The Rockefeller Foundation

Annual Report

1942

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To the Trustees of The Rockefeller Foundation:

Gentlemen:

I have the honor to transmit herewith a general review of the work of The Rockefeller Foundation for the period January 1, 1942, to December 31, 1942, together with detailed reports of the Secretary and the Treasurer of the Foundation, the Director of the International Health Division, and the Directors of the Medical Sciences, the Natural Sciences, the Social Sciences, and the Humanities.

Respectfully yours,

Raymond B. Fosdick
President

THE PRESIDENT'S REVIEW FOR 1942

PRESIDENT'S REVIEW

PRESIDENT'S REVIEW

THE YEAR IN BRIEF

IN 1942 the appropriations of The Rockefeller Foundation amounted to $8,227,867. This is in contrast to $9,313,964 appropriated in 1941. The income of the Foundation from investments during the year was $8,271,037, as compared with $8,734,992 in 1941.

The appropriations in 1942 were distributed for the most part in six major fields, roughly as follows:

Public health	$2,700,000
Medical sciences	1,434,000
Natural sciences	815,000
Social sciences	1,326,000
Humanities	982,000
Program in China	122,000

A detailed statement of the appropriations made in 1942 appears at the conclusion of this report, beginning on page 251. Of the money appropriated during the year, 67 per cent was for work in the United States and 33 per cent for work in other countries. The amount spent in foreign countries was larger than in any year since 1937, and represents an increase of 30 per cent over the average of the years 1938 to 1941. This increase is due to two causes: first, the developing program of the Foundation in Latin America, and second, the growing needs of the Foundation's Health Commission in connection with war activities abroad.

In contrast with the size of public funds now being spent to meet the present emergency, the eight million dollars which the Foundation appropriated in 1942 seems insignificant. It is estimated that eight million

dollars would take care of the current war expenditures of the United States Government for approximately forty-five minutes. But in times like these, when the intellectual and cultural life of mankind has to be subordinated to a struggle for survival, even a relatively small sum may be used effectively to help build a bridge between what men have valued in the past and what they hope to maintain in the future.

VALUES NOT EASILY REGAINED

In this REVIEW, three years ago, under the heading "Night Over Europe," an attempt was made to describe the disaster which the war was bringing to universities and laboratories both in England and on the Continent. The processes of disintegration had already begun. Institutions dedicated to the extension of knowledge were being geared into the war machine. The necessities of military mobilization had decimated faculties and student bodies alike. Cultural values upon which civilization is based were being thrown to the winds as the intellectual blackout spread across half the world.

Today the long shadows of the blackout are lengthening inexorably over the United States. We are fighting for a future in which free institutions can live, but to achieve that end we are sacrificing values which, once they are lost, are not easily regained. The crisis presents us with a problem of delicate balance: how to win the war and at the same time preserve those intellectual ideals and standards, those "great things of the human spirit," without which a military victory would in the end be nothing but ashes. History shows us that it is possible to lose a civilization even while armies and navies are triumphant.

As in Europe, so here at home, liberal education has

been discarded for the duration. Our universities are now instrumentalities of total war. Technology is left as the one subject which must be taught. History, economics, literature, philosophy — the whole range of the social sciences and the humanistic studies — have been crowded out of the picture by the pressure of higher priorities. Our young men are not to be trained in liberal understanding; they must be made into soldiers. Of necessity, their education must be an education in violence. Their participation in the cultural and social heritage of civilization is adjourned. For the time being, at least, their generation may not share in the humane tradition on which alone the building of a worth-while future depends.

Not only the undergraduate work of our colleges and universities but the activities of many of our post-graduate departments, and of our research staffs and laboratories, are being forced to pay the price which war, however necessary, inevitably exacts. On all sides, fundamental research, except as it relates to the demands of war, is being curtailed or abandoned, as scientists, technicians, and students are mobilized for practical types of service. Illustrations of this situation are to be found in almost every branch of knowledge, whether it is biophysics or genetics or agriculture or economics or anthropology or the fine arts. The completion of the 200-inch telescope in California has been indefinitely postponed. The cyclotrons of the country have for the most part been forced to shut down or greatly limit their programs in pure research. Graduate schools across the land are only partially occupied; faculties are becoming scattered. And this is only the beginning of the dislocation; the end is by no means in sight. In time of war the advance of knowledge for the

sake of knowledge becomes a luxury which a nation fighting for its life apparently cannot afford.

These comments are made in the full realization that we have a war on our hands which must be fought to a victorious finish. But in the achievement of this purpose we need to keep in perspective the requirements of the future as well as the demands of the present. The treasure of learning and the liberal tradition cannot be reassembled, like automobiles in a plant, when the long convulsion is finished; nor can scientists, doctors, scholars, philosophers, and artists be fabricated over night. We need to keep soberly in mind the price we are paying for victory — not in terms of dollars, nor indeed wholly in terms of human life, but in terms of values by which the worth of a civilization is ultimately measured. Our enemies kill the humane tradition wherever they can; in the realm of the mind and soul it is their chief adversary. Our concern must be that in fighting this barbarian concept we do not inflict so serious a wound upon the intellectual and spiritual life of our country that though barbarism is conquered without, it finds a low resistance to growth within.

These observations lead to one conclusion. Our schools, our colleges and universities, and all the institutions and individuals concerned with the quest for a rational life among men have a dual responsibility in these stern days. We must of necessity serve the war effort, for there is no future for what we most desire in a world dominated by fascism. But we have a responsibility equally compelling to preserve the treasures of the spirit which we hold in trust from the past for the benefit of the generations to come. There must be no broken link in the chain, no flaw in the title deeds by which what we most cherish is transferred to the future.

The Corporation of Yale University, in a recent statement, expressed in the following words its feeling of responsibility as a "custodian of our cultural heritage":

> The Corporation wishes to impress upon Yale graduates and upon the general public the danger of the impoverishment of the nation's mind and soul, should the less tangible values of our culture be allowed to shrivel while our energies are devoted to the task of winning a war to maintain them. Of what worth is freedom from want, if our minds be on a lower intellectual level; or freedom from fear if we have a less cultured life to defend; or freedom of speech if we have poorer thoughts to express; or freedom of religion if we bring a less enlightened faith to the worship of God?

This obligation is laid on the doorsteps of all our educational institutions. It is to them that we look for perspective and leadership in such an hour as this. If they cannot carry the responsibility, nobody else will, for nobody else can. In their absorption in military necessities they must not allow themselves to be mere appendages of the war machine. They must not abdicate their high purpose. Unless they keep the candles lit which have largely flickered out elsewhere around the world, we may reach the dim aftermath of war, with victory behind us, but with not enough light left to make it mean anything in terms of a brighter world.

In 1881 the College of William and Mary in Virginia closed its doors for nearly seven years. The battles of the Civil War had been fought up and down the Peninsula and had left the College physically in ruins; and although it struggled to keep going during the bitter time of Reconstruction, it was finally overborne by financial catastrophe. But every morning during those seven barren years President Ewell rang the chapel bell. There were no students; the faculty had disappeared;

and rain seeped through the leaky roofs of the desolate buildings. But President Ewell still rang the bell. It was an act of faith. It was a gesture of defiance. It was a symbol of determination that the intellectual and cultural tradition must be kept alive, even in a bankrupt world.

In every school, college, and university of America today we need to hear that bell ringing.

A FAITH WORTH FIGHTING FOR

The fate of democracy, whatever it may be, is also the fate of our institutions of learning. While these institutions in earlier years helped to release the intellectual ferment out of which our modern democracy developed, they are today based upon the intellectual and spiritual foundations which democracy itself has laid. They can exist only so long as democracy exists. Regimented ideas and universities cannot live side by side. A university in exile is an indictment of a civilization. The search for truth and the weighing of values cannot be maintained in a world from which freedom has been banished.

But freedom and democracy are not static principles. All values change from age to age and the interpretation of one generation is seldom the interpretation of another. The Declaration of Independence was a broader definition of freedom than that which came out of the Revolution of 1688, just as 1688 widened the freedom of Magna Carta. Today the conception of freedom is once again taking on a larger meaning. Our generation is thinking of the threat to freedom which comes from poverty and insecurity, from sickness and the slum, from social and economic conditions in which human beings cannot be free. This new conception of freedom is struggling to make itself articulate in many countries

and will undoubtedly bring clarification and change to older points of view.

Every social fact or phenomenon must constantly be reinterpreted and given its current value; it must be re-expressed in contemporary idiom to accord with contemporary thought. Stagnation and death await ideas as well as social and economic arrangements which have lost their power to grow. To be sure, there is a balance to be maintained between the spirit of change and the spirit of conservation. There can be nothing real without both. A high degree of critical selectivity is necessary if change is to be kept from degenerating into capricious variation. As Whitehead remarked, mere change without conservation is a passage from nothing to nothing; but on the other hand, conservation without change cannot conserve. In the words of Jean Jaurès when he was accused of neglecting tradition: "Take from the altar of the past the fire, not the ashes."

Like freedom, democracy is a conception which must also be reinterpreted from generation to generation. It is not a fixed creed. It is not a body of dogma. Its ultimate outlines were not circumscribed by the political concepts of the eighteenth century. Rather it is a growing, dynamic faith, a perpetually evolving adjustment between freedom and justice, between individual values and the demands of society. This adjustment, however, is never perfectly and finally attained; it remains a problem which mankind must solve again and again. "It is provided in the very essence of things," said Walt Whitman, "that from any fruition of success, no matter what, shall come forth something to make a greater struggle necessary."

Democracy is a promise, a method of evolution, a maturing way of living, a conception of human relations

that is rooted deep in the yearnings of many races and people. If this war has meaning and purpose it is to extend the idea of democracy vertically in America and horizontally throughout the world, wherever the soil is ready.

Here is a faith worth fighting for. Hitler boasts of his "new order." We have a new order, too, based on the capacity of each generation to experience what Lincoln called "a new birth of freedom." The Nazis extol the virility of totalitarianism. In the evolution of democracy we have a world that is always young.

THE WAR AND PUBLIC HEALTH

The Rockefeller Foundation is interested primarily in long-range objectives. Its main concern is not with immediate things nor with the emergencies of the moment, but with results in terms of human welfare which come from careful planning and maturing knowledge. In choosing its fields of operation it has tried to avoid projects of temporary significance and to concentrate, as far as possible, on a few of the problems which lie at the root of our social difficulties and physical limitations, and which require for their solution patience, tenacity, research, and adequate and continuing funds.

This attempt to maintain the long view is of course handicapped by the war. Nevertheless, in regard to at least one branch of the Foundation's work—the field of public health — it can truly be said that the emergency of the moment is distinctly related to the far target. As of December 31, 1942, the professional staff of the Foundation's International Health Division consisted of 55 doctors, 4 entomologists, 5 sanitary engineers, 2 bacteriologists, 2 experts in public health nursing, 1 physicist, and 1 statistician. This staff is a highly

specialized group of professional men and women who have had experience over many years in the public health problems of countries throughout the world. They have worked in the tropics of Africa, South America, and the islands of the Pacific. Their activities have taken them from Iceland to Australia and from Japan and Russia to the Argentine.

When the United States entered the war it was inevitable that the advice and services of this group should be sought by the military authorities. Seven members of the staff were absorbed into the armed forces to deal with such specialized responsibilities as malaria and typhus. Of the twenty-eight staff members now on duty in the United States twelve are serving part time on committees and commissions in Washington in connection with the medical problems of the Army and Navy. Thus Dr. Wilbur A. Sawyer, the Director of the Division, is Chairman of the Commission on Tropical Diseases of the Army; Dr. George K. Strode, who in the last year and a half has visited Iceland and Russia, and is now in North Africa as an adviser in public health matters to the State Department and the American Red Cross, is consultant to the Office of the Coordinator of Inter-American Affairs; Dr. Andrew J. Warren is a member of the Board for the Investigation of Epidemic Diseases in the Army. The laboratory staff, under Dr. Johannes H. Bauer, is giving its entire time to problems that have a direct bearing on the war, including yellow fever, malaria, typhus fever, and influenza.

The same situation is true of the staff abroad. Dr. Fred L. Soper, who in recent years headed the work which drove the gambiae mosquito out of Brazil, is now a member of the American Typhus Commission organized by the Army. Dr. Marshall Balfour, in

Chungking, is an adviser to the American Red Cross, the United China Relief, and other organizations dealing with Chinese health problems. Dr. Charles N. Leach, who was captured by the Japanese at Manila and is now interned, is reported to be directing the hospital at the Santo Tomás internment camp.

All this work, of course, has a bearing on the future. The scientific knowledge gained by this intensive activity can be applied in the years ahead. In this specialized field of the control of disease, as distinguished from other sectors on the advancing front of knowledge, one does not get the impression that the war means a retarding of effort, the slowing down or even cessation of fruitful and promising work. If our young men are to fight in the Aleutian Islands and in the tropics, laboratories must work overtime and we must have more and more knowledge of the prevention of disease. The war has brought disaster to many fields of learning, but in this particular area of public health it seems to be proving a stimulant to advance.

YELLOW FEVER IN 1942

Although the armed forces of the United States are fighting in many parts of the world where disease is rampant, we have at least this assurance which we never had before: none of our soldiers or sailors needs to be a victim of yellow fever. Our troops in Liberia and in other parts of Africa, where yellow fever is endemic, are now protected from the consequences of this savage disease, with its mortality ranging in some localities as high as 70 per cent. Indeed it is doubtful whether without this protection troops could be detailed to certain sectors which they now occupy. Experience in endemic centers of yellow fever over many decades proves that

this disease can upset the best-planned military operations.

The vaccine now used to provide immunity was developed in the laboratories of the International Health Division of the Foundation in 1936. During 1942 a great deal of attention was given by the Division, in association with Army and Navy personnel and experts called in from other institutions, to an outbreak of jaundice which appeared to be associated with certain definite lots of the yellow fever vaccine. In preceding years a total of nearly eight million vaccinations had been successfully administered without any disturbing consequence, except the recent appearance of a few cases of jaundice in Brazil. Research during 1942 indicated that the incidental jaundice, which is not contagious and does not constitute a danger to public health, is probably due to a virus contained in the human serum component employed in the vaccine. Oddly enough, cases of jaundice have appeared this year in England and Russia, apparently following the administration of vaccines or serums which were manufactured in those countries for diseases other than yellow fever and which also contained a human serum component.

The yellow fever vaccine is now being successfully made without this component, and it is believed that the risk of jaundice has been definitely eliminated. By the end of the year over four million doses of the new type of vaccine were distributed. In the meantime the International Health Division of the Foundation has adopted jaundice as a prime objective for research in the hope of clarifying the many hidden factors in this relatively obscure disease. The scope of the work will include a study of jaundice as it occurs in the general

population as well as in groups which have received injections of serum-containing substances.

Field work in yellow fever continued throughout the year in central Africa, in Brazil and Colombia in South America, and in Central America. Blood specimens obtained from Indians in the inadequately explored area of eastern Panama showed clearly that yellow fever had very recently occurred there, and it is probably now present. The infected area does not reach the Canal Zone, but stops at about the level of Chepo. Similar investigations in western Panama failed to reveal any evidence that the disease had been present in recent years. Farther to the north, in forested areas on the border between Guatemala and Mexico, where conditions exist which might be favorable to jungle yellow fever, an investigation was carried out on horseback and by canoe. The region is one which few white men have penetrated since the days of the conquistadores. Cortés fought his way through this country on his march to Honduras, never dreaming that the dense tropical forest hid the ruins of a magnificent civilization. The Foundation's field study in this area, under Dr. H. W. Kumm, together with other evidence recently collected, confirmed earlier conclusions that yellow fever does not exist in Mexico or in Central America, except in that part of Panama nearest South America.

In Africa, field investigations in certain areas showed a high prevalence of *Aedes aegypti* mosquitoes, the common transmitters of yellow fever. As a precaution, mass vaccination of the population was undertaken by a staff member of the Foundation. The African situation is receiving increasing attention because of the potential danger of the spread of the disease in areas which are or may become military zones.

QUININE JOINS RUBBER

War correspondents have reported that the Battle of Bataan was lost, not because the ammunition was gone, but because the quinine tablets gave out. Ten days before the end, 80 per cent of the front-line troops were suffering from malaria. When the Japanese extended their advance to the south, America lost both her rubber and her quinine. Fortunately as far as quinine was concerned, synthetic chemistry jumped into the breach, but with the war extending into malaria-infested countries all over the world there is still great need for a drug that is better than quinine or any available quinine substitute. Indeed among war diseases malaria ranks ahead of typhus and influenza in the list of unresolved problems.

Over many years, and in many countries, The Rockefeller Foundation has worked in the field of malaria. During the earlier period its activities were largely confined to various methods of mosquito control, such as drainage, screening, the use of fish to destroy mosquito larvae, and the employment of sprays and Paris green. But in many parts of the world these measures are inapplicable for economic or physical reasons. In such areas the widespread use of drugs is at present, and particularly under war conditions, the only feasible means of control.

The use of drugs, however, has been shown to be largely ineffective, even under the most favorable circumstances, because of two fundamental disadvantages inherent in the drugs now in use. In the first place, these drugs do not always eradicate the infection, and thus a constantly increasing carrier reservoir accumulates, tending to spread the disease. In the second place, the drugs cannot be wholly relied upon to

prevent the development of malaria following the bite of an infected mosquito.

These disadvantages assume even greater importance in wartime than under normal conditions, because the introduction of large numbers of nonimmune persons into malaria-ridden countries naturally increases the incidence of the disease. The development of some new drug, not subject to the limitations of quinine and its substitutes, would have enormous military and public health significance.

The hunt for such a drug is now being carried on in laboratories in several countries, and the Foundation is financing some of the research. In its own laboratory this work in the chemotherapeutic approach has been under way for several years. In 1942 the laboratory carried on its activities in close cooperation with the Department of Chemistry of Harvard University. Censorship at present veils the details of this work.

Readers of this REVIEW will recall accounts, given in former issues, of the campaign in Brazil which was successful in driving out a particularly dangerous malaria mosquito imported from Africa and called *Anopheles gambiae*. It is a pleasure to report that there was no reappearance of gambiae in 1942 in the area in which the campaign was waged. But although the gambiae is driven out of America, this is not the end of the story. There remains its homeland. The bad reputation of Africa as the Dark Continent is based in part upon the exceptional activity of this mosquito. The gambiae holds firmly in his grasp whole areas, from Dakar in the west, straight across the Continent, and all the way south. Unless this mosquito can be exterminated, or its effects neutralized, it does not seem probable that the vast regions which it now contaminates can be successfully developed.

In India, the country where, over forty years ago, Sir Ronald Ross did his epoch-making work in incriminating the mosquito as the carrier of malaria, the Foundation has now completed some fifteen years of cooperative malaria work. Field investigations in India, which came to an end in March 1942, disclosed that a standardized and systematic spraying technique, even in rural districts with homes of open construction, was remarkably effective in interrupting the transmission of malaria. Since it also eliminated other insect pests, it won immediate and wholehearted acceptance from the native population, especially when the cost was brought down so low that it was not a financial burden even to impoverished districts. Indian agencies are now carrying on this work independently, and the apparatus required has also been added to the equipment of units of the United States Army.

BRITISH MEDICAL STUDENTS

In the REVIEW for 1940, it was announced that the Foundation, at the suggestion of the late Lord Lothian, British Ambassador to the United States, had appropriated $100,000 for scholarships for British medical students. In Great Britain, because of the war, the conditions for thorough and adequate teaching in medicine had been severely deranged. Since a break in the chain of medical teaching in any country spells disaster for the next generation, it was decided to bring a carefully selected group of young British medical students to America to complete their training here. The first of these students arrived in 1941; and in 1942, on the basis of the very successful results registered by this group, the Foundation appropriated an additional $100,000 to continue the program for a second group.

Fifty English, Scotch, Welsh, and Ulster students,

selected by the Committee of Vice-Chancellors and Principals of the Universities Bureau of the British Empire, are now in North America attending medical schools on scholarships provided by the Foundation. Twenty-five came in 1941, and an additional twenty-five arrived during the past summer. The appointees for 1942 originally numbered twenty-six, but one of them was lost in a submarine attack which sank the ship on which he and six other students were en route here in August.

The fifty British students are attending various medical schools in the United States and Canada. Cornell, Johns Hopkins, and Yale each has four; Duke, Harvard, and Washington University in St. Louis have three each; Chicago, Iowa, McGill in Montreal, Michigan, Minnesota, Pennsylvania, Rochester, Stanford, Toronto, Western Reserve, and Wisconsin have enrolled two each; and the remaining seven are at California, Cincinnati, College of Physicians and Surgeons in New York, Illinois, New York University, Tulane, and Vanderbilt.

All these students had already begun their training in British medical schools, some having had three years of work, the others two. Three of the 1942 arrivals are women, two from the University of Bristol and the third from Cardiff. Other schools represented are Aberdeen, Bart's, Belfast, Birmingham, Cambridge, Edinburgh, Glasgow, Leeds, Liverpool, London Hospital, Manchester, Oxford, St. Andrew's, St. Mary's, London, and University College, London.

Most of the students who came in 1941 will fulfill the requirements for the medical degree in 1943, but the British authorities have requested that the American schools award them no degrees. The plan is for them to return and serve an additional six months in their home

medical schools in Britain. After completing successfully the final qualifying examinations, they will be awarded their degrees there and will be assigned to service under the British manpower authority.

High praise and warm expressions of admiration for the visitors have come from the deans and professors of our medical schools as well as from American fellow students. The British students have been equally cordial in their reaction to the American scene. Perhaps the most objective report is a series of letters published in the London *Lancet* written by thirteen of the twenty-five students who came over in 1941. The following excerpt from this unique symposium is selected as most inclusive in its appreciation of America:

> In the last months I have heard Toscanini, Heifetz, Rachmaninoff, and Horowitz, and have seen a production of *Macbeth* that left as little to be desired as any production could; I have driven to Chicago and back, and seen something of the little towns that go to make the Mid West, without realizing that it was as if I had been from London to Warsaw in two days; I have acquired an old blue jalopy which rears at a traffic light; I have grown fat eating irradiated oats, polyvitamin chocolate bars, and aseptic hot dogs; I have almost essayed to jitterbug, but find the cut of English trousers rather a handicap; I have shouted at football games, but still can't fathom why; I have made many friends, both students and faculty, in my own and other universities; I have got engaged to be married. I like America.

