred.....	28,609	30.	858,270.00
Wilson Realty Co. Capital.....	591		1.00
TOTAL STOCKS.....			\$110,636,549.11

SUMMARY

Bonds.....	\$71,547,719.44
Stocks.....	110,636,549.11
TOTAL LEDGER VALUE OF INVESTMENTS.....	\$182,184,268.55

EXHIBIT D—Continued

	APPROPRIA- TIONS	1933 PAYMENTS
UNIVERSITIES AND OTHER EDUCATIONAL INSTITUTIONS—Continued		
Land and Buildings—Continued		
University of Göttingen, Germany		
Institute of Inorganic Chemistry. Construction and equipment (RF 32049, 33054).....	\$45,215.31	\$39,164.64
University of Lyon, France		
Faculty of Medicine and Pharmacy. Land and building (ME 21242, 28138, RF 29152).....	229,713.46	Cr. 3,930.00
School of Nursing. Building and equipment (RF 32064, 33054).....	135,470.96	104,612.20
University of Nancy, France		
Institute of Hygiene. Building improvements (ME 28019).....	407.16	.....
University of Oslo, Norway		
Institute of Theoretical Astrophysics. Construction and equipment (RF 31035).....	82,745.02	56,873.55
University of Oxford, England		
Development of the Bodleian and other libraries (RF 31121).....	2,300,000.00	104,928.09
University of Stockholm, Sweden		
Construction of a social science building (RF 31033).....	47,110.61	34,916.65
Greenhouse for departments of biochemistry and plant physiology (RF 31106) ..	16,000.00	.....
University of Sydney, Australia		
Medical School. Building of clinical laboratory (RF 30011).....	329,330.00	220,280.50
University of Utrecht, Netherlands		
Institute of Comparative Physiology. Construction of building (RF 33038, 33081).....	101,000.00	.....
RESEARCH INSTITUTIONS AND ORGANIZATIONS		
Medical Science Education		
Chinese Medical Association, Shanghai. General budget (RF 32016, 33045).....	14,472.87	1,431.15

Social Science Education		
Laboratory of Anthropology, Santa Fe, New Mexico		
Support of field training course in anthropology (RF 29116).....	\$34,115.15	\$9,459.90
Social Science Research Council, New York City		
Instruction in agricultural economics (RF 30104).....	30,210.13	7,329.60
General Education		
Canadian National Committee for Mental Hygiene, Toronto		
Development of training centers for advanced students (RF 30088).....	30,787.50	10,200.00
General Development		
American Historical Association, Washington, D. C.		
Support of the International Committee of Historical Sciences, Zurich, Switzerland (LS 951).....	8,850.54	4,354.34
American Schools of Oriental Research, Baghdad and Jerusalem		
Current expenses (RF 29134).....	130,000.00	40,000.00
Endowment (RF 29134).....	229,224.28	8,769.58
Australian National Research Council, Sydney		
Visiting professors (ME 21203).....	27,427.95	1,572.78
Bermuda Biological Station for Research, Inc.		
Support of work (RF 31107).....	6,000.00	6,000.00
Brookings Institution, Inc., Washington, D. C.		
General endowment (LS 929).....	2,000,000.00	.....
Support of research (RF 31125).....	187,500.00	75,000.00
Canton of Geneva, Switzerland. Department of Public Instruction		
Postgraduate Institute of International Studies. Maintenance (RF 29136).....	770,214.18	63,611.75
Economic Foundation, New York City		
National Bureau of Economic Research. Support (LS 930).....	25,000.00	25,000.00
Hungarian Biological Research Institute, Tihany. Maintenance (RF 31061).....	5,843.59	2,366.00
Institute for Comparative Research in Human Culture, Oslo, Norway		
General budget (LS 1006, RF 30086).....	12,508.11	10,008.11
Institute of Economic and Social Research, Paris, France		
Establishment and support (RF 33072).....	350,000.00

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EXHIBIT D—Continued

	APPROPRIA- TIONS	1933 PAYMENTS
RESEARCH INSTITUTIONS AND ORGANIZATIONS—Continued		
General Development—Continued		
Institute of Economics and History, Copenhagen, Denmark		
General budget (RF 30085, 33071).....	\$24,000.00	\$6,000.00
Institute of Pacific Relations, Honolulu, Hawaii		
General program (RF 31080, 33048, 33114).....	55,000.00	30,000.00
International Institute for the Study of African Languages and Cultures, London, England		
General budget (RF 31041).....	205,389.52	28,894.45
Long Island Biological Association, Cold Spring Harbor, New York		
Work of the Biological Laboratory (RF 32091).....	20,000.00	20,000.00
National Bureau of Economic Research, New York City		
General budget (RF 29073, 33063).....	392,120.05	69,710.00
Social Science Research Council, New York City. General budget (LS 875).....	300,000.04	50,000.04
Woods Hole Oceanographic Institution, Massachusetts		
Current expenses (RF 30004).....	400,000.00	90,000.00
Zoological Station of Naples, Italy. Current expenses (RF 32087).....	22,260.00	7,000.00
Research Programs		
American Council of Learned Societies, Washington, D. C.		
Research in paleography (RF 29133).....	34,345.50	13,992.44
Support of projects in the field of humanistic studies (RF 31129).....	278,742.84	127,813.54
Development of a training center for Far Eastern studies at the Library of Congress, Washington, D. C. (RF 33082, 33094).....	14,000.00	.....
American Law Institute, Philadelphia, Pennsylvania		
Study of law administration in the federal courts (RF 31083).....	15,000.00	.....
Association for the Study of Negro Life and History, Washington, D. C.		
Research studies and publications (RF 30053).....	4,746.75	4,746.75

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