PSYCHIATRY IN WARTIME

In a world as shaken and shocked as is ours, psychiatry must inevitably play an increasingly important part. Civilian populations, untrained to war, have suffered the full fury of enemy attack in many countries, and even in those countries as yet unbombed, anxiety

and insecurity add to the mental strain of living in a war-torn time.

In such a situation one would expect a large number of psychoneurotic casualties in the civilian population. Actually, so far, the contrary seems to be the rule. The most complete reports have come from England. In that country, normal, stable persons have continued to function without hysteria or panic. In cases where they have been exposed to some particularly terrifying incident, symptoms of shock have resulted, but recovery in the majority of cases has been rapid and complete. Children seem to have been more disturbed by evacuation and by the consequent separation from their parents than by bombing. Unstable elements of the population reacted as they would to any crisis — no more, no less. Most actual mental cases showed an abnormal lack of reaction. In general, over the whole population morale has remained high. The British people have been stimulated by the actual presence of danger as contrasted with the dread of unknown evil, and they have been fortified by the discovery that they could endure without flinching the worst the enemy could offer.

One must, however, accept these encouraging reports with a measure of caution. It is likely that the full bill of nervous strain and disease resulting from the war has not yet been rendered. Hidden strains and injuries, obscured in the excitement and activity of the present emergency, will doubtless be discovered when the emergency is ended. The real effects of the war years will not show until the present pressure is lightened.

The fact that so far the continental United States has been free from enemy attack does not mean that this country has no problem of mental health in wartime. We have all of us been shaken by events even if we have

escaped bombs; the tragedy of loss has already been brought to many American homes; all of us face new insecurities and deprivations; all of us are headed toward a future which we cannot foresee. A great part of our population will find direct employment in the war effort and will have the comfort of making a useful contribution to a common cause. Others, because of age, health, or some disqualifying factor, will find themselves temporarily less important and significant — unrelated in any practical way to a unifying social purpose. It is in this latter group that psychoneurotic problems may be expected to arise.

Civilian needs, of course, constitute only part of the demands which war makes upon psychiatry. There is the important problem of the mental health of the armed services. In this area, both here and abroad, psychiatry is making valuable contributions in the selection of adequate and stable personalities, in the preservation of morale, and in the therapy of psychoneurotic casualties.

Every service of total war — armed, industrial, or civilian — makes demands upon our knowledge of mental hygiene. It is to be hoped that these demands will accelerate the development of this still relatively backward department of medicine, just as the development of another department, surgery, was accelerated in the first World War.

In its work in the medical sciences the Foundation has for nearly a decade stressed the field of psychiatry. The word "psychiatry" as used in this connection is not employed in any narrow sense. It leads into physiology and psychology and embraces a wide range of disciplines. It is not a field where immediate results can be obtained, where scientific method is easily applied, or

where trained leadership is plentiful. But with all its difficulties, it is perhaps the most significant, as it is the most challenging, field in which modern medicine is engaged.

Over the last decade the Foundation has appropriated $11,500,000 for the development of psychiatry, both at home and abroad. In 1942 more than half of the money which it spent in the medical sciences was for this purpose. During the year a total of $495,410 was given to the further development of nine centers, located as follows: Yale University School of Medicine, Harvard Medical School, Medical School of the University of Tennessee, The Johns Hopkins University School of Medicine, Tulane University Medical School, University of Colorado Medical School, University of Edinburgh, Judge Baker Guidance Center of Boston, American Psychiatric Association.

COOPERATION WITH ICELAND

When American soldiers made their peaceful landing in Iceland in 1941 they returned a visit which an Icelander, Leif, called the Lucky, paid to the American continent in the year 1000. In the intervening centuries, Iceland's contacts with America have been infrequent. Her relationships have been largely with Great Britain and with Western Europe; her culture, of course, stems from Scandinavia. Remote from all other countries, in the middle of the Atlantic Ocean, Iceland is nevertheless a stepping-stone between the Old and the New Worlds. It is the largest island in Europe after Britain, with an area of 40,000 square miles, about the size of the State of Kentucky. Its traditions are distinctly democratic. Vilhjalmur Stefansson gave his recent book *Iceland* the subtitle: *The First American Republic.* In

1930 Iceland celebrated the 1000th anniversary of the continuous existence of its legislative assembly — the oldest parliament in the world.

The population of Iceland today is 120,000. Its people are homogeneous, sturdy, independent, self-reliant, law-abiding, and highly literate. The University of Iceland, with its departments of the arts, medicine, law, and theology, is an indigenous institution, admirably adapted to the needs of the country.

The relations of the The Rockefeller Foundation with Iceland began in 1927, when a survey was made of the Medical School at Reykjavik by Dr. Alan Gregg of the Foundation's staff. Subsequently, the Foundation assisted the school in the development of its trained personnel and scientific work. Thus a grant was made to Dr. Niels P. Dungal of the Department of Pathology to enable him to study at the Pasteur Institute in Paris a disease affecting sheep and to visit institutes of pathology and hygiene elsewhere on the Continent. Another grant facilitated the purchase of scientific apparatus for research in morbid anatomy and bacteriology. A fellowship was given to Dr. Larus Einarson for the study of anatomy and physiology in the United States from 1930 to 1932. The Foundation also made a grant in 1936 to Dr. H. Tomasson, toward the expenses of investigations in hereditary manic-depressive psychoses. With its complete and unbroken family records, running back in some cases for a thousand years, Iceland constitutes a unique area for studies in heredity.

In 1941 Dr. G. K. Strode of the staff of the International Health Division of the Foundation visited Iceland in connection with a Red Cross mission. His survey included not only public health, but medical education, veterinary medicine, and agriculture. It was

found that substantial progress had been made in medical education since 1927. An admirable new 150-bed hospital had been opened and its facilities are used in the teaching of clinical subjects. All of the fundamental branches of medicine are now adequately housed either in the Institute of Pathology or in the new University building. The equipment for student laboratory work, however, was found to be inadequate. Accordingly, in 1942, the Foundation appropriated $15,000 to the University of Iceland to fill this need. In addition the Foundation made a grant to the University to provide internships, during the year 1942-43, in the United States for four of the Medical School's graduates. Iceland has limited facilities for internship training, and Danish hospitals to which Icelandic students were formerly sent to complete their medical education are now shut off by the war.

It is hoped that the happy contacts which the Foundation established with this sturdy democracy fifteen years ago can be continued.

HITLER AND MATHEMATICS

In 1926 the International Education Board, founded by Mr. John D. Rockefeller, Jr., made an appropriation of $275,000 to the University of Göttingen in Germany to build and equip a Mathematical Institute. For many decades Göttingen had been an important mathematical center, but the first World War left it impoverished. The new funds in 1926 enabled it not only to add to its physical facilities for mathematical research but to strengthen its already brilliant faculty. In a few years Göttingen became the world's chief center for advanced study in mathematics and physics, and its students arrived in increasing numbers from many countries.

Then the Nazi regime took over Germany, and its effect on Göttingen was drastic and immediate. The Jews on the faculty were thrown out, and their colleagues, of Aryan stock, shocked by this intolerance and unable to live in the stifling intellectual atmosphere, resigned. By 1939 only one of the original faculty remained active at the Institute. Most of the others came to the United States.

In view of what has happened in the last few years it seems ironical that this German institution was brought to maturity by American funds. An even deeper irony lies in the fact that the blind fanaticism of the Nazis succeeded in driving to America some of the world's leading mathematicians. There appears to be a universal principle about intolerance: it reacts on those who practice it. Just as many countries were enriched by the Huguenot immigration that followed the revocation of the Edict of Nantes, so the United States and England have greatly profited by the scholarship driven out of central Europe through the self-defeating bigotry of Nazi ideology.

If Hitler had set out, with benevolent intent, to build up America as the world's great mathematical center, he could hardly have achieved more successfully the result which his ruthlessness has accomplished. During the last decade 131 leading European mathematicians have migrated to the United States. Of these, sixteen came from the faculty of Göttingen. The School of Advanced Study at Princeton, Brown University, New York University, Harvard, Chicago, the University of Wisconsin, the Massachusetts Institute of Technology are only a few of the American institutions which have profited by this migration.

Years ago an Oxford mathematician remarked that he

loved his subject because it had never been prostituted to any useful purpose. But he was wrong. There is no sector of mathematics, however theoretical, which does not contain the possibilities of ultimate use. The field of knowledge is like a jigsaw puzzle: we throw aside the single piece because it does not seem to fit, only to find later that it has an intimate bearing in the development of the whole picture. The men who came from Göttingen, many of them specialists in pure mathematics — as well as their associates from other continental institutions — are today making an extraordinary contribution to America's war effort. They are serving as teachers, research workers, and consultants in many important posts. As the pressure of war intensifies the military and naval demand for mathematics, and more and still more mathematics, the services of these highly trained brains become indispensable.

A few illustrations will perhaps suffice. Dr. Richard Courant was director of the Mathematical Institute at Göttingen when Hitler came to power. He immediately resigned, got out of the country, and is now head of the department of mathematics at New York University. Under Courant's leadership, New York University in 1941 instituted courses in applied mathematics which are proving of great value in training men to handle the highly complicated problems posed by aerodynamics, ballistics, elasticity, and other technological fields active in modern war. Dr. Courant's faculty includes two other refugees from Göttingen, Dr. Felix Bernstein, professor of biometrics, and Dr. Kurt O. Friedrichs, professor of mathematics.

An even larger center is the graduate school of applied mathematics which was opened at Brown University in 1941 with financial assistance from the United States Office of Education and the Carnegie Corporation of

New York. And here again Göttingen has made important contributions. Two of the permanent teaching staff are former Göttingen men: Willy Prager, professor of applied mathematics, was acting director of the Institute of Applied Mechanics at Göttingen and is an expert on theory of structures, theory of vibrations, and theory of plasticity; Willy Feller, associate professor of mathematics, is an expert on probability, statistics, and graphical and numerical methods in mathematics. To a layman these subjects may seem far removed from immediate purpose and practicality, but it is on applied mathematics that armies and navies and air forces lean in winning a war.

To assist Hitler in the development of America as a great mathematical center, The Rockefeller Foundation has made a number of grants over the last few years. Of these the more important are summarized in the following paragraphs:

1. Of the 131 mathematical scholars who were driven out of central Europe and came to the United States, twenty-eight were assisted by grants from the Foundation.

2. Over the last decade the Foundation, through the agency of the National Research Council, has appropriated $135,000 for fellowships in mathematics to American postgraduate students.

3. Twelve thousand dollars was given to the American Mathematical Society toward the expenses of establishing *The International Review Journal of Mathematics*. This journal took the place of the *Zentralblatt für Mathematik und Grenzgebiete* published in Germany and edited by Professor Otto Neugebauer. Professor Neugebauer, an émigré scholar, is the editor of the new periodical.

4. The sum of $49,500 was appropriated to Brown University for microfilming mathematical books, periodicals, and other materials for the use of scholars.

5. Fifteen thousand dollars was given to the National Research Council as a revolving fund for the publication of mathematical tables and aids to computation.

6. The sum of $30,000 was given to Brown University for fellow-

ships in applied mathematics for the summer session of 1942 and for the academic year 1942–43. Last summer, for the intensified summer program, Brown enrolled 110 students, of whom twenty-seven were on fellowships provided by the Foundation. The current enrollment, for the academic year, totals forty-four, of whom twenty-five are on Rockefeller Foundation fellowships.

7. Over recent years sums totaling $130,500 have been appropriated to the Massachusetts Institute of Technology for the construction and maintenance of a differential analyzer — a device for the mechanical solution of obscure differential equations which bears much the same relationship to scientific analysis that a computing machine does to arithmetical work. The new analyzer, which is capable of solving equations involving six variable quantities, is now employed constantly on war problems.

RESEARCH IN THE BIOLOGICAL SCIENCES

With dwindling opportunities for pure research both in this country and abroad, the Foundation has tried to keep alive those projects in the biological sciences which are of high merit and which will help to maintain a continuity of tradition between the past and the future. In Europe there still remain three countries where opportunities for modest support are open — England, Sweden, and Switzerland. In 1942, fourteen grants, totaling $60,410, were made for fundamental biological research in these countries — five to Sweden, to John Runnström, The Svedberg, Einar Hammarsten, Einar Stenhagen, and T. O. Caspersson; one to Switzerland, to Professor Ruzicka of Zurich; and the others to England, to such well-known scientists, among others, as Professors R. Robinson, H. A. Krebs, Lancelot Hogben, David Keilin, H. W. Florey, and Alan W. Greenwood.

In the United States, one grant was made in genetics — to Professor George W. Beadle at Stanford University; and two grants were made in physiology, one going to Princeton University and the other to the University of Minnesota.

Many of the appropriations in 1942 in this field of the biological sciences related to the application of chemistry to biological and medical problems, and grants totaling $204,600 were made to the University of Minnesota, the University of Wisconsin, Massachusetts Institute of Technology, Cornell, Columbia, the University of Toronto, Northwestern University, and the California Institute of Technology. The details of these appropriations appear under Natural Sciences.

In the opinion of the Foundation there is no question as to the necessity of keeping this type of work going. It is of vital importance that there should be no interregnum in the search for knowledge. Once the continuity is broken, with resources dissipated and scholars dispersed, the pattern will not easily be re-established. Pure research, the pursuit of truth for its own sake, could become a luxury, as it is in Europe today — forgotten in the chaos of war and perhaps subsequently lost in an age in which utilitarian values constituted the only standard of measurement.

THE RETURN FROM VIOLENCE

War is violence, and a nation at war has to think in terms of violence. Even the mildest among us finds satisfaction in the news that hundreds or thousands of Japanese or Germans have been killed. On all sides, we hear the counseling of those who urge the necessity of hate as a psychological prerequisite to victory.

But the insistent voice of reason tells us that violence and hate cannot serve as foundation stones with which to build a new world. Our consciences revolt against our present pattern of thinking; and we look forward to peace, not only because it means the cessation of violence, but because we assume that the end of physical conflict will more or less automatically induce a mood

in which hate and the hunger for vengeance will be dissipated.

If it were all as simple as this assumption would indicate, the future would seem less dark. The difficulty, of course, is that the mood of violence, resulting from war, tends to continue long after the actual fighting has stopped. It continues not only as a way of looking at old enemies but as a philosophy of life and conduct toward others, whether they be nations, races, groups, or individuals. The emotional environment of war is carried over into peace, and passion and force tend to become accepted as legitimate weapons in dealing with human problems. Hate is like a chronic disease which does not lend itself to a quick and easy cure; and violence, if too prolonged as an accepted technique, can become a deeply set mental habit.

If, after the victory of the Allied powers, a psychiatrist could be called upon to prescribe for this sick world, he would undoubtedly say that it is as necessary to "return from violence" on the mental front as it is to cease physical hostilities. The destructive war of the spirit must be stopped. There must be an armistice for hate. The world must slough off its mood of violence if it expects to have a rational, healthy future.

What is this mental attitude of violence? Spiritually it means emphasis upon antagonism rather than upon cooperation, and upon fear rather than faith. Intellectually it means that emotionalism takes the place of objectivity, and that propaganda is substituted for truth. In political and social life it means selfish partisanship instead of considerations of total interest, and the substitution of factional advantage for general welfare. In short, the mental attitude of violence means the fragmentation of society, in which the whole is

forgotten for its parts and the universal is lost in the partial.

These tendencies, always present in human life, are augmented by the complicated structure of modern society. The size and scale of modern life have outrun man's experience, his patience, and his capacity to understand. The complexity of the social and industrial order affords favorable opportunities for the concealment of injustice. Conscious of wrong, bewildered by facts as well as propaganda, men slip into some segment of the total circle — some loyalty, however fragmentary, which seems to them intelligible. With distorted perspective their own special advantages and their small fraction of society become not parts of the whole, but the whole itself. They confuse love of freedom with their particular interest in freedom. To them whatever is justice for their faction is justice for all.

When such a state of mind possesses a group, the employment of force as a means of gaining ends becomes a logical consequence. The "state of mind of violence" breeds a "state of violence"; and that which in Mary Follett's excellent phrase might have been "creative conflict" becomes social disintegration.

It is surely not too soon to discuss the problems of peace, which will prove even more difficult than the problems of war. Nor is it too soon to plan for the return from the mental attitude of violence and begin the formidable task which this about-face will involve. This is the task of the teachers, the philosophers, the clergy, the journalists, the statesmen, the poets, the novelists, the social scientists, and all who search for universal values and totality of vision. Upon these men and women must rest the burden after the war for our mental disarmament, and for seeing that the welfare of

mankind is not forgotten in the conflict of lesser loyalties.

SOCIAL SCIENCE AND PUBLIC HEALTH

Each year The Rockefeller Foundation makes grants to strengthen the work of scholars in the social sciences. Their work is primarily a search to discover and define the facts and values which will add to man's ability to see life honestly and see it whole.

Any foundation dedicated to the welfare of mankind cannot be content to limit its efforts to the physical side of man's being. It is estimated that a substantial proportion of all funds spent by American foundations goes into the field of medicine and public health. It is a field where results are observable and measurable. Because it deals with tangibles rather than intangibles, it brings justifiable satisfaction and a sense of achievement. But just to keep men free of disease is not enough. Public health, a laudable object of endeavor, is not the whole of life. The ancient Greeks created a civilization of intelligence and beauty without knowing anything about public health. Conversely, during the latter part of the nineteenth century and well into the twentieth, Germany's medical schools led the world; and at the outbreak of this present war she undoubtedly had the best public health service in continental Europe. Japan, too, has public health facilities that are far ahead of anything in eastern Asia. Obviously the goal of physical health is not sufficiently broad; something is missing from the equation.

One of the things that is missing is, of course, a knowledge of rational human relationships. What are the principles on which nations can live together in peace? What form of government most effectively enhances the

dignity and worth of the individual? How can the social adjustment of millions of human beings be arranged with less frustration and inequity? How can we shape human thinking so that it will more closely accord with the implications of Kant's great dictum: "When justice has gone it is no longer important that men should live on this earth"?

These are some of the questions to which answers must be found if "the glorious edifice of the future" is not to be just another patched and flimsy firetrap. Public health has great social usefulness and so has medical research, and no money spent in their development is wasted. But unless we can find successful solutions to some of the intricately complex and fast-growing problems of human relationship, we run the risk of having a world in which public health and medicine are of little significance.

A foundation, therefore, broadly concerned with human welfare, must support the effort to make knowledge available for social purposes, and to widen the area of basic understanding. In carrying out this general aim The Rockefeller Foundation in 1942 appropriated roughly $1,325,000. Twenty grants in all were made. Nine of these were to centers specializing in international relations; seven were for the continuance of basic research; four were for the study of domestic problems directly related to the war and its effects. Details of these appropriations appear in the section of this report on the social sciences.

THE LIBRARY OF CONGRESS

The Library of Congress is one of the great cultural assets of America. With its vast collections and staff of scholars it belongs in the same rank with similar institu-

tions in other countries, such as the British Museum, the Bibliothèque Nationale, and the Vatican Library. Indeed in some respects, particularly in the easy availability of its resources to the public, it has no equal. In the words of its present Librarian, Mr. Archibald MacLeish:

> It became a people's library not in the usual sense of that term, the sense familiar in the so-called public libraries, but in a very special and significant sense. As a consequence of the fact that the Congress extended to the people the use, not of the collections only, but of the services of scholarship which had been created to make the collections more usefully available to the Congress, the Library became a reference library to the people — a People's Library of Reference.

The principal support of the Library comes, of course, from public funds, and amounts to some three and a half million dollars a year for operation, with other funds available for special purposes. In addition the Library has been given some trust funds which yield an annual income of approximately four hundred and fifty thousand dollars. In terms of such relatively large resources, grants from an organization like the Foundation, totaling $303,170 over the last decade, hardly bulk large. But they illustrate one of the principal functions of a foundation and perhaps the main justification for its existence, i.e., the support of exploratory work or of demonstration in areas where, because techniques are untried and results are uncertain, public funds cannot readily be obtained to blaze the trail. Sometimes, too, emergencies develop which are of such critical importance to scholarship and the advance of knowledge that the time lag involved in securing public funds might seriously jeopardize an essential undertaking. Here again a foundation has a useful function to perform.

In his first annual report in 1941, Mr. MacLeish laid down as one of several canons for the selection of materials in the Library the following principle: "The Library of Congress should possess all books and other materials (whether in original or copy) which express and record the life and achievements of the people of the United States." Over the last decade the Foundation has made a number of appropriations which have contributed, under this heading, to the Library's institutional growth. Thus grants were given to aid the Library in completing its accumulation of source materials in American history by obtaining photographic copies of materials in libraries abroad. Another grant was for the purchase of equipment for the collection of American folklore, at a time when the Library was beginning its work in that field. Grants were also made toward the expenses of equipping and operating for an initial period a laboratory of microphotography, to enable the Library to make its material available to others in that efficient and economical form.

Until recently, there was no provision for including in the Library's holdings one important body of materials which expresses and records the life of the people, i.e., motion pictures. Their claim to inclusion was clear. Accordingly, in 1942, at the Librarian's request, the Foundation appropriated $25,000 toward developing methods of selecting, cataloguing, and making available for use films from among those deposited for copyright which were deemed worthy of preservation. Lacking its own facilities for this work as yet, the Library has delegated it for the present to the Film Library of the Museum of Modern Art in New York; but Mr. MacLeish hopes that within a short period, the work may become a part of the Library's regular operation.

Another canon laid down by Mr. MacLeish in 1941 was as follows: "The Library of Congress should possess, in some useful form, the material parts of the records of other societies, past and present, and should accumulate, in original or in copy, full and representative collections of the written records of those societies and peoples whose experience is of most immediate concern to the people of the United States." A typical grant made by the Foundation which illustrates this canon was for the development of a center of training on the Far East in the Library's Division of Orientalia. Another grant was toward the salaries of refugee scholars to serve as consultants on special classes of materials, with a view to appraising and extending the Library's present holdings. Still another was to enable the Library to assist Latin American libraries in training personnel and in organizing collections.

Current in 1942 was an appropriation toward the development of a catalogue and the organization of bibliographical services for the Hispanic materials in the Library. Its Hispanic Foundation was officially opened as a division of the Library on July 1, 1939, with income from endowment and a government appropriation. The first requirement was to bring together in this division the large mass of Hispanic material scattered through the Library. But funds were needed for cataloguing it and for making it properly available for use. The grant of The Rockefeller Foundation over three years ending with 1942 provided for a cataloguer, for other essential assistance, and for the preparation of bibliographies to indicate what materials were available in the United States and elsewhere for use in these collections.

During 1942, also, the Foundation made a final grant

to the Library toward a study of communication trends in wartime, under the direction of Dr. Harold D. Lasswell, bringing its contributions for this purpose to a total of $81,800 over a three-year period. Though the specified purpose of this grant was to develop methods of analyzing and charting trends of communication in the world press, the study was not without effect on the Library itself. In the first place, it resulted in putting into more useful form, through better organization, materials in the Library which in terms of this study proved to be "of most immediate concern to the people of the United States." Furthermore, it drew attention to the lack of other materials of similar concern and led to their acquisition. Clearly work of this kind in the Library has the effect of developing its service as "a People's Library of Reference."

It is a satisfaction to record that virtually all the projects in the Library which were initially developed with Foundation assistance have now been absorbed, or are in process of absorption, into the Library's regular operations. The Foundation is proud to have this modest relationship with an institution which means so much to American scholarship.

PROGRESS IN THE HUMANITIES

Foreign scholars in the humanities, as well as scholars here at home, occasionally show some impatience with what they think is the overemphasis of American students on the tools of research. In our preoccupation with the gadgets of indexes and dictionaries and good library methods, we have little time for the task of interpretation and valuation which is the basic function of humanism. In our interest in the technology we miss the content.

This criticism is not completely fair. The development of adequate tools and methods is important. Without them scholarship would be thwarted and handicapped. Nevertheless there is perhaps enough truth in the criticism to suggest the necessity of a better perspective. Humanistic study in America needs imagination, creativeness, and a clear objective more than it needs microfilming machines and photostat copies.

Another criticism, of probably greater validity, has to do with our preoccupation with factual research — new fields of facts to conquer, new puzzles for scholarship to unravel, new opportunities to correct a text or discover a parallel. Henry Seidel Canby in a recent address before the Modern Language Association expressed this criticism in these words:

> Unconsciously, he [the American scholar] has left the difficult and doubtful ranges of interpretation, of appreciation, of valuation, all involving the never-to-be-entirely-calculable human spirit, and has thrown the emphasis more and more on fact-finding, on the material background of human experience, upon the search for the last detail of accurate knowledge, as if, when that were found, his job was done. He has become more accurate and more knowledgeable than his predecessors, and this is good, but somehow, somewhere, the precious and nourishing liquid of literature has been spilled from the ever more carefully moulded goblet, or frozen there. . . . I submit that this generation of young people has reason to say to the American scholar, I asked for bread, and you gave me a stone.

While Mr. Canby's comments were directed largely to literature, they are undoubtedly applicable to other disciplines.

The Rockefeller Foundation for nearly fifteen years has supported ventures of various types in the humanities. As one reviews the record, one must truthfully admit that some of the ventures have fallen within the

target at which the two criticisms above noted are aimed. Support has been given to libraries and museums and to such techniques as microfilms and catalogues — and the Foundation is not inclined to apologize for it. Where is the line that can be sharply drawn between technology and content? Support has been given to books, too, and who can say that books are gadgets — merely a part of the mechanical equipment?

Assistance also has been given by the Foundation to scholars, in the form of postdoctoral fellowships and grants in aid extended directly by the Foundation or through the medium of the American Council of Learned Societies, and many thousands of dollars have been spent for this purpose. The scholars who have had this support have worked in literature and philology, oriental studies, history, archeology, philosophy, art, architecture, and a dozen other subjects. Probably some of their work has been profitless — a piling of fact upon fact, which has had no relation to the values and aspirations our students have bitterly needed. But who can tell in advance the scholar from the pedant? Or who can determine the kind of intellectual and cultural soil out of which creativeness, imagination, and great teaching will spring? Meanwhile it is a pleasure to record that of the scores of scholars who have received support from the Foundation, not a few have become the interpreters of their generation, bringing to life in contemporary language what is relevant in the stream of human values.

Support, too, has been given by the Foundation to colleges and universities to improve the quality of instruction, to give younger and abler men a part in planning it, and to make more vivid and alive the materials for imaginative teaching. In 1942 three appropria-

tions were made that would fall within these general outlines: one to Stanford University, one to the University of Missouri, and one to Cornell. Perhaps over the years there has not been as much of this type of assistance as there should have been, but the funds of the Foundation which can be devoted to this purpose are necessarily limited. And it must be frankly admitted that opportunities for support which give promise of rewarding returns are also limited.

Of course, with the war absorbing the energies and attention of our universities, the humanities seem to have been relegated to the background. But there is hope that when peace comes they will emerge from their present position, toughened by adversity and better equipped to meet new demands. Indeed, there are already some signs of progress in this direction. The call to national service has shown the humanists that they belong to contemporary life. It was the humanists who were summoned when the need arose for men with a command of languages and a knowledge of tradition in those parts of the world that were strange to us. Not only has the study of languages been intensified — many of them not previously included in the curriculum of our colleges — but there is a new interest in developing through education a better understanding of other civilizations. Most important of all, adversity is leading humanists to reappraise what the humanities can continuously contribute to national life and to liberal education.

At worst, the humanities are in abeyance; at best, they are beginning a new and promising development.

THE RURAL PROGRAM IN CHINA

The program of the Foundation in China in agricultural research and rural reconstruction has completed its seventh year. There have been some inevitable casualties among the projects, but the program as a whole continued with fair success during 1942 in spite of increasing difficulties.

All work of American agencies in China is now threatened by the disastrous effects of wartime inflation. Since 1937 the cost of living has risen sixty to seventy times, and the situation is deteriorating rapidly. The American dollar is tied to Chinese currency at a fixed rate, and it is obvious that the time is swiftly approaching when American money will have little purchasing power inside China. Under these circumstances it is difficult to see how any work in China financed by American funds can be long continued. Various plans have been suggested for meeting the emergency, but at the moment the future is admittedly dark.

In 1942 the Foundation appropriated $72,000 for the China Program. Of this total, $33,500 was for fellowships and $18,000 for grants in aid. The balance was used to support the Mass Education Movement and the Nankai University Institute of Economics, both at Chungking, and the Department of Agricultural Economics of the University of Nanking, now in Chengtu.

When peace comes again to China, it is hoped that this modest rural program may make some contribution to the development of Chinese agriculture, which constitutes the essential base of any national reconstruction of the nation.

FELLOWSHIPS

The war has not only reduced but radically changed the Foundation's fellowship program. In 1938 the Foundation supported 592 fellowships; in 1942 the total had fallen to 374. In 1938, 30 per cent of those holding fellowships were Europeans and 7 per cent were Latin Americans; in 1942, 3 per cent were Europeans and 28 per cent Latin Americans. Of the Europeans, incidentally, only one — a Swiss — was actually appointed in 1942.

The 374 fellows supported by the Foundation during 1942 were citizens of 29 different countries. One hundred and eighty studied in countries other than their own. Of the 374 fellowships, 255 were awarded directly by the Foundation. The fields represented by these 255 fellowships were as follows: public health, 110; public health nursing, 25; medical sciences, 42; natural sciences, 15; social sciences, 15; humanities, 39; and the program in China, 9 (not including local fellowships for study in China).

Of the 119 fellowships awarded by other agencies with funds supplied by the Foundation, the National Research Council was responsible for 59; the Social Science Research Council for 37; the American School for Classical Studies in Greece for 2; the Authors' League of America for 3; and the National Theatre Conference for 18. In addition to these 119 fellowships, the American Council of Learned Societies assisted 32 individuals through grant in aid funds supplied by the Foundation.

During 1942 the Foundation spent a total of $585,897 on its fellowship program.

APPLICATIONS DECLINED DURING 1942

During 1942 the Foundation was obliged to decline a total of 1,121 applications for financial aid, less than half the number declined in 1941. Some of these applications represented projects of interest to the Foundation but were declined because other opportunities seemed more promising. The great majority, however, were declined because they fell outside the areas of work in which the Foundation is attempting to be of service.

The Foundation does not make gifts or loans to individuals, or finance patents or altruistic movements involving private profit, or contribute to the building or maintenance of churches, hospitals, or other local organizations, or support campaigns to influence public opinion on any social or political questions, no matter how important or disinterested these questions may be.

The applications declined during 1942 may be classified under the following headings: conferences and meetings, 6; continued aid to projects, 16; cures, remedies, investigations of theories and inventions, 70; development of educational and cultural institutions and projects, 333; European refugees, 189; fellowships, travel and training grants, 229; local institutions (including hospitals, theatres, libraries, museums, churches, etc.), 40; personal and medical aid, 26; public health projects, 15; publication projects, 82; research projects, 108; miscellaneous, 7.

REPORT OF THE SECRETARY

SECRETARY'S REPORT

THE members and trustees of The Rockefeller Foundation during the year 1942 were:

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The officers of the Foundation were:

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Edward Robinson	*Treasurer*
George J. Beal	*Comptroller*
Thomas M. Debevoise	*Counsel*
Chauncey Belknap	*Associate Counsel*
Vanderbilt Webb	*Associate Counsel*

The following were members of the executive committee during the year:

The President, *Chairman*

Chester I. Barnard	William I. Myers
John Foster Dulles	John D. Rockefeller, 3rd
Herbert S. Gasser, M.D.	Walter W. Stewart

The following served as scientific directors of the International Health Division of the Foundation during 1942:

Charles H. Best, M.D.	Thomas Parran, M.D.
Ernest W. Goodpasture, M.D.	Lowell J. Reed
Kenneth F. Maxcy, M.D.	Thomas M. Rivers, M.D.

The Director of the Division

MEETINGS

Regular meetings of The Rockefeller Foundation were held on April 1 and December 2, 1942. Six meetings of the executive committee were held during the year to take actions within general policies approved by the trustees.

FINANCIAL STATEMENT

A summary of the Appropriations Account of the Foundation for the year 1942 and a statement of its Principal Fund follow.

Summary of Appropriations Account

Funds Available		Funds Appropriated	
Balance from 1941 . . .	$ 2,117,908	Appropriations	
Income for 1942	8,271,037	Public Health	$ 2,700,000
Unexpended balances of appropriations allowed to lapse and refunds on prior year grants	916,848	Medical Sciences . .	1,433,710
		Natural Sciences . .	814,895
		Social Sciences	1,325,575
		Humanities	982,350
		Program in China .	122,000
		Miscellaneous	79,234
		Administration	
		Scientific Divisions	551,723
		General	242,858
			$ 8,252,345
		Less appropriation for which funds were previously authorized	75,000
			$ 8,177,345
		Authorization for later appropriation by the executive committee	50,522
			$ 8,227,867
		Balance available for appropriation in 1943	3,077,926
	$11,305,793		$11,305,793

Principal Fund

Book value, December 31, 1941	$144,970,630
Add	
Contingent project canceled in accordance with trustees' action at meeting of December 2, 1942	1,200,000
	$146,170,630
Less	
Amount by which the proceeds of securities sold, redeemed, or exchanged during the year failed to equal the ledger value	279,541
Book value, December 31, 1942	$145,891,089

INTERNATIONAL HEALTH DIVISION

INTERNATIONAL HEALTH DIVISION

Scientific Directors

Charles H. Best, M.D.
Ernest W. Goodpasture, M.D.
Kenneth F. Maxcy, M.D.
Thomas Parran, M.D.
Lowell J. Reed
Thomas M. Rivers, M.D.
Wilbur A. Sawyer, M.D.

Staff During 1942

Director

Wilbur A. Sawyer, M.D.

Associate Directors

John A. Ferrell, M.D.
George K. Strode, M.D.

Assistant Directors

Lewis W. Hackett, M.D.
Andrew J. Warren, M.D

Staff

Charles R. Anderson, M.D.
Marshall C. Balfour, M.D.
Marston Bates
Johannes H. Bauer, M.D.
George Bevier, M.D.
Mark F. Boyd, M.D.
Elizabeth W. Brackett
John C. Bugher, M.D.
Henry P. Carr, M.D.
Joseph C. Carter
Ortis R. Causey
Harold D. Chope, M.D.
Porter J. Crawford, M.D.
William A. Davis[1]
Wilbur G. Downs, M.D.
Brian R. Dyer
Monroe D. Eaton, M.D.
John E. Elmendorf, Jr., M.D.

[1] Appointment effective May 15, 1942.

John P. Fox, M.D.
William F. Friedewald, M.D.[1]
Kenneth Goodner
John B. Grant, M.D.
Richard G. Hahn, M.D.
Rolla B. Hill, M.D.
George K. Hirst, M.D.
Thomas P. Hughes
John L. Hydrick, M.D.
Henry R. Jacobs, M.D.[2]
William P. Jacocks, M.D.
John H. Janney, M.D.
Harald N. Johnson, M.D.
John F. Kendrick, M.D.
J. Austin Kerr, M.D.
Stuart F. Kitchen, M.D.
Frederick W. Knipe
Henry W. Kumm, M.D.
Charles N. Leach, M.D.
Edwin H. Lennette, M.D.
William A. McIntosh, M.D.
Estus H. Magoon
Alexander F. Mahaffy, M.D.
John Maier, M.D.
D. F. Milam, M.D.
Hugo Muench, M.D.
J. Harland Paul, M.D.
George C. Payne, M.D.
Edward G. Pickels
Persis Putnam
Elsmere R. Rickard, M.D.
William D. Robinson, M.D.
Paul F. Russell, M.D.
Francis F. Schwentker, M.D.
Raymond C. Shannon
Hugh H. Smith, M.D.
Kenneth C. Smithburn, M.D.
John C. Snyder, M.D.
Fred L. Soper, M.D.
Winfield C. Sweet, M.D.[3]
Richard M. Taylor, M.D.
Ruth G. Taylor[4]
Mary Elizabeth Tennant
Max Theiler, M.D.
John M. Weir, M.D.
Clifford W. Wells, M.D.
Charles M. Wheeler[5]
Loring Whitman, M.D.
D. Bruce Wilson, M.D.
Daniel E. Wright
Clark H. Yeager, M.D.[6]

[1] Appointment effective July 1, 1942.
[2] Resignation effective March 31, 1942.
[3] Died May 20, 1942.
[4] Resignation effective April 30, 1942.
[5] Appointment effective February 15, 1942.
[6] Resignation effective September 30, 1942.

INTERNATIONAL HEALTH DIVISION

INTERNATIONAL HEALTH DIVISION

INTRODUCTION

DURING 1942 the activities of the International Health Division have been increasingly pointed toward assistance in the health phases of the war effort. Without abating its interest in the production of yellow fever vaccine for immunization of the armed forces of the United States and Great Britain, the International Health Division has increased its attention to nutrition, continued its search for a more effective influenza vaccine, intensified its studies of typhus fever and its vector, the louse, cooperated in the control of syphilis near military camps, and taken steps to extend its yellow fever work in Africa to the west coast.

The International Health Division carried on activities in twenty-nine different countries during the year 1942, with the geographical emphasis shifting, as might be expected, to the southern half of the American continent. Over half of the countries now aided are in Central America, the West Indies, and South America. In addition, aid was given to the United States, Canada, five countries in Europe, three in Africa, and three in Asia. Yellow fever vaccine shipped from the Division's Laboratories in New York was distributed by the Yellow Fever Research Institute at Entebbe, Uganda, to five African governments not otherwise aided and to Palestine; and a representative of the Division made a health survey in Iceland.

Approximately one-third of the staff members of the International Health Division are now giving part or all

of their time to war work. One has resigned to become a member of the Royal Canadian Army Medical Corps; eight of the staff have been granted leaves of absence to enable them to enroll with the military forces or to devote their full time as experts with various other government services connected with the war effort; thirteen others are consultants to or members of special commissions or committees; and one who was interned when the Japanese took Manila was reported to be directing the hospital and taking an active part in the health work in the internment camp on the campus of the University of Santo Tomás in Manila.

Much or practically all of the work of the International Health Division, in regions stretching from Manitoba to India, is now directly or indirectly affected by the war effort. Even minor activities have a war background. For example, since the principal industries in Manitoba have grown to include mining, manufacturing of explosives, and assembling of airplanes, the Health Department, with Foundation aid, has recently established a new Division of Industrial Hygiene. The University of Toronto School of Nursing, in coping with an increased number of special and refresher courses connected with war nursing, has received aid for additional personnel. In Florida, the State Bureau of Malaria Control, cooperating with military authorities in instituting malaria sanitation in areas where troops are concentrated, and in training military personnel in malaria work, is receiving Foundation aid. In India, the development of an effective spray and spraying devices by Foundation staff members for use by the armed forces in defending themselves against the malaria mosquito has made sanitation more effective.

While continuing its work in the three major fields of

disease prevention, aid to health services, and support to public health education, the Foundation in 1942 carried out a large part of its new work related to the war through The Rockefeller Foundation Health Commission. The activities of this Commission continue to be many-sided.

THE ROCKEFELLER FOUNDATION HEALTH COMMISSION

The activity of the Foundation devoted directly and specifically to war needs in the health field is The Rockefeller Foundation Health Commission. This Commission was set up in 1940 before the entrance of the United States into the war, chiefly to be of help in connection with problems arising from the refugee situation, disorganization of sanitary services, post-war epidemics, and nutritional deficiencies.

The problem of nutrition is one of special interest in time of war, with food supplies disrupted and food consumption reduced. One of the earliest activities of the Commission was the investigation of nutrition in France and in Spain. Later the Commission cooperated in nutrition studies in England. During the past year an official representative of the International Health Division and the Commission has acted in England as liaison officer with the Ministry of Health. One medical nutritionist was assigned for service in the British Isles in 1941 with headquarters at Oxford and another went to England in the spring of 1942 as a special consultant in nutritional diseases with headquarters in London.

At Oxford University a permanent Department of Human Nutrition has been established and it serves as a center for three types of surveys in which the Health

Commission is cooperating. One type aims to test and develop all reasonable methods of investigating the state of human nutrition, and to train people in the use of the methods for assessing economic, dietetic, clinical, and biochemical factors. This type of survey is applied to a random sample of the population of certain districts of Oxford. A second, more rapid type is used among particular groups in industries and institutions. In a third type of study, more detailed than the second and more rapid than the first, a team of clinician, dietitian, and technical assistant spends approximately six weeks in collaboration with local health officers in studying some fifty to 100 families. Three such surveys have been carried out in representative areas of Great Britain. These investigations have not been completed but so far they have failed to reveal any serious deficiency of nutrition.

The nutrition work in Marseille, begun under the auspices of the Commission, continued during 1942 under French direction at the Section of Nutrition of the regional Institute of Hygiene. The Section has been working under difficulties but is making a genuine attempt to continue the gathering of scientific data.

Nutrition studies in Spain were turned over to the Institute of Medical Research in Madrid when the two members of the Health Commission left in August 1941, and have been continued with the support of the National Department of Health. A second survey of the families of the industrial suburb of Madrid, Puente de Vallecas, showed that an improvement of diet was reflected in both the clinical and laboratory findings, but it appeared that this improvement was chiefly among adults, and not among children.

In the winter of 1941–1942 study groups in England

were vaccinated against influenza with vaccine on hand from the material supplied by the Commission during the previous winter, but as there was no evidence of influenza A or B in England during the winter, no indication of the value of the vaccine could be obtained.

Acting as intermediary, the Commission was able to assist in securing typhus vaccine and supplies for typhus studies from the United States. The Commission collaborated in an exchange of insect repellents between England and the United States so that those developed in one country could be tested in the other. Some repellents received from London were sent to entomologists on the International Health Division's field staff for testing in the American tropics.

Following typhus studies in Spain by two members of the Health Commission staff, an informal plan was worked out for the collaboration of the Health Commission and the American Red Cross with the Spanish Government for investigations and control work in typhus. Before agreements with the Spanish representatives could be made the United States entered the war and the project was abandoned. However, the Health Commission in 1942 was able to send vaccine which was donated to the National Department of Health.

In September 1941, a representative of the Foundation, Dr. George K. Strode, went to Russia as a member of the American Red Cross Mission, and during his visit was able to arrange to have the Cox vaccine against typhus included in a comparative field trial of anti-typhus inoculations to be carried out by Professor A. A. Smorodintseff of the All-Union Institute of Experimental Medicine. The provision of medical and hospital supplies was the field of the American Red Cross, but the Health Commission sent anti-typhus vaccine, quan-

tities of various insecticides, sulfa drugs, strains of viruses for research, and recent publications on encephalitis, typhus fever, and influenza to Russia.

The same staff member, as a representative of the Health Commission, also visited Iceland early in 1942 with an American Red Cross group to make a survey of public health. As a result of the information which was gathered on Iceland's needs, the Foundation gave aid to medical education in Iceland (see page 130), and recommendations concerning other types of aid were referred to other institutions. Informal contacts were established between Iceland and persons and organizations in this country, and various types of information and literature have been supplied.

Late in the year, Dr. Strode was temporarily made available to the American Red Cross by the Commission and went to North Africa to take part in the health features of a survey there.

To assist the Institute for Medical Research of South Africa in preparing for the manufacture of yellow fever vaccine, the Commission built equipment in the New York Laboratories and supplied other material not readily available in England or South Africa. A member of the staff of the Institute came to the United States as guest of the Commission to study the manufacturing technique in the New York Laboratories. He also studied the latest developments in the preparation of typhus vaccine in this country.

The Rockefeller Foundation Health Commission made available a sanitary engineer and, intermittently, the services of a health consultant, to the Medical Commission to the Burma-Yunnan Railroad, organized by the United States Public Health Service. Sanitation and general cleaning of the labor camps was well under

way, and medical services and communicable disease control had been organized by the Railway when, on April 24, orders were given to evacuate headquarters at Lashio. The Medical Commission to the Burma-Yunnan Railroad, including the Foundation's sanitary engineer, was transferred to India. The Rockefeller Foundation Health Commission purchased and shipped certain supplies for a blood bank established at the All-India Institute of Hygiene and Public Health in Calcutta, and made it possible for an Indian doctor to come to the United States to study the manufacture of yellow fever vaccine and the preparation of typhus vaccine.

In the United States the Health Commission has rendered a variety of services related to the war effort in cooperation with various government agencies. As assistance to the Board for the Investigation and Control of Influenza and Other Epidemic Diseases in the Army, a member of the Health Commission and technicians were made available for a study of streptococcic infections in Army camps. A grant was made to the Board toward the expenses of a study of acute respiratory diseases in the Army, and the responsibility for the administration of the expenses of the Board's Commission on Tropical Diseases was assumed by the Health Commission. The Commission also made a grant toward the expenses of a study of infectious diseases in training stations of the Navy. Another activity of the Health Commission has been collaboration with the Bureau of Entomology of the Department of Agriculture in testing in the field the efficacy of certain new materials in destroying the body louse, with the cooperation of artificially infested subjects in a conscientious objectors' camp.

DISEASE CONTROL

Yellow Fever

With the war creating conditions which increase the threat of epidemics, and with airplanes and new roads bringing the jungle in many South American countries closer to the coastal towns and cities, anti-yellow fever measures have increased in importance. The Rockefeller Foundation is still engaged in yellow fever studies and control in both South America and Africa. In Brazil and Colombia, vaccination and the mode of transmission of jungle yellow fever are the chief objects of study. In Peru and British Guiana, the Foundation is cooperating with the local governments to control or, if possible, eliminate *Aedes aegypti* mosquitoes along the coast. The purpose is to prevent the spread of yellow fever by aegypti in case the virus should be brought to the coast from the jungle country. In the remote jungle regions of Panama, Nicaragua, El Salvador, Guatemala, Mexico, and British Honduras, surveys were made of yellow fever immunity by subjecting blood specimens taken from the natives to the mouse protection test at the Bogotá laboratory. These surveys indicated that yellow fever virus was not present in any of these countries with the possible exception of eastern Panama where a vaccination program was put into effect in July 1942.

The yellow fever laboratory at Rio de Janeiro, Brazil, which the Foundation is aiding, continues to manufacture yellow fever vaccine and to carry on experimental field studies of vaccination, as well as the routine examination of liver specimens for lesions of yellow fever. The 17D strain of yellow fever virus without the addition of human serum is now used for all human vaccination.

The duration of immunity after vaccination and the degree of immunity required for protection are under investigation. Efforts are being made to improve the mouse protection test and to develop an *in vitro* test for the study of yellow fever immunity.

During the last few years fourteen families and forty species of wild mammals of Brazil have been surveyed for their susceptibility to the virus of yellow fever. Six hundred sixty-five individual animals were studied, many of which have been classified as to degree of susceptibility. All monkeys, the true marmosets and tamarins, and the nine-banded armadillo are susceptible in varying degree. Birds have also been studied, but no adult bird has shown susceptibility to yellow fever virus. As baby chicks are highly susceptible to neurotropic virus up to the ninth day of age, a study of the fledglings of various species was under way.

The Government of Colombia at Bogotá with Foundation assistance is continuing the study and control of yellow fever in Colombia, and a representative of the International Health Division acts as director of the Section in charge of this work. Field studies recently extended to new regions of the country are producing increased knowledge of the mechanism of transmission of jungle yellow fever. Some two hundred viscerotomy posts where liver sections are gathered and sent to the central laboratory at Bogotá are maintained. It is believed that in some regions where the population has been extensively immunized through vaccination, the jungle yellow fever may exist even though no evidence of it is given by the viscerotomy service.

The yellow fever laboratory at Bogotá supplies vaccine, not only for all the needs of the Government of Colombia, both military and civilian, but also for the

work in Peru, Panama, and other countries of Central America and the British West Indies. The amount of vaccine produced at the Bogotá laboratory during the first half of the year 1942 was greater than in any previous period. The yellow fever service of Bogotá also operates a laboratory as a center for field work in Villavicencio, a town of about 5,000 inhabitants, on the east side of the mountains at the head of the Orinoco River system where yellow fever exists without the presence of *Aedes aegypti*. Studies during 1942 were directed chiefly to mosquitoes of the region and to infection experiments with opossums and other marsupials.

The Yellow Fever Research Institute in Africa, supported by the Government of Uganda and the International Health Division, was established for the study of the epidemiology of yellow fever in what is believed to be the continent where this disease originated. The Institute through its yellow fever work is making a contribution to the war effort. A survey in Italian Somaliland and Eritrea disclosed a high prevalence of *Aedes aegypti* in certain towns and ports. As a result of this discovery preparations were made for mosquito control measures and mass vaccination of the population of two areas in Eritrea.

A discovery by the Institute's viscerotomy service of one case of yellow fever in Kitale in Kenya occasioned an investigation of this area. Although no mosquitoes were found in the native village where the case occurred, adult mosquitoes were numerous in wooded ravines in the neighborhood, and the presence of jungle yellow fever was suspected.

After the mouse protection test had verified its usefulness by leading to the final isolation of the virus of

Photograph Excised Here

Auxiliary ketch used for yellow fever studies in the Chocó region, Colombia.

Photograph Excised Here

Yellow Fever Service, Chiclayo, Peru. Inspector examining valve sump.

yellow fever in Bwamba County, Uganda, in 1941, control work was undertaken in this area. A special field unit under an entomologist with a medical degree was organized and an intensive study of the mosquitoes of the region was begun in March 1942. On June 16 a lot of 395 female *Aedes simpsoni* mosquitoes caught in Bwamba County was received at the laboratory and examination confirmed the presence of yellow fever virus. As the entire human population of the section from which the mosquitoes came had been vaccinated in August 1941, after the discovery of a case of yellow fever, it would appear that some host other than man must be harboring the virus, and that jungle yellow fever is probably present. Preliminary tests showed that *A. simpsoni* bites man most readily and that next to man he prefers birds, goats, and baboons.

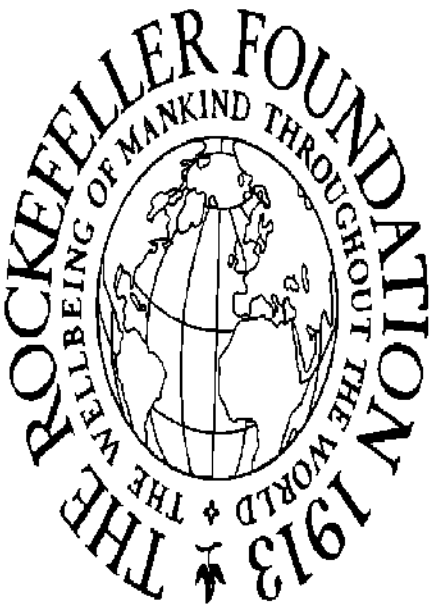
A study of animals which may be harboring the virus has been begun. It has been very difficult so far to obtain monkeys and lemurs, but the trapping of rodents has been fairly successful and has yielded over two hundred animals, many of which have not yet been identified by other than the names given to them by the natives.

The Institute has continued to give financial aid to the yellow fever section of the government laboratory at Stanleyville, in the Belgian Congo, and has provided certain supplies and pieces of equipment not obtainable elsewhere, which has enabled this laboratory to expand the viscerotomy service and extend surveys of immunity by means of the mouse protection test.

The services of the director of the Yellow Fever Institute, a member of the International Health Division staff, were requested as consultant on a number of occasions in 1942. He attended a meeting of the Yellow

Photograph Excised Here

University of São Paulo Medical School to which the new School of Nursing will be annexed.



Photograph Excised Here

Mosquito spray guns used in malaria work in India.

Photograph Excised Here

On guard against reappearance of gambiae mosquitoes in Brazil.

Fever Committee of India at New Delhi in June, and the Governors' Conference in West Africa in July.

The International Health Division Laboratories in New York have been engaged for the past year or two in manufacturing yellow fever vaccine on a large scale. Through April 1942, more than eight million doses of yellow fever vaccine were manufactured and distributed. Then, with the occurrence of jaundice among persons vaccinated with certain lots, vaccine manufacture was discontinued to permit an investigation of the cause. The evidence suggested that an icterogenic agent had been introduced into the vaccine with normal human serum. When manufacture was resumed, a different technique was used, and vaccine is now made without the addition of normal human serum. By the end of the year over four million doses of the new type of vaccine were distributed.

Influenza and Other Respiratory Diseases

Work on influenza at the New York Laboratories has been greatly speeded up by the use of the new agglutination inhibition technique discovered in 1941. With this laboratory method of measuring influenza antibodies, it is now possible to finish in one day a test of large numbers of serum samples which formerly would have taken several weeks.

Considerable time was given during the year 1942 to the further development and refinement of this test, which is based on the ability of the influenza virus as grown in the chick embryo or other living substance to agglutinate red blood cells, and the capacity of immune serum to inhibit this phenomenon. If, in a given sample of serum, the red blood cells are agglutinated in the presence of the chick embryo influenza virus, the serum

is not immune, but if agglutination does not take place, the serum must contain immune bodies which prevent this action. To increase the sensitiveness of the test, the use of a photoelectric cell has been developed to measure agglutination. In case of another epidemic of influenza, much more thorough and rapid laboratory work can be done, and it is hoped that more information about the epidemiology of the disease may be gleaned.

The agglutination reaction also opens up a new avenue for the study of the behavior of the virus itself. It is possible, also, that this peculiar reaction between virus and red cells may be applicable to other viruses.

To continue studies of the still unsatisfactory vaccination problem large amounts of vaccine were manufactured for use during the autumn of 1942 among institutional populations along the eastern seaboard, and a smaller amount was used on the Pacific Coast. In case influenza occurred among these vaccinated groups, it was planned to send one or more staff members to the scene to study the epidemic at first hand. However, no influenza of either A or B types was reported and identified in continental United States during the winter of 1942–1943.

The extensive studies on the epidemiology of influenza that have been carried out in Yorktown Heights, Westchester County, New York State, since 1937 have now been completed and the results published. One of the facts established is that normal human beings differ so widely as regards the quantity of neutralizing antibodies against influenza A virus in their sera that it is impossible to state any critical antibody level which, if exceeded, would have diagnostic significance.

Besides the research which the International Health Division carried on in its own laboratories, it gave

financial aid in 1942 to research on respiratory diseases in four university departments, and continued its cooperation with the laboratories for research in respiratory diseases of the health departments of the States of California and Minnesota. In the laboratory at Berkeley, California, the International Health Division shares in the budget and contributes the full time services of a staff member as director. Much of the time of this laboratory during the early part of the year was given over to investigations of the etiology of jaundice in the Army. Influenza studies have covered vaccination and immunity, including the specificity of the antibody response of human beings to different strains of influenza virus. Studies were made of the origin of virus pneumonia and of certain problems in human pneumonitis.

At the laboratory in St. Paul, Minnesota, which was established to make epidemiological, laboratory, and clinical investigations of influenza in the north central states, work has continued, with some difficulty because of loss of staff. Cases of both influenza A and influenza B have been demonstrated. Virus studies have continued, and tests have been made of various techniques for determining the level of immune bodies in serum.

Continuing studies at the University of Michigan were aided during 1942. A study of the distribution of A and B influenza antibodies in the serum of the general population at different ages has given a picture of the past history of the two diseases. Other subjects under investigation are intranasal and subcutaneous vaccination and the inactivating power of nasal secretion.

Research on respiratory infections at Columbia University in New York, which has been assisted by the Foundation for more than ten years, was formerly concerned only with the common cold. In 1941 the

scope of the work was broadened to include the study of any of the respiratory diseases. At present, effort is concentrated chiefly on the significance of *Hemophilus influenzae*, a parasitic genus of Bacteriaceae which usually accompanies influenza. The laboratory is examining a large number of strains of influenza bacilli isolated both from normal individuals and from patients suffering from acute respiratory infections.

Assistance to influenza studies at Ohio State University was begun as of January 1, 1942. Here the studies are concerned with the effect of mixed infections (influenza virus with secondary invaders) on mice, and the effect of nutritional deficiency states on susceptibility in mice and monkeys.

In the virus section of the Institute of Bacteriology in Buenos Aires, research in influenza was conducted under the direction of a staff member of the International Health Division and with financial assistance from the Division. Preparations were made for the careful scrutiny of any possible epidemic of influenza during the winter of 1942, and isolated groups of individuals were available for observation, but very little influenza occurred. Material, especially throat washings, collected from the influenza-like infections investigated in the winter of 1941 was tested in mice, hamsters, and ferrets, and studied from various angles. Protection experiments carried out on mice centered chiefly around the protection afforded by subclinical infections. An improvement in the technique for the inoculation of egg embryos was developed.

Malaria

Chemotherapy. In many parts of the world antimalarial measures directed against the mosquito vector

are inapplicable for economic or geological reasons. In such areas the widespread use of drugs would be the most feasible means of malaria control. Drug control, however, has been shown to be ineffective, even under optimum conditions, because of two fundamental disadvantages inherent in the antimalarial drugs now in use. First, these drugs do not eradicate the infection. Thus a constantly increasing carrier reservoir accumulates, tending to spread malaria. Second, these drugs cannot be adequately relied upon to prevent the development of clinical malaria following the bite of an infected mosquito.

These disadvantages assume even greater importance in wartime than under ordinary conditions, since the introduction of large groups of non-immune individuals into malarious areas is certain to be followed by an increased incidence of malaria. The development of a drug not subject to the above limitations would be of great military and public health importance. Also, the need for further effective synthetic antimalarials has been increased by the loss of our principal sources of quinine.

The Rockefeller Foundation decided to test, as the most practical measure available, a large number of sulfanilamide derivatives. It had already been shown that drugs related to sulfanilamide destroyed the monkey malaria organism. It was further decided to supplement the work with monkeys by other tests on birds, including canaries and other fowls. In the case of ducklings it was possible to obtain good concentrations of sulfonamide drugs by incorporating them into the food, but only one strain of duckling was susceptible to the malarial organism and the supply of these birds was limited, as they do not breed in summer.

Approximately 6,000 chicks have been used in drug experiments with a strain of bird malaria and 125 sulfonamides tested. It was found that the action of sulfonamides against plasmodia closely parallels its action against bacteria. The derivatives ineffective against bacteria are also useless for malaria.

A new class of chemical agents, the sulfones, related to sulfanilamide although not sulfonamide derivatives, was also found to have some antimalarial action. A representative of this class was fairly effective against three types of bird malaria, and completely effective against monkey malaria. Moreover, these agents were known to be safe for human administration. One of them, promin, has been tried in a limited way on human patients with apparently good results. The significant fact is that new drugs, totally unrelated to quinine, atebrin, or plasmochin, have been shown to have a considerable effect upon the malaria organism.

About seventy-five sulfones have been tested for their activity against malaria parasites. Two have been found which were superior to promin in that they can be given by mouth. The toxicity of promin on oral administration was modified by a chemical manipulation which fortunately also increased the antimalarial activity, so that smaller doses could be used. Preparations are under way for testing these new substances in human beings. This work is now proceeding under the aegis of the Department of Chemistry of Harvard University, headed by Professor L. F. Fieser. The work at Harvard, supported by an International Health Division grant, is directed toward the improvement of the action of promin and related substances. Cooperation has been arranged with Dr. James A. Shannon of the Department of Medicine of New York University,

who is studying the chemotherapy of malaria in paretics at Welfare Island. In this way the work is correlated with the excellent laboratory facilities at Welfare Island for testing drugs against human malaria.

The Rockefeller Foundation also supported work in this field at Johns Hopkins University Medical School under the supervision of Dr. E. K. Marshall, Jr., Professor of the Department of Pharmacology and Experimental Therapeutics. Dr. Marshall's function was to determine the toxicity, absorption, excretion, and distribution of key sulfonamide derivatives in birds. He reports that a simple satisfactory criterion of antimalarial activity has been found to be the percentage of parasitized red cells of the treated animals as compared with that of the controls on the sixth day after infection. A rapid method for determining qualitatively the antimalarial activity of sulfonamide derivatives in avian malaria has been perfected, and a number of sulfonamide derivatives have been found to be active.

Control. During 1942 The Rockefeller Foundation gave support to malaria control work in southeastern United States, Mexico, Haiti, Cuba, El Salvador, British Guiana, Trinidad and Tobago, Peru, Bolivia, Brazil, India, and China.

In Florida, cooperation with military authorities in instituting malaria sanitation in areas where troops are concentrated has been one of the most important activities of the State Bureau of Malaria Control. Assistance has been given in making surveys, training personnel, and supervising control work. At present this part of the Bureau's program is undergoing rapid expansion and new training courses as well as additional control experiments conducted by State, Federal, and Army personnel are now under way.

To encourage the use of ditches lined with concrete as an aid to malaria control, the Division cooperated with the Georgia and North Carolina State Health Departments in the purchase of malaria drainage equipment. The work centered chiefly around Quitman, Brooks County, Georgia. Similar aid for drainage equipment has also been given to Mexico.

In Mexico, malaria is one of the outstanding problems. On invitation of the Mexican health authorities a staff member visited Mexico during 1942 and inspected the malaria work under way by various government offices. To make possible further studies of a broad program the Foundation in 1942 made available a sum of $20,000. The objectives of a Mexican malaria program would be to determine the epidemiology of the disease, to outline the steps for control, and to integrate the malaria service into the official health organization.

During 1942 Professor A. M. Goodman, agricultural engineer and professor of the New York State College of Agriculture at Cornell University, was appointed consultant to various malaria control projects in the Caribbean region. Professor Goodman's services were of particular value in connection with the malaria problem in British Guiana, where anopheline breeding is encouraged by the presence of irrigation water supplied for rice and sugar cane crops. A number of control experiments were tried but at present most reliance is on screening and bed nets.

Following a malaria survey of Haiti, a demonstration malaria control project by land drainage at Petit-Goâve is receiving support. A Malaria Bureau has been made part of the Health Department, and training for engineers and a malariologist has been provided by the Division.

In 1942 the malaria survey begun in Cuba seven

years ago was completed. It revealed that in the six provinces of Cuba, malaria is almost entirely absent in three and mildly endemic in the other three. From time to time, however, when a combination of circumstances is favorable, epidemics occur. As yet no relation with annual or monthly rainfall or with other known factors has been found. The last epidemic year was in 1934, when over 54,000 cases were reported, with 1,929 deaths. Work in Marianao County, Havana Province, and in Oriente Province was continued in 1942 and cooperative control projects were begun in the Provinces of Santa Clara and Pinar del Río.

Malaria is prevalent in British Guiana below high tide level along the coastal lands, where 90 per cent of the Colony's population lives. The malaria research unit is now concentrating on a study of the mosquito vectors, especially with respect to physical or chemical states of water collections which are unfavorable to their development and which may form the basis of a control program. The work is directed by a member of the Division's staff, and is under the general supervision of the government's medical department. Field observations of anophelines have been continued during 1942, together with spleen and blood surveys and laboratory studies of the mosquitoes. Breeding of *Anopheles darlingi*, which disappeared almost completely during a prolonged drought in 1940, has now begun again and the species is spreading. In connection with wet rice culture, experimentation has been undertaken on intermittent irrigation.

To supplement a malaria survey previously made in El Salvador, the Division cooperated in a mosquito survey of this country which located fifty species, eight of them *Anopheles*. The most widely distributed was

found to be *Anopheles pseudopunctipennis*, but *Anopheles albimanus* was more abundant in the lowlands and varied in density with the rainfall. The latter is considered to be the chief vector.

The malaria survey of Trinidad and Tobago is continuing. Roughly 25,000 children between the ages of five and fifteen years have been examined and about 15 per cent found to have enlarged spleens. Blood smears taken from 8,500 of these children gave confirmatory results. Collections of local anophelines made from more than 500 locations in Trinidad and Tobago disclosed at least two and probably four species of *Anopheles* believed to be responsible for carrying malaria. The most important mosquito vector in the interior of Trinidad, *Anopheles bellator*, breeds in plants known as bromeliads. A special study of these plants is under way.

In Peru, the malaria program is part of a broader project for complete eradication of certain species of mosquitoes from given areas. The program is in the process of organization as a part of the work of the Special Yellow Fever and Malaria Service under a staff member of the International Health Division. The malaria control program is limited to the Pacific coast of Peru. The coastal area, where *Anopheles pseudopunctipennis* is the chief, if not the only, known vector, is characterized by parallel river valleys which are separated by stretches of desert and protected by these barriers against reinfestation by any insect, once exterminated. The plan at present is to eliminate the mosquito from valley after valley throughout the coastal region. Reliance is placed on the use of Paris green. The principal obstacle is the presence of verruga in most of the valleys above a certain altitude. This dangerous infection makes it impossible for non-immunes to spend

the night there, while the absence of automobile roads prevents anyone from reaching the top of the valley and returning in daylight hours.

The new Division of Endemic Diseases in Bolivia, directed by Dr. Torres Muñoz, began malaria activities during 1942. Malaria is general in the eastern valleys of the Cordillera and throughout the tropical plain of the upper Amazon basin. During this first year, control measures were limited to the upper valleys, where pseudopunctipennis is the only species of *Anopheles*, and studies were begun in the plains.

After the successful anti-gambiae campaign in Brazil, of which mention has been made in former reports, support was provided in 1942 to permit the continuation of surveys during the second rainy season following the apparently complete eradication of the vector.

In 1942 the malaria program in India was brought to a close. In Pattukkottai, headquarters of the field study, observations were completed on the epidemiology of malaria in that area, the causes of irrigation malaria in South India, the cost of malaria control for a typical village, and characteristics of the local vector. As mentioned on page 60, the Foundation through the Health Commission is aiding the spray-killing of mosquitoes with pyrethrum. In general, government agencies are continuing various types of malaria work.

In southwest China work on the study and control of malaria in Chefang extended from 1940 to April 1942, when the Japanese attack on southwest China forced the evacuation of the staff from Chefang. New quarters were established at the National Institute of Health, Chungking. It is expected that the laboratory will become the malaria section of the Institute's Department of Parasitology.

Typhus

Always an historic trouble-maker in sections of Europe, Africa, and the Near East, typhus fever is considered one of the most serious threats of the war and post-war period. Concentration on the solution of some of the problems it still poses is considered a timely activity of the International Health Division. Work was begun in this field in 1940. A new staff member, after receiving special training in Dr. Hans Zinsser's laboratory at Harvard University, initiated the work at the New York Laboratories of the Division. The program to date has included the comparative testing of the various vaccines against typhus fever, the development of a protection test, and chemotherapeutic experiments.

A field trial undertaken in Spain just before the United States entered the war was inconclusive in that the incidence of cases had decreased in control groups before the vaccination program had been completed. A comparison of vaccines in guinea pigs in the laboratory led to the conviction that this animal is quite unsuitable for accurate quantitative experimental work. This conviction was further strengthened by the failure of the available vaccines to protect laboratory workers against typhus fever, despite the fact that the vaccines had been considered potent on the basis of guinea pig tests. The illness of Dr. J. C. Snyder and three Spanish physicians in Madrid was followed by the illness of Dr. C. R. Anderson in New York. Other laboratories engaged in typhus research had had similar accidental infections among their vaccinated personnel. Consistent results were obtained with young cotton rats when the inoculum of typhus rickettsiae was administered intracardially. An almost uniformly fatal infection can be

relied upon in the control animals with this technique. Sera from persons who had recovered from typhus fever, if injected with the rickettsiae, were found to prevent the death of the cotton rats, and it is hoped that a standard procedure for the demonstration of such protective antibodies will be worked out.

When the method for producing fatal infections with typhus in cotton rats was worked out, there arose the possibility of employing the technique for a survey of the effect of chemotherapeutic agents on typhus. Data already obtained do not indicate beneficial effects from the sulfonamides. A further survey is contemplated using both murine and European strains.

After experimentation with available vaccines in the first half of 1942, it became apparent that a considerable increase in potency of vaccines should be sought. Work is proceeding on direct testing methods for the potency of various vaccines.

A great deal more needs to be learned of the louse vector. A start has been made by setting up a Louse-Control Laboratory on the East Side of New York, with a physician and two entomologists in charge. Persons responsible for control measures on a large scale — mainly the military authorities at the present time — are emphasizing the need for new louse-killing methods to replace the cumbersome, expensive devices for sterilizing by heat or fumigation. New louse-killing substances are in the process of development under various auspices, and the Louse-Control Laboratory is cooperating by testing them on naturally or artificially infested persons. The Rockefeller Foundation Health Commission is also collaborating in this phase of typhus control experimentation.

The possibility of typhus carriers was raised by find-

ings at Peiping Union Medical College. The question whether rodents other than rats can carry murine typhus needs investigation. Other problems still to be studied are the development of an improved vaccine, the differences in strains as correlated with clinical observations, diagnostic techniques, the possibility of fluid therapy in the severe dehydration which typhus causes, and the value of hyperimmune rabbit serum in therapy.

Other Activities

The cause of *infective hepatitis*, commonly called catarrhal jaundice, is unknown. The occasional occurrence of similar jaundice in persons inoculated with convalescent serum or vaccines containing human serum has been noted for a number of years. Interest in the phenomenon has grown recently with the appearance of jaundice among persons vaccinated against yellow fever with a serum-containing vaccine. There have also been rare instances in which persons have developed jaundice after receiving blood transfusions. The war has increased the interest in a study of infective hepatitis, for it is now imperative that blood transfusions and plasma injections be accomplished safely.

Several authors suspect that the cause of the jaundice following injections of serum may be a virus with a protracted incubation period, but, to date, the lack of a susceptible experimental animal has handicapped research on this theory. A member of the International Health Division staff, working under a grant from the Health Commission, has observed a rise in the icteric index in horses inoculated with material from jaundice cases or with suspected vaccine, but it is not yet possible to show that the change was due to the jaundice-pro-

ducing agent sought for. The International Health Division has adopted infective hepatitis as a special interest in the hope of clarifying the many obscure factors in the occurrence and transmission of the disease. The scope of the Division's study will include infective hepatitis as it occurs in persons in the general population, as well as in groups which have received injections of serum-containing substances.

Although *hookworm* control is included as a part of the general rural health programs in countries with which the International Health Division is cooperating, the only specific studies now receiving support are those by Dr. W. W. Cort at the Johns Hopkins School of Hygiene and Public Health. Former extensive observations of dog hookworm are now made the basis of a study of the human disease with the object of discovering whether the mechanism of immunity is similar. The aim, both of the laboratory studies, as well as of the field studies in southeastern Georgia under the direction of Dr. G. F. Otto, is to evaluate all the factors which interfere with the normal development and persistence of immunity. An antibody of the type seen in the sera of hyper-immune dogs has been demonstrated in the sera of many children, the antibody level being high for Negroes, whether the infection was light or heavy.

Another study receiving support at the Johns Hopkins School of Hygiene and Public Health is the work in *diphtheria* under Dr. Martin Frobisher, Jr., Associate in the Department of Bacteriology. He is at present studying the extent to which the chick can replace the rabbit and the guinea pig in the titration of toxin and the standardization of toxin-antitoxin. Other subjects under investigation are the part played by carriers of

"avirulent" bacilli in the epidemiology of diphtheria, the question whether certain strains of the diphtheria organism may produce disease by direct bacterial action rather than by toxin, and the subject of antibacterial immunity in connection with the phenomenon of "malignant" diphtheria not responsive to antitoxin.

The Division's *syphilis* program has comprised three epidemiological units; one at Baltimore, Maryland, one in San Joaquin County, California, and a third in North Carolina. The directors of the first two have entered military service, but the North Carolina unit is still active in the investigation of the epidemiology of syphilis. This work, directed by Dr. John J. Wright, and originally limited to the Tri-County Health District, which includes Orange, Chatham, and Person Counties, was enlarged toward the end of 1941 to include the City and County of Durham. The staff now serves an area of 1,792 square miles, with a population of approximately 150,000 persons. Headquarters are maintained in Durham and at the School of Public Health, University of North Carolina, in Chapel Hill.

The incidence of syphilis is studied through serological tests performed by the Laboratory Division of the State Health Department, tests of men inducted into military service, birth and death records, and records of cases diagnosed in the Health Department clinics. Attention is also paid to the education of officials and other community leaders in the public health aspects of syphilis. Activities have included lecture courses and demonstrations for health department nurses, teachers attending a Child Health Conference at Chapel Hill, nurses studying at the School of Public Health, sanitarians training to make epidemiological studies of syphilis in the manoeuvre area, and various groups

among the general public. Recently an attempt has been made to orient the study program to the new situation created by the proximity of military camps, and Dr. Wright is cooperating with government officials in working out control measures for extra-cantonment areas.

All *tuberculosis* projects of the International Health Division have been closed with the exception of the Jamaica project, now terminating, and the epidemiological and control program in Tennessee. Epidemiological studies have been made in Williamson County, Tennessee, on a household basis, with special investigations of tuberculosis in childhood and old age. As a result of the Williamson County findings, emphasis is placed on control work among young adults, on the importance of sputum examinations, and on case-finding among contacts of sputum-positive cases. The study has definitely indicated that the first strength dose (0.01 mg.) of a potent tuberculin can be relied upon to detect: (1) practically all active reinfection-type lesions in young adults; and (2) the great majority of individuals who have had household exposure to a sputum-positive case of tuberculosis.

A state-wide program based on these findings has been initiated among high school students. A single test is used, and only the positive reactors are X-rayed. This method has reduced the time involved in examination by one-half and the number of X-rays by two-thirds. The program has been introduced into a large part of the State and has reached many thousands of young students.

The significance of pulmonary calcification in males of military age is of current interest. In Williamson County there is apparently a higher proportion of in-

dividuals with extensive calcified areas than in other regions of the country. Accordingly, a method of analysis is being devised for the pertinent data in the files of the Williamson County Tuberculosis Study and of the local Selective Service Board.

In connection with The Rockefeller Foundation's support of *rabies* studies in Alabama, a program is now under way in the laboratory to learn whether it is necessary to vaccinate dogs each year in order to control rabies. The results, it is believed, will also offer valuable information regarding immunity to virus diseases in general.

Rabies is one of the few virus diseases which can now be prevented by the administration of tissue vaccine containing only inactivated virus. In human virus diseases, it is difficult to correlate the results of serological tests with actual resistance to infection because such work depends on field trial. Rabies is a natural disease of the canine species and the normal host can therefore be used in a carefully controlled experimental study, allowing correlation of the results of serological tests with actual resistance. During the course of the study the blood serum of dogs can be tested at intervals in order to learn the significance of these tests as applied to actual immunity.

The work in *mental hygiene* in Williamson County, Tennessee, received support for a portion of the year 1942, but was discontinued when the director of this project entered military service. Some of the results are discussed in an article which has recently been published, "The Relationship of Mental Hygiene to a Local Health Department Program." Further articles are forthcoming.

The psychiatrist in charge of the Johns Hopkins

mental hygiene study receiving Foundation aid has likewise been called into Army service but has nevertheless been able to give some technical supervision to the work. Two additional part-time psychiatrists have been employed. Several papers have been published. In this work increased emphasis is given to the training of public health personnel. Students are given an opportunity to work in psychiatric clinics and instruction in psychiatry is given to public health nurses.

Recently the techniques of *nutrition* study have been sufficiently advanced to warrant their adoption by official health agencies. Nutrition activities at Vanderbilt University, Tennessee, under the direction of Dr. John B. Youmans, are being transferred to the State Health Department. The program includes field surveys, two of which have been completed in Wilson County, Tennessee, and another at Crossville, Cumberland County, Tennessee, the latter in cooperation with the Agricultural Extension Service of the University of Tennessee. The Delta area of Mississippi was studied early in 1942 to aid the Mississippi State Board of Health and the Delta Council in ascertaining the nutritional status of tenant farmers. Since sufficient progress has been made by Dr. Youmans and his associates to warrant an extention of his studies and the application of control measures by the Tennessee State Health Department, a State nutrition service was organized during the year under the direction of Dr. J. J. Hanlon.

Aid has been given to the State Board of Health of North Carolina to establish, in cooperation with Duke University School of Medicine, a demonstration unit for the correction of nutritional deficiencies. An intensive

survey of nutrition in certain population groups in Wayne County was recently completed, and the clinical and laboratory records are now under analysis. The next step involves concentration on an extensive survey of a random sample in the sections of the County not covered by the intensive study. Results of nutrition surveys are promptly placed at the disposal of State and local agencies, including particularly the administrators, for use in the formulation of programs to correct deficiencies.

The International Health Division is giving aid to a study of nutrition in the East York Health District near Toronto. The objectives are to appraise the status of nutrition in the area, to test diagnostic procedures, and to train personnel in the field of nutrition. A group of 800 high school students has been examined for vitamin deficiency. Mention is made of the laboratory aspects of the work of Professor E. W. McHenry of the University of Toronto in the section of this Report on Natural Sciences, page 143.

Cooperation of the Division has been requested by the Federal Health Department of Mexico in the formulation of plans for an organization which can appraise the nutrition situation, develop procedures for correcting deficiencies, and possibly conduct a demonstration of improved procedures in the Federal District or in a nearby state where there is an established local health organization. In 1942 plans were formulated for a survey in the Federal District in collaboration with the School of Public Health, the Demonstration Health Unit in Tacuba (Mexico City), and the Instituto Nacional de Nutriología. A laboratory center was established at the School of Public Health and a staff selected and trained. Field work has begun.

AID TO STATE AND LOCAL HEALTH SERVICES

Local Health Departments

An International Health Division program to encourage the development of official health organizations was gradually evolved in the five years preceding 1921, when a definite program was inaugurated in the United States. The objective was to preserve the gains made in hookworm control and sanitation and to extend the concept of public health and prevention and the technique of public health practice to the control of other diseases. The work was rapidly expanded during the 1920's, yearly expenditures reaching the high level of almost $500,000 during 1929. The majority of the projects aided were in the United States, with grants to Europe, Canada, the East, South America, the West Indies, and Mexico ranking in that order.

After 1929, the size of the program began to diminish. In the United States, the program was restricted to the preservation of those units in financial difficulties but with qualified personnel and effective programs. In 1934, federal funds became available for support of county health work through the United States Public Health Service, and International Health Division aid was rapidly closed out. In Europe also, aid to cooperative local health departments diminished during this time because, due to the economic depression, public funds were not available to enable these countries to contribute their share. Fortunately it was felt in many instances that the practice of public health administration had been sufficiently demonstrated.

In India and the Caribbean area, however, this phase of International Health Division work grew in

importance as funds were released by other geographical areas. In the Caribbean, the peak of expenditures was reached in 1933. Since then outlays have decreased. Today there is active only one project in this field of activity, the Marianao County Health Unit near Havana in Cuba. In India, the local health department program was developed in several areas from 1929, but is now gradually terminating. The Singur Health Unit in Bengal Presidency has been given aid over five years to December 31, 1943; the Sirur Health Unit in Bombay Presidency will receive aid until September 30, 1944. In Europe, the program has continued to contract and at present aid is given only to the Model Health Center in Lisbon, Portugal.

Local health work in Canada and Mexico has been on the increase in the last ten years. Three consolidated health districts having jurisdiction over an area larger than that usually covered by the local health departments are receiving aid in Canada (one in Nova Scotia and two in British Columbia). Two large health districts have been organized in Mexico but on a basis less inclusive than in Canada. In addition, the Health Department of Trois Rivières, Quebec Province, has received a grant available to September 30, 1943. In Mexico, eight local health units, seven of which are within one of the larger districts, have current support.

Typical of the new units aided in Latin America is the full-time unit which became operative at Atlixco, Mexico, on July 1, 1942. The health unit now in operation has a full-time health officer, two nurses, and a sanitary inspector. More personnel is to be added. The area to be served contains six municipalities and has a total population of about 55,000 persons. It is located in the southwestern part of the State of Puebla about

twenty miles from the capital; it is on the lower slopes of the volcanoes Popocatepetl and Ixtaccihuatl, and includes a large area of rich agricultural land. The town of Atlixco is an important industrial center with about 25,000 inhabitants and seven large textile mills, each of which maintains medical services for its employees and their families. Through the influence of the new health unit, these facilities are to be used for important activities in preventive medicine.

The next indicated area for the development of local public health work is South America. A former International Health Division program to stimulate the organization of local health departments ended in Brazil in 1930. Since then there was a single project in Colombia in 1934. Preparatory work has been done in the new Rio de La Plata and Andean Region, organized as an administrative division in 1939, and a grant has been made for a health center in Santiago, Chile.

When the program to develop local health departments was begun, the establishment of the department came after the demonstration in hookworm disease control. The demonstration was used as a stimulus to general public health development. In recent years the program has been used to accomplish two objectives. In countries like Mexico and those of the Rio de La Plata and Andean Region, aid has been given to demonstrate the advantages of public health practice by full-time trained personnel. The purpose is to introduce the concept of public health and prevention to the people, the government, and the local medical profession who are accustomed to thinking in terms of curative medical practice only. In Canada and Mexico, in order to secure greater efficiency of operation there has been experimentation with health organizations having a juris-

diction larger than that of the usual or routine local health department.

The other major objective of the local health program has been to provide facilities for field training of public health personnel. In Brazil today, and in Europe before the war, aid has been given to health centers providing opportunities for field training for students in schools of public health and schools of nursing, in order that their academic preparation for public health careers might be balanced by a knowledge of the practical application of their studies.

State Health Services

The program of aid in the development of technical services in the central, or state, health departments of various countries grew simultaneously with the local health department program, and, except for one area in South America, is likewise on the wane. As in the case of the local health departments, the bulk of expenditures has been for the development of services in the United States, and was used to build up the state health departments with trained personnel. There has been a rapid decrease in these expenditures since the beginning of the last decade, and in the United States there have been no grants of this type since 1936, when federal funds for the purpose became available in substantial amounts.

The state health services program has included aid to various branches of these services, including public health laboratories, divisions of epidemiology, vital statistics, public health nursing, sanitary engineering, and others. Outside of the United States, aid has gone principally to countries in Europe and the Caribbean area. Except for the fact that the services of a sanitary

engineer on the staff of the International Health Division are available to the health departments of the Caribbean region, no aid of this kind is at present being given in these areas.

The present program is concentrated in Canada and South America, with one grant available to China. Aid is given to Manitoba for the development of a Division of Statistics and a supervisory Division of Local Health Services. The Province of Ontario has received a grant to help in giving emergency training to public health personnel needed to replace those drawn off for war needs. A grant to Prince Edward Island for the development of a public health laboratory service is in abeyance because the prospective director is engaged in war work. In China, aid is given to the Technical Division of the Szechuen Provincial Health Department, which engages in a variety of public health activities.

The major part of the Division's budget for state health services has been allocated to South America. Bolivia has received help in organizing a Division of Endemic Diseases to include the existing Yellow Fever Service and new services for the control of hookworm and malaria. Ecuador has been given a substantial grant for the development of a public health laboratory, the National Institute of Hygiene in Guayaquil. Funds set aside for Chile in the 1942 budget of the Division were designated for the development of a Health Center near Santiago as the first step in the improvement of health services.

PUBLIC HEALTH EDUCATION

The International Health Division has used four techniques of public health education to give support to its other programs for the improvement of public

health. These have been the development of schools and institutes of hygiene and public health, the development of schools of nursing, aid to training stations offering short courses or practical experience in public health techniques, and the granting of fellowships and training grants to individuals.

The establishment of schools for the training of public health officers and public health nurses has been made possible by capital grants from The Rockefeller Foundation on the recommendation of the International Health Division or its predecessors. The first school to be established was the Johns Hopkins School of Hygiene and Public Health in 1916. Since that time grants from the Foundation have made possible the organization of schools of public health and institutes of hygiene at Harvard and the University of Michigan in this country, at Toronto in Canada, at São Paulo in Brazil, at London, at Tokyo, and in Bulgaria, Greece, Hungary, Norway, Poland, Turkey, and Yugoslavia. The International Health Division has supplemented the grants to all of these institutions with funds for maintenance expenses or grants for special studies.

Cooperation in the field of nursing was begun in 1915 with an appropriation for the translation of nursing textbooks in China, and in 1918 the first appropriation for nursing in the United States was made to the National Organization for Public Health Nursing. In Europe, work began in 1917 as part of the activities of the Commission for the Prevention of Tuberculosis in France. In all, the Rockefeller Foundation or the International Health Division has contributed to the development of nine nursing schools in this country, two in Canada, fifteen schools in eleven countries of Europe, and schools in Panama, Brazil (two), Venezuela, Siam, Japan, and Syria.

The development of schools is, however, a slow process and, in order to provide personnel for the public health administration and disease control programs, the technique of short courses and training stations was adopted in 1921 and used rather extensively, particularly in this country, through 1932. Various types of organization were used, including health institutes, summer work for medical students, training centers in the control of various diseases, and even correspondence courses. In other countries there have been several such centers for training in malaria (Italy), sanitation (Colombia and Jamaica), public health nursing (Puerto Rico), and general public health practice. As stated earlier, centers for general public health training are often established in conjunction with a school of public health. One of the two training stations for which support is currently available is so operated, in Mexico City, on the grounds of the School of Public Health of the Federal Department of Health. The other training center is being established in Jamaica for public health personnel of the British West Indies; it is to be associated with a model health unit, but there are no plans for its affiliation with a university public health center.

An important instrument of the International Health Division for public health education is the grant to the individual for a period of advanced training in public health. In the past, this program has included such procedures as granting resident fellowships for study within the grantee's own country, and appointment to the staff as a special member for training. At the present time, however, grants are limited to fellowships, and travel and training grants. Fellowships are given to staff members of organizations in countries with which

the Division is cooperating and whose training will be of definite use to the development of specific programs. There is also a classification of "special fellowships" for students not already assured employment by a health agency who may be under consideration for appointment to the International Health Division staff, or who may be used to build up personnel in special fields of public health in which there is an obvious need for additional highly qualified personnel. Travel grants are usually given only to health officials of experience and responsibility and are for visits to outstanding projects in their fields of interest to encourage exchange of views and provide an opportunity for study of new techniques. Summer training grants are available for medical students who are interested in doing public health work during their vacation period.

The public health education program has reflected the geographical shift of emphasis of the other branches of the Division's work. Except for grants to the Institute of Hygiene and the Nursing School in Madrid and the School of Nursing in Lisbon, of which only the latter can be said to be active, all new work undertaken by the Division in public health education has been in South America, the Caribbean area, or the Far East. Grants to support and improve the work of the Institute of Hygiene in Manila were made but of course are inoperative. The work of the National Institute of Health at Chungking, China, the center of the public health education system of that country, is receiving support, and the All-India Institute of Hygiene and Public Health at Calcutta is aided by the services of two staff members. In South America, the Institute of Hygiene at São Paulo has received a grant for the

further development of its demonstration health center and training area, and new schools of nursing at São Paulo and at Caracas, Venezuela, have had grants for developmental aid. An adviser in nursing has recently been assigned to the Rio de La Plata and Andean Region, and it is expected that schools of nursing in that area will require financial support for development under her supervision. As stated earlier, one training station is now active in Mexico and another in the process of formation in Jamaica. The geographical distribution of fellowships and travel grants has shown substantial increases in the number of fellows from South America and China.

Grants to schools of public health in this country have been increased in the last two years. These have included a grant (by the Foundation) toward the establishment of a new school of public health at the University of Michigan, a grant to the Harvard School of Public Health for the establishment of a Department of Nutrition, funds for the maintenance of field training facilities for Johns Hopkins University and the University of Toronto, and emergency grants to help these schools meet the increased demand for instruction created by the need for public health personnel in the military and civilian services.

Fellowships

In 1942 the International Health Division, in accordance with the program described on page 98, administered a total of 135 fellowships. Sixty-one of these were new grants, 66 were continued from 1941, and the others from previous years. The men and women receiving fellowships worked in the following fields:

Classification	*Numbers*
Public Health Administration	72
Public Health Nursing	25
Sanitary Engineering	13
Nutrition	6
Industrial Hygiene	4
Vital Statistics	3
Miscellaneous	12
	135

Thirty-two of the 135 fellows came from the United States; 20 from Canada; 10 from Mexico; 8 from the British West Indies; 7 each from Brazil, Chile, and Venezuela; 6 each from China, Peru, and the Philippines; 4 each from Argentina and Ecuador; 3 each from Colombia, Panama, and Uruguay; 2 each from Haiti, El Salvador, and Turkey; and 1 each from Costa Rica, India, and Portugal.

In 1942 there were only 2 fellows who did not study in the United States or Canada. These were 2 Chinese doctors who studied plague vaccine and control measures at the Haffkine Institute, Bombay, and other centers in India. Most of the fellows were assigned to 15 educational institutions in the United States or Canada. There were 6 who conducted field studies or worked in nonacademic institutions and 8 who combined study in educational institutions with field work.

Fellowships were held by 89 physicians, 25 nurses, 13 sanitary engineers, 3 statisticians, 2 industrial hygienists, 1 biochemist, 1 entomologist, and 1 pharmaceutist.

In addition to fellowships, 26 travel and training grants, the purpose of which is also described above, were administered during the year. They went to gov-

ernment health officials, teachers of public health, and health workers from the following countries: the United States, 9; Canada, 6; British West Indies and Mexico, 2 each; Argentina, Bolivia, Ceylon, China, Great Britain, Haiti, and Venezuela, 1 each. Six nurses received aid to enable them to observe public health nursing programs in the United States and Canada, as well as to study means of strengthening or expanding basic and advanced courses in nursing. Five grants were for development of public health activities and education and the training of public health personnel, five for malaria work, and one each for maternal and child health activities, the organization of yellow fever control, development of nutrition projects, study of bacterial nutrition, and preparation of Kahn antigen. There were also four summer training grants to Harvard medical students, one for a study of malaria control, and three for public health work.

THE MEDICAL SCIENCES

THE MEDICAL SCIENCES STAFF

During 1942

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THE MEDICAL SCIENCES

THE MEDICAL SCIENCES

DURING 1942, the American participation in the war had immediate and increasing effects upon the Foundation's work in the medical sciences. More stringent regulations were placed upon our contact with foreign countries; many teachers and investigators in the United States, especially those under forty, left their usual posts for military duty or special assignment under the government; the teaching personnel in medical schools and hospitals assumed additional burdens under the new "accelerated" program. Under such conditions, it was inevitable that uncertainty and anxiety should spread through hospitals, medical schools, and research institutes, and that plans should be modified.

Of the larger appropriations made during the year in the medical sciences, approximately one-half were for the continuation of projects quite unconnected with the war; the other half were directly related to the war and represented in large part efforts to minimize the losses and dislocations which the war imposed upon institutions, personnel, and teaching programs.

The Medical Sciences has sought since 1933 to stimulate and to support better teaching and better research in psychiatry in medical schools. Without these essentials the recruitment of well-trained staffs for hospitals or special enterprises flounders, and alert cooperation from the rest of the medical profession cannot be ex-

pected. During 1942 support was given for the first time to the University of Tennessee, and renewals of support went to the University of Colorado, Tulane University, Harvard Medical School, the Johns Hopkins Medical School, and Yale University for teaching and for research in psychiatry.

Although such expenses should be within the regular budget of an ideally supported medical school, the recognition of what psychiatry can offer in the training of a physician has been quickened by grants from foundations. And such recognition usually precedes local interest and enthusiasm. In the meantime, younger physicians graduating from schools where psychiatry is adequately presented add steadily to the ranks of those physicians who understand their patients as well as their patients' diseases.

Explicit attention was given for the first time since the Foundation's support in 1928 of the Committee on the Cost of Medical Care, to the field known as Social Medicine. As one of the social and economic effects of the war there is occurring and will further develop a considerable change in the way doctors practice and in the ways they are paid. Though war and post-war changes will come to the luxury trades, it is certain that the public does not regard the doctor's services in the luxury bracket, to be purchased mainly by those who can afford them. The growth of our public educational system presented in its day a somewhat similar arrangement of problems and alignment of sympathies.

Post-war periods are often more chaotic than the period of active war. It seems clear, in the medical sciences at least, that foundations are likely to find greater opportunities for service after the war than during the war itself.

ADVANCEMENT OF PSYCHIATRY

UNIVERSITY OF EDINBURGH
NEUROSURGERY, NEUROLOGY, PSYCHIATRY

One of the few instances where war casualties can be a source of knowledge unparalleled in peacetime is illustrated by the group in neurosurgery, neurology, and psychiatry at Edinburgh. Hospital care for accidents and war casualties in Northern England and Scotland has been organized during the past two years in such a way as to make available in Edinburgh for study and prolonged care selected cases of brain injury and psychiatric disturbance.

Mr. Norman Dott, a leader of neurosurgery in Scotland, and Dr. D. K. Henderson, an eminent psychiatrist, are professors in the faculty of medicine at Edinburgh. Their interests overlap when patients with brain injury or brain tumor show changes of personality, or impairment of mental function, intellectual deterioration, psychoses, speech disorders, or confusion.

Associated with the Brain Injuries Unit at Edinburgh are services active in speech therapy, occupational therapy, physical training, and physiotherapy, all of which cooperate in furnishing data of value for rehabilitation and disposal of personnel to military and industrial activity. The Unit, in close liaison with military medical officers and Ministry of Labour officials, has studied and directed suitable disposal of personnel with the purpose of raising the standard and scope of staffing and equipment at other centers in Britain. There is to date an accumulation of detailed data on 500 military and 300 civilian cases.

From this work new fields of research have been opened up in both neurology and psychiatry which

would not be possible if one had been kept in isolation from the other. Using a combination of psychiatric and psychological methods in the assessment of cases, it has been possible to obtain as complete a picture as possible of the brain-injured person's behavior patterns, including not only his social and emotional attitudes and personality, but also his abilities and intellectual endowments. Important clues have been obtained as to the essential nature of breakdown in the higher cerebral functions. Evidence has been presented to show that personality change may be a much more common effect of head injury than is generally recognized. All told, this union of effort has proved to be one which meets the circumstances of both war and peace. To the continuation of this work the Foundation contributed $20,760 for the current year.

American Psychiatric Association
Psychiatric Nursing

The Foundation has contributed $10,000 for the work of the American Psychiatric Association of New York City. The membership of this Association includes most of the professors of psychiatry and superintendents of mental hospitals throughout the country. In increasing measure during the past eight years the Association has sought to improve the selection, training, and supervision of psychiatric nurses and attendants. A special Committee of the Association, under the leadership of Dr. Charles P. Fitzpatrick of the Rhode Island State Hospital for Mental Diseases, is sponsoring and supervising studies of nursing and attendants' care made by personnel of its own selection.

The Committee is making a survey of the educational facilities for training mental hygiene attendants and

nurses, and the adequacy of present personnel in this field. Standards for courses are also being formulated, in conjunction with the National League of Nursing Education. The general purpose of the Committee is to stimulate interest in psychiatric nursing and to promote adequate recruitment and satisfactory training of psychiatric nurses. Mrs. Laura W. Fitzsimmons, who was appointed to make the survey, began work in July 1942 by visiting various hospitals throughout the United States and Canada. The work of Mrs. Fitzsimmons is intended to be more nearly that of a traveling consultant than of a surveyor. And as the war makes continually growing demands on nurses of every range of training and ability, the value of a traveling consultant to mental hospitals, often desperately short of nursing personnel, will probably increase.

Harvard University
Research in Industrial Hazards

To insure the continuation of the work on the psychological aspects of the research in human relations in industry, the Foundation made a grant of $40,000 to Harvard University for the Graduate School of Business Administration. It is coming to be recognized that the most important scientific background for business training is not economics or engineering but human biology in its broadest sense. In any such conception of human biology the psychological factors are sure to predominate. Dr. Elton Mayo, who is in charge of the work at Harvard on industrial hazards, has developed what he calls the clinical approach to human relations in industry.

Several extensive studies have been published going in detail into the best ways of investigating human

situations in a factory group. These deal chiefly with the physiology of fatigue and other bodily conditions as related to muscular activity and with psychological studies concerning the influence of social and economic conditions. In the psychological studies there is an attempt to observe carefully the actual behavior of human beings with no assumptions as to the simplicity and rationality of human conduct and with full recognition of the part played by personality, tradition, habit, and sentiments. The Business School group tries to combine the natural with the social sciences on a footing that minimizes the differences between them, and the work in industrial hazards has become the central part of this program.

Columbia University
Study of Human Constitution

By something of a paradox, psychiatry, though often considered as one of the most specialized fields of medicine, lays especial emphasis upon the concept of man as a complete organism, an individual not always to be divided into various organs or systems. The so-called constitutional school of medicine attaches similarly a great importance to the study of the patient simultaneously in terms of form, function, and psychological behavior.

Since 1936 the Foundation has been giving support to Columbia University, where Dr. George Draper is undertaking studies of the human constitution based upon the concept of man as a complete organism, each person possessing a unique "otherness" or individuality, but belonging roughly to types or classes in point of physique, function, disease resistance, and behavior.

The Constitution Clinic has been in existence at the

Presbyterian Hospital in New York since 1916. Studies carried out have included statistical analyses by anthropologists investigating bodily form, immunological studies of natural resistance, and psychological studies of patterns of behavior and types of personality. Work has been done to determine the types of patients that could be clearly delineated and possibly broken down into recognizable types susceptible to certain diseases.

Observing, measuring, recording, and comparing patients from this new point of view constitutes exploratory work in a field of considerable promise also for the selection of combatant troops. In support of its continuation the Foundation appropriated $54,000 in 1942.

HARVARD UNIVERSITY
EPILEPSY

Dr. W. G. Lennox and his associates have been studying epileptics at the Boston City Hospital since 1923. From this intensive work have come two substantial results: a new drug, dilantin, has been shown to be the best sedative for most epileptics; and the electroencephalograph has been shown to be the most valuable diagnostic tool in the study of epilepsy.

There are about 400,000 epileptics in the United States. The severity of the disease ranges from a form accompanied by mental and emotional deterioration and requiring hospitalization, to a very mild form controllable by medication and hygienic guidance. Intensive research has been the only source of progress in the control of this disease.

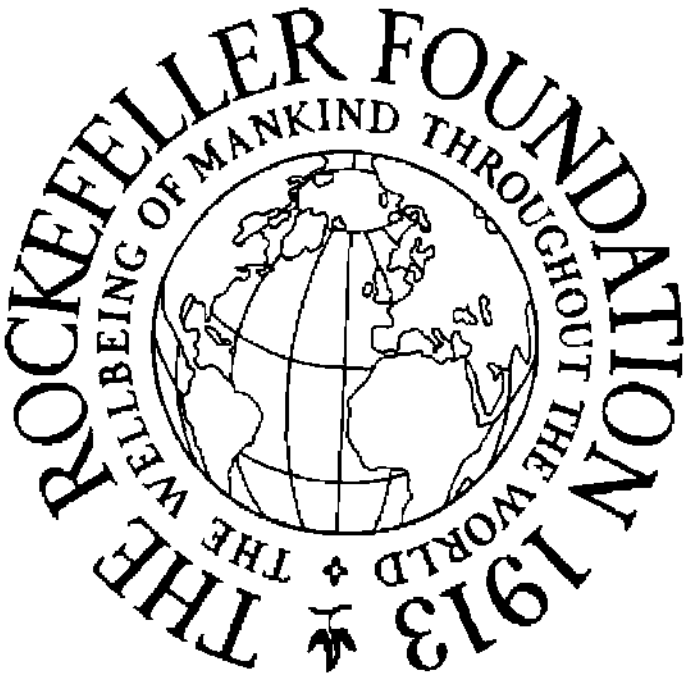
From the work at Harvard have already resulted two books and fifty-six articles, the latter divided into two groups, one containing the results of specific investiga-

tions, and the other summarizing present-day knowledge on various phases of epilepsy for the benefit of the medical profession and others. For further support of this work during a six-year period beginning in 1943 the Foundation has made a grant of $114,000.

Child Research Council of Denver

The Child Research Council of Denver, which is closely affiliated with the University of Colorado Medical School, has received $14,000 for support of its studies in child growth and development. The Child Research Council of Denver, incorporated in 1927, is an independent institute supported by subscribers and contributions. The work is under the direction of Dr. Alfred H. Washburn, who, with a staff of about forty workers, half of whom are full-time, is undertaking to follow about 100 children from birth to maturity for the purpose of measuring and testing anatomical, physiological, and psychological aspects of human growth and development. The children represent a sampling of the population similar to the clientele of the average practitioner.

The principal significance of this sort of study is that by long continued observation of the same children various types of growth and development can be discovered which have not been revealed in the usual experience of pediatricians. The objective is to learn to understand man as an individual living organism, beginning the study at the beginning and not with the finished product. About 100 normal children have now been under study for twelve years. None of them is in the group because of psychological or other problems, although of course various problems naturally do develop. The emphasis in the psychological part of the



Photograph Excised Here

Exhibit material on work of Committee on Research in Medical Economics, New York.

Photograph Excised Here

University of Tennessee, Psychiatric Clinic.

program is on personality development. Parents are interviewed at regular intervals and use is being made of systematic scales and schedules and of personality tests.

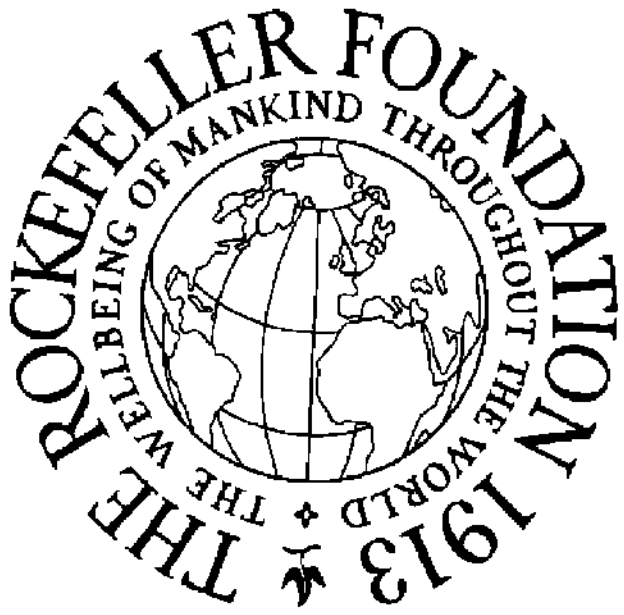
The value of such work is in its continuation, the repeated results obtained year after year forming a continuing record of great interest. The logical issue of such studies would be the recognition of the value of a comprehensive study of human biology.

Judge Baker Center

The Foundation this year made a grant of $15,000 to the Judge Baker Guidance Center of Boston toward the support of a children's psychiatric consultation center. The general purposes of the Judge Baker clinic are to free the growing individual from crippling mental and emotional handicaps, to check unfortunate beginnings of delinquency and crime, and to foster valuable attitudes, interests, and behavior in personal and social life.

Family influence in the early years of life, traits apparently inherited, real or fancied wrongs as experienced by children, the types of compensations for handicaps and inferiorities, are some of the basic factors in the structure of personality. The Center studies these formative factors of personality during the early years of childhood and youth, when behavior tendencies and character are in the making.

The Judge Baker Guidance Center is now twenty-five years old. Since its beginning it has striven to satisfy the demand for knowledge of modern methods of attacking the problems of childhood. The leading principle has always been that of applying all the scientific knowledge available in any field for the purpose of dealing with the difficulties of behavior and personality in education



Photograph Excised Here

Laboratory at Boston City Hospital, where Harvard University is conducting research on epilepsy.

Photograph Excised Here

Child Research Council of Denver, basal metabolism determination.

that some children present. The unique feature of the work at this Center is that it tries to have medicine, psychiatry, psychology, and social work join hands in a united endeavor to understand and solve these problems. Some 12,500 children have been studied in this Center, the largest private clinic of its kind. Recently much stress has been placed on parent guidance. Through lectures, seminars, and college courses the Center has tried to spread the principle of mental health and to keep research going hand in hand with clinical service.

The Judge Baker Guidance Center, long under the leadership of Dr. William Healy, with a program centering principally round juvenile delinquents, has, with the appointment of Dr. George Gardner and Dr. Frederick Rosenheim, entered the general field of child psychology and child guidance. At present only about 30 per cent of the cases seen by the Center are referred to it by the courts.

The plans toward which the grant contributes are for a kind of psychiatrically oriented day nursery where the relationship of young children to their mothers and of mothers to their children can be studied, and, where indicated, corrected.

University of Tennessee
Psychiatry — Teaching and Research

It can hardly be said too often that among the new tasks which the physician of the future must prepare to take on, psychiatric work occupies a more important place than it was given ten or fifteen years ago. It has too often been the practice of physicians to ignore mental disturbances as long as possible. Not that every man who receives medical training should be a psychiatrist,

any more than he should be a surgeon, but at least he should know more than he does now about this subject.

Under the direction of Dean O. W. Hyman the University of Tennessee has made notable progress in psychiatry during the last ten years. The work is based on the premise that a substantial advance for psychiatry lies in the more nearly adequate training of the general medical profession. About three-fourths of the doctors practicing in Tennessee, as well as many in Alabama, Arkansas, and Mississippi, are trained in this school.

In the University of Tennessee the future students of medicine are going to have an unusually good opportunity to observe mental disease patients under the supervision of trained and experienced teachers. The State of Tennessee has built, with county and city aid, a small psychiatric hospital and clinic operated as a unit of the University teaching hospital and closely affiliated with one of the State's three mental hospitals sixty miles away. The total cost of the site and the new seven-story building, three floors of which will be occupied by the psychiatry unit, will be over one-half million dollars, with about one-quarter of a million chargeable to psychiatry.

This splendid unit was opened in October 1942. The expenses of operating it, exclusive of salaries of personnel, will be about $30,000 a year. These funds are supplied by the State and the City of Memphis. The Foundation has made a grant to this project of $45,000. Tennessee is the first state medical school in the South maintaining formal connection with state mental hospitals to be aided by the Foundation. It is expected that about 600 patients will go through the clinic each year for diagnosis and that about forty will be retained for

study and treatment. The entire staff is full time. Dr. Theron S. Hill is director of the hospital and professor of psychiatry at the University.

University of Colorado
Psychiatry

Since 1934 the Foundation has contributed to the maintenance of a liaison service at the University of Colorado Medical School between psychiatry and the other clinical departments. Partly as a result of this support a workable liaison has been established between all the departments and staffs of the General Hospital and those of the Psychopathic Hospital. According to Dr. Franklin G. Ebaugh, director of the hospital and professor of psychiatry, one of the chief functions of this service is to emphasize to the student the importance of considering the patient as a whole. The result of this type of liaison work is largely one of a change in attitude in the thinking and working habits of medical students and others in such a way as to take a fuller account of psychological factors.

The graduates of the University of Colorado School of Medicine are consequently prepared to agree that 40 per cent of the patients that come to doctors in the practice of medicine suffer from illnesses accounted for by problems of personality. The general hospital is an excellent place to teach future doctors the uses of psychiatry in general medicine. The work at Colorado has provided a clear demonstration that men with psychiatric training can improve the treatment given to patients in the general hospital. In the future development of psychiatry it will be advantageous for general hospitals to create small psychiatric wards. As a step in this direction the liaison department serves a useful purpose.

Under Dr. Ebaugh's direction the Psychiatric Liaison Department was organized in September 1934 with the appointment of Dr. Edward G. Billings as psychiatrist. The Foundation supported this work in 1942 by a grant of $10,000.

Tulane University
Psychiatry

At the Tulane Medical School aid in support of a teaching service of psychiatry in the Department of Medicine was given by a grant of $10,000 in 1942. Dr. T. A. Watters has organized this teaching service and developed its relations with other parts of the University, for example, the Law School and the School of Social Work. The importance of psychiatry has been stressed by special lectures and articles to the medical and lay public of the lower Mississippi area.

Graduate teaching at Tulane in psychiatry has been recognized by the American Board for Neurology and Psychiatry and the future offers promise of a psychiatric service being developed under the administration of the Charity Hospital in New Orleans.

Harvard Medical School
Psychiatry

In the Harvard Medical School the work of Dr. Stanley Cobb has been a strong force in the direction of bringing the teaching of psychiatry into close association with the teaching of neurology in the Medical School and affiliated hospitals. Support to this work was continued in 1942 by a grant of $48,000. Following the traditions established by the pioneer work of Dr. Walter B. Cannon, the interest, so far as research work is concerned, is chiefly in the physiology of emotions. From a

practical point of view the purpose has been to spread teaching in such a manner that not merely the medical man but everyone connected with the hospital's work should get some training in psychiatry. Thus benefit accrues to the social worker, the general staff, the interns, all the medical students, younger physicians and surgeons, and especially to the patient. Emphasis in 1942, however, was on special work for the United States Navy.

A feature of the work has been the cooperation of the Medical School with the Massachusetts General Hospital, where for ten years the Foundation has aided in the development of this teaching and research program. In the general hospital the advanced observer has an exceptional opportunity to study psychiatric patients in their early stages. The Hospital authorities have provided in permanent and satisfactory measure the wards, laboratories, and offices, and the expenses of nursing care appropriate to the work of Dr. Cobb and his associates.

Johns Hopkins University
Psychiatry

Important studies of long standing at Johns Hopkins University which continued to receive support in 1942, in the amount of $36,650, are those on conditioned reflex under Dr. Horsley Gantt, on the clinical psychiatric problems of children under Dr. Leo Kanner, and on various physiological problems under Dr. Curt Richter. These three types of work, two of them experimental and one clinical, constitute a considerable fraction of the research work in this department.

The studies of conditioned reflex are conducted principally with animals, but also involve applications to

patients as a diagnostic procedure. During the past few years a study of cardiac rates and respiration in the organism accompanying the conditioned reflex has proved them to be an excellent measure of emotional tension. The question of the relation of cerebral anemia to the conditioned reflex is of importance nowadays for aviation, because anemia involves impairment of the higher cortical functions of the brain. In this connection, too, the action of important drugs, like sulfanilamide, benzedrine, and metrazol on cortical function has received attention. Shock therapy is also undergoing study. Research now in progress on the dietetic requirements for optimum cerebral functioning may well have a bearing on the feeding of civilian and military populations.

The work in the children's clinic involves treatment, studying, and teaching from cases of psychiatric disorders in children. The Children's Psychiatric Service maintains working contacts with social agencies, schools, recreation centers, and juvenile courts. The juvenile court of Baltimore during the summer months offers students a chance to become acquainted with court problems. The teaching activity is so arranged that careful discussions are encouraged.

In the Psychobiological Laboratory the stress is on experimental work on animals in investigating the bearing of nutrition and endocrine secretions on behavior. The self-selection of diets, in human beings as well as in animals, has been undergoing study. Under a wide variety of circumstances appetite serves as a guide to internal needs. Indeed, many of the observations made in this laboratory are concerned with the nature and components of instinctual drives such as hunger, thirst, and nesting.

Yale University
Department of Psychiatry

In the Foundation Report for 1937 an account is given of aid to the Department of Psychiatry of the Yale University School of Medicine. In that year a grant of $300,000 was made over a four-year period. An entirely similar, terminal grant was made in 1942. At the Yale Medical School, the Department of Psychiatry is housed in the building of the Institute of Human Relations, but is administratively a part of the Medical School. There are about thirty beds for patients under study or before commitment. An outpatient service and consultations on the wards of the New Haven Hospital extend the range of clinical material and improve the quality of clinical instruction, which is well supplemented by the psychological and sociological resources of the Institute of Human Relations.

Alcoholic Consultation Bureau

During the year an exploratory grant was made in a comparatively new field closely related to psychiatry when $15,000 was given to the Alcoholic Consultation Bureau, Inc. of Newark, New Jersey, towards its budget for the year 1942. Unfortunately, due to wartime complications both as to operations and personnel, it was voted by the directors of this Bureau to suspend operations after nine months of activity.

The Alcoholic Consultation Bureau was incorporated as a non-profit organization of private citizens whose purpose was to sponsor studies of alcoholism and conduct a consultation bureau for alcoholics with emphasis on personal interviews, plus collaboration with family and employer. It was incorporated in 1940 with Uzal H. McCarter as president, and William L. Morgan, chair-

man of the Board of Trustees. The other trustees are L. H. Conklin, Edward Schickhaus, P. R. Scheerer, Rev. Arthur Dumper, Dr. Ambrose F. Dowd, Richard Weil, and Joseph M. Byrne, Jr. The Advisory Council consists of Dr. Robert Fleming and Dr. Merrill Moore of Harvard, Mr. Leonard V. Harrison, Dr. Norman Jolliffe of New York University, Dr. Lawrence Kolb of the United States Public Health Service, and Dr. E. A. Strecker of the University of Pennsylvania.

The founding of this Bureau was based on the fact that neither the Eighteenth Amendment nor its repeal has controlled the extent of alcoholism in the United States, that hospital treatment of acute alcoholism, although increasing in point of numbers cared for, remains palliative, routine, and wasteful, and that as time goes on it becomes more and more evident that alcoholism must be dealt with by combining the forces of psychiatrists, social workers, industry, governmental authorities, the families involved, and other persons interested in its control.

Columbia University
Endocrinology

It has been pointed out by many investigators that the mental and emotional trends of the individual are influenced in considerable measure by his hormones. In an appraisal of endocrinology made a few years ago by a committee of which Dr. Walter B. Cannon was chairman, attention is called to the increasing importance of the psychological aspects of endocrinology. Consequently researches in endocrinology form a logical part of programs for the advancement of psychiatry.

For a number of years the Department of Anatomy at Columbia University, under Dr. Philip E. Smith,

has received support for research in endocrinology. The amount given by the Foundation in 1942 was $17,800. Dr. Smith and his colleagues have made numerous contributions to a knowledge of the endocrine glands involved in reproduction. Recently there has been special emphasis on the chemical aspects of hormone assay and identification. Both the experimental aspects and the clinical applications are under study. The relationship of the pituitary to the gonads has received special attention. This investigation has clinical applications bearing upon sterility and irregularities in the estrous cycle both in animals and human beings.

IMPROVEMENT OF MEDICAL SERVICES

Committee on Research in Medical Economics, Inc.

At a time when the services of physicians are being aligned more and more closely with governmental authorities responsible for public welfare, studies and exchange of experience in the field of medical care are of special importance.

The Committee on Research in Medical Economics, Inc., is a voluntary agency formed in 1937 as an outgrowth of the support given by the Rosenwald Fund to the studies of Michael M. Davis, in the field of medical economics and the distribution of medical care. After four years of pioneering work in this field the Committee is now being used for advice and guidance by officers of the United States Public Health Service, the Social Security Board, the Farm Security Administration, numerous medical societies, the American Hospital Association, the American College of Dentists, and industrial and cooperative groups. A journal published by the Committee contains articles and reviews dealing with wartime health problems, tax-supported medical care,

hospital and dental programs, health insurance plans, federal and state legislation; and what governments, medical societies, hospitals, employers, unions, civic bodies, and other agencies are doing or planning about these matters.

Toward the expenses of operation of this Committee over a period of two years the Foundation has made a grant of $15,000.

GROUP HEALTH COOPERATIVE, INC.

During the past fifteen years the economic and social conditions affecting the methods of practicing medicine have received much study. The three-cent-a-day insurance against the expenses of illness represented in hospital costs has been a success. Commercial indemnity schemes for surgical operations are in effect. The time is ripe for the application of the insurance principle to provide for the cost of physicians' services to low income groups. This work has taken on new urgency because of the necessity of preventing absenteeism of workers through illness from vital war work.

To Group Health Cooperative, Inc., of New York City, the Foundation has made a contribution of $32,000 for the expenses of operation and development of a medical insurance program. This non-profit group has an office staff consisting of a director, comptroller, registrar, two solicitors or agents, and two secretaries. The executive director is Winslow Carlton. The development of this work, beginning with a two-year study of the conditions under which satisfactory medical care could be given to low income groups, culminated in a plan for medical services involving three types of medical prepayment. These three plans offer coverage for the services of a physician in the home; surgical, obstetrical,

and in-hospital medical care by physician at the semi-private level; and adequate preventive service in small industrial plants coordinated with out-of-plant care. Group Health Cooperative has the approval of the Superintendent of Insurance of the State of New York.

Medical Administration Service, Inc.

Some ten years ago the Foundation was active in supporting the work of the Committee on the Costs of Medical Care. Based upon the findings of that Committee there has been a steady growth of interest in the United States in the administration of medical care. A wide variety of plans for the distribution of the costs of medical care are being discussed, formulated, and applied, sometimes in the form of laws for health insurance. Much concentrated study of professional and economic factors in medical administration is still needed.

Present practices and policies in many parts of the country show that health insurance administrations should lay more emphasis upon prevention and the securing of effective working relationships with government public health officials.

The Medical Administration Service, Inc., of New York City, is a voluntary association organized to study and promote the methods of a more economical and effective medical prevention and care. The director is Dr. Kingsley Roberts who has for a number of years devoted himself to studying and devising plans for financing medical care for persons of moderate salaries. The Service maintains a library and extensive files on medical economics and health insurance. Dr. Roberts, assisted by a staff, makes surveys and reports for industrial companies and other groups. The purpose of the service is to diffuse information and furnish advice upon

problems of medical care and health insurance. The Rockefeller Foundation has given this Service a grant of $22,000.

National Committee on Maternal Health

Grants totaling $24,500 were made to the National Committee on Maternal Health for studies under the direction of Dr. Clair E. Folsome. This Committee, organized in 1923 as a voluntary group, is furthering research on various aspects of human reproduction. It has access to the majority of the competent urologists, obstetricians, and gynecologists in medical schools and the more progressive hospitals. The Committee sponsors and supervises the research opportunities and plans for research going forward in medical schools, hospitals, and other institutions.

Ways and means to reduce maternal mortality, relief of the sterility which affects about 10 per cent of our families, study of the toxemic states of pregnancy, the close relation of endocrine metabolism to reproductive function, the multiple aspects of ovulation, are all subjects requiring study and on which information is far from complete.

Dalhousie University
Victoria General Hospital

During the past thirty years the importance of the Dalhousie Medical School has steadily increased as the center of medical education and research for the Maritime Provinces — Nova Scotia, New Brunswick, and Prince Edward Island. The war has brought to Canada, as to the United States, a pressing need for more physicians and hospital facilities. Plans have been drawn for a new 300-bed Provincial hospital to cost $1,500,000.

This new hospital, which will be completed it is hoped in 1943, will be one of the hospitals affiliated with the Medical School for clinical instruction of medical students.

A grant of $150,000 has been made to assure adequate teaching facilities for medical students at this proposed Victoria General Hospital. The grant provides amphitheatres, classrooms, and clinical laboratories for students on each floor, additional space in the outpatient department, and more equipment throughout the hospital for teaching purposes. Public health teaching facilities will be greatly improved by freeing for preventive medicine space now used for an outpatient clinic.

University of Iceland
School of Medicine — Scientific Equipment

A grant of $15,000 has been made to provide scientific equipment for the School of Medicine of the University of Iceland. The grant followed a survey made toward the close of 1941 when the American Red Cross and The Rockefeller Foundation entered upon an agreement whereby the latter assigned one of its officers to report upon the health situation in Iceland. The survey was subsequently broadened to cover needs in other fields, including medical education, veterinary medicine, agriculture, fisheries, and geology.

In 1940 the University of Iceland moved into a large, new and modern building, the Medical School receiving ample floor space. The Medical School has no tuition fees and students if necessary may secure financial assistance from the State for their maintenance. The course covers seven years, plus a year of internship. Arrangements have been made by which graduates who wish to continue advanced work in medicine can, under

certain conditions, obtain internships in the United States. Before the war such students went to Copenhagen for the final stages of their studies. In the summer of 1942 four medical students arrived from Iceland to continue their studies in this country.

Chinese Medical Colleges

The Japanese invasion of China forced universities to move as best they could into Western China; and for more than five years the Chinese medical colleges have led an extremely difficult existence. There has been an unprecedented demand for young physicians; but the war has resulted in loss of equipment and depletion of supplies used in teaching; government support has been precarious and teaching personnel hard to keep together; living costs have become a most serious factor in the survival of Chinese medical schools.

For salaries and equipment the Foundation in 1942 made available $25,000 in amounts of $5,000 each to the following schools: College of Medicine, National Central University, Chengtu; National Medical School of Shanghai, Chungking; Cheeloo Medical College, Chengtu; Hsiangya Medical College, Kweiyang; National Kweiyang Medical College at Kweiyang.

SCHOLARSHIPS FOR BRITISH MEDICAL STUDENTS

In the Annual Report of The Rockefeller Foundation for 1940 there is an account of the grant giving British medical students an opportunity to complete their training in schools of the United States and Canada. In 1942 $100,000 was devoted to this work, and at the end of the year a sum of the same amount was appropriated for use of students appointed during 1943.

Twenty-five students arrived at their places of study in September and October 1941. They were distributed among eighteen medical schools in Canada and the United States. These students have made an excellent impression on the deans of the schools. Another twenty-five students arrived in the summer of 1942 to begin their medical work. One student, William Morgan Thomas, from Emanuel College, Cambridge, was lost in a shipwreck by enemy action.

The pressure of wartime demands upon United States and Canadian schools to accept more students and eliminate vacation periods in order to graduate medical students earlier has not interfered with the operation of this scholarship program, the purpose of which is to offer to British students the opportunity to complete their medical education free from the handicaps and limitations resulting from dislocated and even destroyed teaching hospitals.

FELLOWSHIPS

As explained in the Annual Reports for 1940 and 1941, the number of fellowships in the medical sciences has been considerably reduced by the impossibility of granting fellowships to European scholars or to Americans to study in Europe. The total fund provided in 1942 was $50,000, as compared with $80,000 in 1941. All of the fellows studied in the United States. The proportion of fellowships granted to Latin American scholars continued to increase.

Of the 42 fellowships active in 1942, 16 were granted during the year, 25 were continued from 1941, and 1 from 1940. Grants were divided among 10 different countries, Argentina having 8; Brazil, 6; Canada, 3;

Chile, 5; Colombia, 3; Iceland, 1; Mexico, 3; Peru, 4; United States, 8; and Venezuela, 1.

As in past years, more fellowships were granted in psychiatry and neurology than in other fields. However, a wider range of subjects was studied in 1942, including physiology, biochemistry, pharmacology, thoracic surgery, parasitology, cardiology, malariology, anatomy, nutrition, pathology, internal medicine, pediatrics, and endocrinology.

In December 1942 $50,000 was appropriated for fellowships in the medical sciences during the year 1943.

From funds provided by the Foundation in 1941, the National Research Council administered 21 fellowships, of which 11 were begun in 1941 and 4 in 1940. All of the fellows, citizens either of the United States or Canada, worked in the United States. The record of individuals who have received fellowships in the past from the National Research Council shows that at least three-fourths of the former fellows now occupy institutional posts involving teaching and research.

GRANTS IN AID

During 1942, 54 grants in aid, ranging in amount from $180 to $7,500 and totaling $124,859, were allotted by the Medical Sciences. Of these, 8 were for periods of 2 years, 1 for approximately 17 months, 1 for 15 months, 22 for a year, and 19 for less than a year. The other 3 were for indefinite lengths of time. In December 1942 a fund of $125,000 was provided for grants in aid in 1943.

The 54 grants in 1942 were distributed among 17 countries, the United States having 17; Argentina, 7; England, 5; Brazil, Canada, Chile, and France, 3 each;

Sweden, Switzerland, and Venezuela, 2 each; and China, Colombia, Iceland, India, Palestine, Peru, and Spain, 1 each.

In 1942 there was less emphasis on the subjects usually stressed by the grants in aid program of the Medical Sciences. Only 11 persons studied neurology and its branches, 5 psychiatry, and 4 endocrinology, in contrast with the figures for 1940, when, of a total of 63 grants, 23 were for research and teaching in the various branches of neurology, 9 in psychiatry, and 9 in endocrinology. On the other hand, the number of grants given for work outside of these three fields increased in 1942 to meet the varying needs of Latin American countries. Some of the other subjects studied were pharmacology, anatomy, physiology, parasitology, embryology, cardiology, genetics, epidemiology, nutrition, and sociology.

As a temporary measure, previous to an appropriation of $32,000, a grant in aid of $7,500 was given to Group Health Cooperative, Inc., for services described on page 127. The University of Denver was helped in the establishment of training for correction of speech defects. Grants were given for a visit to hospitals in the United States by Canadian officials connected with the proposed new hospital in Halifax; and for scientific missions to the United States by Canadian scientists. Another grant provided internships in the United States for four recent graduates of the University of Iceland Medical School. The Chinese Medical Association received aid for translating into Chinese and printing medical texts. As in 1941, a grant was given to the Royal Society of Medicine, London, toward expenses of maintaining its medical library at a place not likely to be bombed.

THE NATURAL SCIENCES

THE NATURAL SCIENCES STAFF

During 1942

Director
WARREN WEAVER

Associate Director
FRANK BLAIR HANSON

Assistant Director
H. M. MILLER, JR.

THE NATURAL SCIENCES

THE NATURAL SCIENCES

DURING 1942 The Rockefeller Foundation continued its program in experimental biology by appropriating approximately $650,000 in behalf of thirty-seven research items. In this group of projects receiving Rockefeller Foundation support, as disclosed in the pages that follow, new work was undertaken, and progress made in such recent and promising fields as the artificial production of antibodies, the development of tests for vitamin content, and the isolation of enzymes.

Among the research work aided there were a number of studies dealing with nutrition. It has been pointed out by Professor Robert S. Harris of the Massachusetts Institute of Technology that the problem of feeding mankind after the war is almost frightening, that a world democracy cannot function in peoples weakened by malnutrition, and that the conclusion of the war, which will involve aid in keeping alive the populations of Europe, should open up excellent opportunities for nutritional engineering.

In addition to taking on huge new tasks imposed by the exigencies of war, chemical research is laying the groundwork for future advances in immunology. The California Institute of Technology is receiving aid from the Foundation in this field. The Rockefeller Foundation is also cooperating with Brown University in aiding the further spread of the type of applied mathematics needed in dealing both with war problems and with the human engineering tasks that will confront us after the war. In support of work carried out by such machines as the differential analyzer at the Massachusetts Institute of Technology and the large cyclotrons at the

California Institute of Technology and Washington University, the Foundation is continuing its aid.

While research work receiving support in Europe has greatly decreased, work in the American hemisphere has been increased. The Foundation is aiding nutrition work in the University of Toronto, as well as cosmic ray investigations at the University of São Paulo, and is beginning cooperation with the Government of Mexico in developing the agricultural resources of that country.

Massachusetts Institute of Technology
Research on Concentrated Food

At the Massachusetts Institute of Technology Professor Robert S. Harris has been interested in the concentrated food aspect of nutrition for a number of years. The Rockefeller Foundation has aided this research for two years, the grant in 1942 being $10,300.

Professor Harris was formerly advisor on nutrition to the Byrd Antarctic Expedition, where some of his concentrated and complete foods were used with entire satisfaction, both from the nutritional standpoint of satisfying basic hunger, and from the point of view of cost, which was approximately seven cents a pound, with twelve ounces sufficient for a day's ration.

Many factors enter into the preparation of a suitable concentrated food: it should not resemble medicine, should be mild in flavor and mixable with other foods, inexpensive, high in nutritive value, easy to prepare, should require little or no cooking, and have good storage qualities.

One form that Professor Harris' food takes is a powder which, added to hot water, gives a soup containing the necessary vitamins and minerals and one-sixth of

the protein requirements. Another form was used in a recent experiment of the Nutritional Biochemistry Laboratories of Massachusetts Institute of Technology when ten men offered themselves as subjects to determine whether it is possible to live happily on a single diet mixture. The dehydrated ration, somewhat resembling cornflakes, which was given to them, was the only food consumed except for liquids in the form of water, black tea, or black coffee. During a four-week test period the subjects pursued their regular occupations and reported frequently to their doctors. After a short period of adjustment the men had little desire for other food and thoroughly enjoyed the experience.

To complete the biological research on these concentrated food formulae in as short a time as possible the present grant makes possible the use of additional assistants and supplies. It is expected that further wide practical applications will be financed either by industry or government.

COLUMBIA UNIVERSITY
ENZYME CHEMISTRY

Dr. A. F. Coburn of the Department of Medicine, Columbia University, has been doing research on rheumatic fever for fifteen years. The chemical aspects of the work at Columbia are carried out by Professor David E. Green, a biochemist, formerly of Cambridge University.

Diet is an important factor in rheumatic fever. Children from well-to-do surroundings, with good eating habits, become infected with this disease but seem to escape its worst ravages; those from poor and underfed communities may have heart damage, and more deaths

occur among them. The chief difference between these two groups seems to be nutritional.

Two problems are at present under investigation. The enzyme which forms histamine and plays a pivotal role in many physiological processes is now under study looking toward its isolation. The same applies to an enzyme in the liver which plays a definite part in changing pyruvic acid into acetoacetic acid. Funds amounting to $15,000 will provide equipment, supplies, and salary of a technician for the chemical side of the work under the direction of Professor Green.

University of Wisconsin
Nutrition

An outstanding center in America for training men in nutrition is the laboratory at the University of Wisconsin, in charge of Professor C. A. Elvehjem. In general, Professor Elvehjem's laboratory deals with the effect of vitamin deficiency on health and more particularly with the effect that a lack of the vitamins contained in the Vitamin B complex has upon the metabolism of the cell.

Not only are we today obtaining a much clearer picture of the complex substances loosely referred to as Vitamin B, but we are also beginning to know which pathological symptoms are associated with a lack of thiamine, riboflavin, nicotinic acid, and other components of B. In general, when these vitamins are absent there is a deficiency in the enzyme system and cellular metabolism seems to suffer. The interrelationship between vitamins and enzymes is a subject of continued study in this laboratory. Through supplementation by *in vivo* studies it is hoped to elucidate further the true physiological mechanism of the action of the vitamins.

The present grant of $9,600 is for assistance to studies dealing particularly with riboflavin, Vitamin B_6, and pantothenic acid deficiencies.

UNIVERSITY OF TORONTO
NUTRITION

Professor E. W. McHenry of the School of Hygiene o. the University of Toronto is working on three problemsf The first of these involves biotin, that powerful but as yet little known component of the Vitamin B complex, now believed to have an effect upon metabolism. Biotin causes a marked production of fat from carbohydrates and also produces the intensely fatty livers which have a high cholesterol content. The second problem being investigated is the relation of Vitamin B_6, pyridoxine, to protein metabolism. Fat can be synthesized from protein only when B_6 is supplied. It seems likely that this vitamin is necessary for the normal metabolism of protein. The third problem has to do with inositol, which prevents the action of biotin in causing fatty livers, and also prevents the deposition of certain fatty acids. The phospholipids of the brain contain large amounts of inositol. Another question is whether inositol prevents the production of fatty livers by participating in the formation of phospholipids.

This work at the University of Toronto has received a grant of $14,000.

UNIVERSITY OF MINNESOTA
LIPID METABOLISM

Professor George O. Burr of the University of Minnesota has shown that animals cannot manufacture their own essential fatty acids but must get them from plants.

Not only do specific diseases result from a deficiency of these acids but general well-being is also affected by inadequate fat in the diet. Practical application of these findings has been made with farm animals and by clinicians in the treatment of eczema.

The Foundation has been aiding the University of Minnesota through the Departments of Physics and Botany in the application of spectroscopy to the investigation of lipid metabolism. The new grant in support of this work under the direction of Professor Burr was in the amount of $9,700.

Problems concerning the mechanism involved in the burning and synthesis of physiologically important acids, in such tissues as liver, kidney, spleen, and heart are not easy to solve. However, analyses which a few years ago were considered impossible are now successfully negotiated. Spectrographic methods, although not necessarily more accurate than chemical methods, permit the investigation of problems in concentration ranges too low to be studied by chemical methods. It is already known that fatty acid intermediates play an important role. With modern equipment and the cooperation of highly trained physicists and biologists significant progress should be forthcoming.

Stanford University
Biochemical Genetics

At Stanford, by treating organisms with X-ray and ultraviolet light, a new and promising field of biochemical genetics has been opened. The work, under the direction of Professor George W. Beadle of the Department of Biology, was supported in 1942 by a grant of $7,500 from The Rockefeller Foundation.

The primary purpose is to answer the question of how

genes produce their characteristic effects on the development and function of the organism. The experimental procedure followed is based on two facts: (1) that the normal strain of the fungus *Neurospora* is able to synthesize all the known vitamins, amino acids, and other substances necessary for growth and function with the single exception of the vitamin biotin; (2) that by the treatment mentioned above the organism is induced to mutate in such a way that it can no longer carry out specific syntheses. Some eighty-three so-called biochemical mutants have been found, in addition to a large number of clear-cut morphological variants. These mutants give valuable information concerning the nature of gene action, biosyntheses, and certain heretofore unknown substances of biological importance.

From the standpoint of practical application each mutant strain constitutes a specific test for the substance it cannot synthesize and can be used as a measure of the amount of that substance in the medium. Thus there has become available a series of bioassays for different vitamins and amino acids, all based on the use of strains of the same organism and all employing the same basic technique.

It is evident that the method might be used for investigating additional substances of physiological significance, thus opening a way to discover new vitamins and essential amino acids. One practical result envisaged is the use of the method in studying vitamin content of dehydrated fruits and vegetables, which are of increasing importance from both civilian and military standpoints.

The technique used is in considerable demand for varying kinds of research projects. Stanford University has made a point of helping to make these methods available to researchers elsewhere.

UNIVERSITY OF MINNESOTA

OSMOSIS

Every living organism, in order to keep its internal, largely fluid, environment constant in composition, makes use of the process of osmosis, or diffusion through cell membranes in such fashion that the concentration of the solutions is equalized. Life would be impossible without the functioning of this imperfectly understood mechanism. Recent work in this field offers an illustration of how the physical and the chemical sciences must be closely integrated with biology.

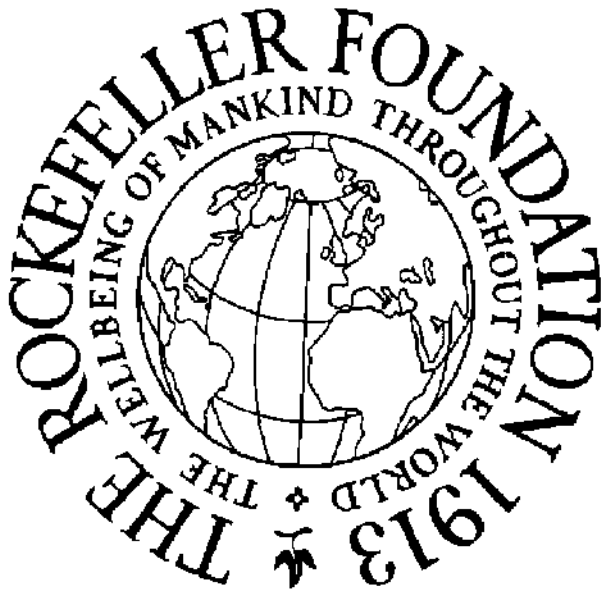
At the University of Minnesota selective osmotic work in living systems has been under way for a number of years in the Department of Physiology under Professor M. B. Visscher. In general this involves a study of the movement of materials across physiological boundaries. By intravenous injection of radioactive isotopes of sodium and chloride and subsequent study of the rate of their accumulation in the aqueous humor and cerebrospinal fluid, turnover rates have been estimated. The activity of the intestinal epithelium has been made clear by the successful measurement for the first time of rates of movements of various fluids in both directions. The ultimate goal is to build up, stepwise, model systems which approach the conditions found in animal experiments.

In 1942 a grant of $15,900 was made for this work.

CALIFORNIA INSTITUTE OF TECHNOLOGY

RELATION OF CHEMISTRY TO BIOLOGICAL PROBLEMS

Since 1938 support has been given to the California Institute of Technology for the development of chemistry in relation to biological problems. Previous support amounted to $225,000 and in 1942 $75,000 was given.



Photograph Excised Here

California Institute of Technology laboratory for investigation of carotenoids and related pigments.

Photograph Excised Here

University of Toronto nutrition studies, slit lamp examination.

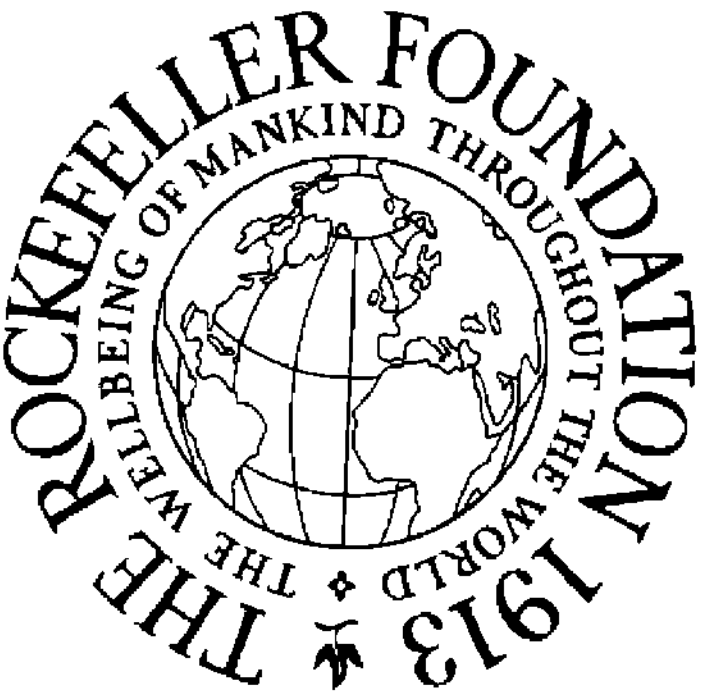
The work performed at the Gates and Crellin Laboratories of Chemistry, under the general direction of Professor Linus Pauling, covers two fields, the chemistry of organic compounds which occur in nature and are of physiological significance, and the structural chemistry of molecules and crystals, especially of organic substances. The program of research under the grant made by The Rockefeller Foundation has been done with the participation of Professors C. Niemann, L. Zechmeister, and E. R. Buchman.

Professor Niemann, in connection with his researches on the relation between the chemical structure and thyroxine-like activity, has succeeded in synthesizing a physiologically active isomer of thyroxine. This is the first substance other than thyroxine itself which acts like thyroxine. Professor Niemann and his collaborators have also carried out the study and synthesis of fluorine derivatives of aromatic amino acids.

Professor Zechmeister and his associates have made several studies on the correlation between the pigments of the tomato and the genetic constitution of these plants. They have isolated from the tangerine tomato a new carotenoid recognized as a geometrical isomer of the common tomato pigment. Several other isomers of this nature have been discovered and an extensive study has been made of the phenomena of isomerization of the carotenoids under various physical and chemical influences.

Professor Buchman, after making considerable progress in synthesizing cyclobutadiene, is now working on the synthesis of quinine and other antimalarials.

Considerable progress has been made in using X-ray methods for determining the structure of crystals of amino acids, peptides, and related substances. This work was discontinued early in 1942 for a war problem.



Photograph Excised Here

The Rockefeller Foundation is cooperating with Mexico in a study of agriculture. Corn growing on a steep hillside.

Photograph Excised Here

Stanford University plant heredity study. Bread mold growing in test tube.

Study has also been made of the structure of gas molecules by the electron-diffraction method, and the results have already clarified several parts of the rapidly maturing science of structural chemistry.

University of Wisconsin
Physical Chemistry

A grant of $14,000 has been made to the University of Wisconsin for research in physical chemistry under the direction of Professor J. W. Williams, who is studying the vital role of proteins in the human body. This work is greatly facilitated by the use of Svedberg ultracentrifuges, toward the purchase and installation of which the Foundation gave $27,500 in 1936. More knowledge is needed on the physico-chemical properties of proteins, the way they are constituted, and their transport in the organism. At Wisconsin interest centers on the so-called conjugated proteins — substances which combine a protein and a non-protein portion.

The nucleoproteins, important constituents of the nuclei of all animal cells, are especially prevalent in glandular tissue and in sperm cells. The virus proteins which recently have been prepared in pure form are also of the nucleoprotein type. Variations in the nucleoproteins of the chromosomes may account for differences in heredity. It is important to compare the proteins from different tissues at different stages of development, and under normal and pathological conditions. Cells in cancerous tissue are different from those in normal tissue, possibly because of modifications in the nucleoproteins of the cells.

Investigations in this field are fundamental to an understanding of the role of the nucleus in accounting

for the differences in cells of various tissues and organs in embryonic development, in disease, and in the phenomena associated with aging.

CORNELL UNIVERSITY
ENZYME CHEMISTRY

The history of our knowledge of enzymes falls into two parts, the early period, when most of the work, extensive in scope, was done in Europe, and a later period when American laboratories laid the basis for epoch-making discoveries. One of the leading enzyme chemists in this country is Professor James B. Sumner, in charge of the Biochemistry Laboratory in the College of Agriculture at Cornell University, Ithaca, New York.

The work of Professor Sumner has included: the isolation of the first enzyme, urease; the production of antiurease; the isolation of the first hemagglutinin; the isolation of crystalline catalase from cow, lamb, and horse liver (recently obtained from erythrocytes also); the discovery of a prosthetic group in liver catalase that is related to biliverdin; the discovery that carotene oxidase is really a lipoxidase which oxidizes carotene by an induced reaction; the isolation of four crystalline proteins from cow liver, not including catalase.

The Foundation has made a grant of $22,000 in support of Professor Sumner's work.

NORTHWESTERN UNIVERSITY
STEROID CHEMISTRY

Although sterol chemistry had its early development in Europe under distinguished leadership in various countries, including Germany, Switzerland, and England, the list of workers in the field in this country is a short one and is mostly confined to young men. One of

the centers now concentrating all its energies upon research in the field of sterol chemistry is the excellently equipped laboratory at Northwestern University under the direction of Professor Byron Riegel, who has had exceptional training under world leaders in organic chemistry. From private sources Northwestern University has recently obtained a new five million dollar building and excellent facilities for research work in chemistry. There is to be considerable stress on this relatively new field of sterol chemistry, which is one of great promise for biology, medicine, and industry.

The sterols are a group of chemicals known as unsaturated alcohols found in every animal and plant cell, with the exception of the bacterial cells. Compounds in the body related to the sterols, such as the sex hormones, bile acids, and cardiac aglucones, are likewise of importance physiologically, and one of these, stigmosterol, which has been obtained from soy beans, can be made to yield some of the sex hormones. Little is known of the metabolism of another of these compounds, cholesterol, but it is a constituent of egg yolk, of nerve tissue, and of brain cells; it may clot to form gallstones, it deposits on the eye to form a cataract, and its accumulation in the walls of the blood vessels is a mark of arteriosclerosis. The chemical mechanism of the body cannot be understood without a thorough knowledge of the role of sterols in plant and animal life.

A grant of $15,000 has been made in support of this work.

Princeton University
Plant Physiological Chemistry

A grant of $10,000 was made to Princeton for research in plant physiological chemistry under the

direction of Professor Ray F. Dawson of the Department of Biology. Princeton offers favorable opportunities for such work, as this activity will obtain the advantage of cooperation with an active group of investigators in the Chemical Laboratories of Princeton University and with the workers in the Department of Plant and Animal Pathology of The Rockefeller Institute at Princeton.

The program of research which Professor Dawson will follow deals primarily with the timely subject of the origin and production of alkaloids by plants. After his preliminary work on the alkaloid, nicotine, in the tobacco plant, which showed that nicotine is synthesized almost entirely in the roots and from there transferred to the stalk and leaves, it became possible to approach the problem of the mechanism of the synthesis of alkaloids in a new way. Another mechanism under study is that by which nitric acid is reduced and used in the synthesis of amino acids in the plant cell. A further problem has to do with the ability of young trees to absorb inorganic nutrients from the soil.

The present grant makes possible the continuation of the studies on nicotine in tobacco and the reduction of nitric acid in other plants, and the further study of certain tree roots.

California Institute of Technology
Immunology

Up to the present day the protective substances produced by the blood against germs and viruses have been formed only within the bodies of living persons and animals. Considerable importance can therefore legitimately be attached to the work in immunology at the laboratories of the California Institute of Tech-

nology, which has apparently succeeded in producing artificially the disease-fighting blood substances known as antibodies. This work, under the direction of Professor Linus Pauling, has received Foundation support of $33,000 last year and $20,000 in 1942.

Professor Pauling and his co-workers, Dan Campbell and David Pressman, in discussing this discovery are the first to emphasize that the prepared solutions are not ready for clinical use. Results are still in the realm of biochemistry. In the blood stream are large protein molecules known as serum globulins. In the presence of disease-producing disturbers, the complex structure of these serum globulins undergoes certain changes which enable them to seize hold of the offenders and render them harmless. After the infection has been overcome these changed protein molecules remain in the blood as antibodies ready to attack reappearing enemies.

By chemical methods the serum globulin molecules are made to acquire the characteristics of a natural blood serum which would be obtained from an animal immunized with the same antigen. Antibodies against a few simple chemical antigens, such as methyl blue, have already been prepared and work is going forward on the more complex antigens, such as snake venoms and viruses. With the wide use of human plasma banks at present, there is considerable interest in the conversion of normal human plasma globulins into immune globulins.

Long Island Biological Association
Cold Spring Harbor Laboratory

The summer symposia of the Long Island Biological Association at Cold Spring Harbor, Long Island, have

become important landmarks for biology and for sciences bordering on biology. Nine volumes containing proceedings of former symposia have been published. The tenth session, in June and July of 1942, was on the subject of hormones and was attended by some forty or fifty scientists selected from more than a score of the leading research institutions of the United States and Canada. Distinguished investigators from foreign lands were absent but a number of foreign scientists now in this country attended the conference.

The 1942 symposium was organized under the leadership of L. C. Dunn, chairman of the Department of Zoology, Columbia University; W. J. Robbins, director of the New York Botanical Garden; and Oscar Riddle, staff member of the Carnegie Institution. The amount contributed by The Rockefeller Foundation as a final grant, for support of symposia over a period of years, was $15,000.

American Institute of Physics

The American Institute of Physics, New York City, has established an Office of Scientific Personnel, which cooperates closely with the National Roster of Scientific and Specialized Personnel in making available to the government for analysis the names and special qualifications of all physicists in the United States. This Institute, to which the Foundation in 1942 gave $11,000, is a central organization which for the past twenty years has played an increasingly important part in the organization and development of physics in this country. The Institute has a War Policy Committee, appointed in March 1942 to guide its war efforts and to help carry out actions decided upon. The Committee, composed of Karl T. Compton, R. C. Gibbs, Homer L. Dodge,

O. E. Buckley, and Paul E. Klopsteg, has established active relations with the War Manpower Commission, the Selective Service System, and the United States Office of Education. A number of reports and bulletins designed to transmit policy recommendations to government agencies, industrial establishments, and educational institutions have been issued by the Committee. These publications also contain material informing physicists and university physics departments how to direct their activities in order to make the maximum contribution to the war effort.

Brown University
Applied Mathematics Fellowships

In wartime the complicated weapons in the fields of aeronautics, hydrodynamics, thermodynamics, elasticity, plasticity, electricity, and magnetism are constantly needing the type of improvement which relies first of all upon thorough mathematical training. In some branches of the applications of mathematics America has depended in the past largely on other countries for research. The war has made it imperative that these inadequacies in industrial mathematics be remedied as soon as possible.

Among the universities strengthening their work in this field Brown takes a leading place. A specialized faculty has been assembled and the courses given are attracting advanced students. The work at Brown is envisaged as a long-range training program, a basic change of emphasis, rather than as a short-term plan. In 1942 the Foundation made an appropriation of $30,000 to Brown University for fellowships in applied mathematics.

Massachusetts Institute of Technology
Differential Analyzer

Since 1935 the Foundation has contributed slightly over $100,000 toward the construction of a calculating machine known as a differential analyzer. The apparatus, now completed, is the latest development in a distinguished sequence of mathematical aids originated at the Massachusetts Institute of Technology by Professor Vannevar Bush, formerly in charge, and his associates. The Massachusetts Institute of Technology was given $25,000 in 1942 for further work in connection with the newest differential analyzer.

This machine is so constructed that its capacity may be increased to care for as many as thirty variables. It is able to solve more complex problems than any previous machine and do these more difficult jobs in less time and with a tenfold gain in precision. The machine is adapted for studies of cosmic rays, geophysics, seismology, electrical machinery, acoustics, astrophysics, and radiation, and is accessible to scientific workers from all over the world.

University of São Paulo, Brazil
Cosmic Rays

In São Paulo the Department of Physics of the University of São Paulo has been cooperating with the University of Chicago in investigations of cosmic rays. In the summer of 1941, when Professor A. H. Compton of Chicago visited São Paulo, carrying out balloon experiments on cosmic rays, active collaboration was begun with Professor Gleb Wataghin and his associates of the University of São Paulo.

Professor Wataghin, a refugee Russian scientist, re-

ceived most of his training in physics in Italy; was associated with the Department of Physics at the Escola Politecnica (Engineering Faculty) at São Paulo for a brief time; and has been professor of physics and head of the department in the Faculty of Philosophy, Science, and Letters since its creation in 1934.

Since assuming the responsibilities of this new post, Professor Wataghin has developed a small, but active, group of young Brazilians, working for the most part in research on cosmic rays. The group includes a theoretical physicist who has just returned from a two-year Guggenheim fellowship in the United States; a young experimental physicist who was the recipient of a two-year fellowship for work in England and succeeded in having the first year of his experience there before interruption by the outbreak of war; and a recent graduate who has been working for two and a half years in the Department of Physics at Chicago under Professor Compton. In addition, the distinguished young Italian refugee scientist, Giuseppe Occhialini, has been an active member of the group.

By bringing this group of scholars together the University of São Paulo has established one of the largest and most active centers in experimental and theoretical physics in South America. The Foundation has appropriated $7,500, in addition to a grant in aid of $2,500, to the University of São Paulo for this work.

University of California

Cyclotron

The giant cyclotron under construction at Berkeley, California, is not yet finished. A detailed description of this project, to which the Foundation gave over a million dollars in 1940, was given in the Annual Report of

The Rockefeller Foundation for that year. During 1942 a further grant of $60,000 was supplied to make possible the use of three eight-hour shifts. The work is proceeding with all possible speed under the direction of Professor E. O. Lawrence of the University of California, a Nobel Prize winner and eminent authority on the physics of the atom, who has invented and developed the giant cyclotron.

Washington University
Cyclotron

The cyclotron at Washington University, St. Louis, was built primarily for biological and medical research and for the treatment of malignancies. The University of California workers have in the past supplied the large and growing demand for radioactive isotopes for investigators all over the country. Other demands upon the California cyclotron make it unavailable for this service at present. Most other cyclotrons are either not available for non-defense projects or are no longer operating, because of reduced budgets. The present grant, $13,920, to Washington University will enable that institution to supply radioactive elements to meet the legitimate needs of fundamental research.

Mexican Agricultural Program

As noted in the Annual Report of last year, support was given in 1941 for a survey of Mexican agriculture by a commission of specialists. The report made by this commission was received towards the end of 1941 and on the basis of its findings the sum of $30,000 was appropriated in 1942 to initiate, on invitation of the Mexican Government, an agricultural program in Mexico. The grant provides for research and clerical assistance;

travel in Mexico; equipment and supplies; and the renting of a locale in the International Health Division offices in Mexico City. J. George Harrar from the State College of Washington, whose former career included four years in the Agricultural Experiment Station in Puerto Rico, is in charge.

YALE UNIVERSITY
PRIMATE BIOLOGY

The Foundation has aided anthropoid research at Yale University since 1925. After a brief experience in New Haven, a more suitable southern station for breeding, rearing, and studying great apes was established when the Foundation, in 1929, provided funds in partial support of the anthropoid colony at Orange Park, Florida. This laboratory now contains forty animals, half of which were born and reared in the colony.

The anthropoid laboratory at Orange Park aimed to achieve three principal objectives: first, the development of methods for breeding and rearing healthy chimpanzees and the establishment of a colony of known age and history; second, a broad psycho-biological study of the chimpanzee for the light it might throw upon origins of human biological and social traits; and third, the determination of the suitability of the chimpanzee as research material for the investigation of various questions of physiology, psychology, and medicine to ascertain those lines in which the animals can be used to best advantage. The first aim has been fully achieved, much headway has been made on the second, while the third is somewhat restricted by the small size of the colony.

Recently the administrative end of this research project on anthropoid apes has been reorganized so that the work now becomes the joint responsibility of Yale and

Harvard. All questions of policy, program, and personnel of the laboratories are now under the control of a board of scientific directors composed of two from Yale, two from Harvard, and three from other institutions or research organizations. Professor Karl S. Lashley, of Harvard University, has been appointed director at Orange Park. The Yale Laboratories of Primate Biology have been renamed the Yerkes Laboratories of Primate Biology, in honor of the founder, Professor Robert M. Yerkes. The Foundation in 1942 gave $118,000 for expenses during a five-year period.

Royal Society, London
Scientific Journals

The Royal Society of London is administering an emergency fund for the temporary relief of the most important of the English scientific publications. In 1941 the Foundation made an appropriation for this purpose and in 1942 two grants were made, one of $15,000 early in the year for current assistance, and another of $15,050 later in the year to be used during 1943. In many cases this enables the continuation of these journals, important not only for the English work they contain, but also for the outstanding scientific manuscripts which they continue to accept from the continent of Europe, from Canada, and from the United States.

Stated European Projects
Continuation

In support of five projects in Sweden, one in Switzerland, and eight in Great Britain $61,425 was given in 1942. These grants went to projects formerly receiving Foundation support, in some cases for a number of years. In none of the specific instances in which a grant

was made has the war disadvantageously affected the conduct of the work. Institutions aided, amounts given, and purposes of the grants are listed below:

University of Uppsala, Sweden — biochemistry of fatty acids, lipoids, and proteins — $1,125

Karolinska Institut, Stockholm, Sweden — biophysics — $3,950

University of Uppsala, Sweden — researches in physical-chemical properties of proteins and other substances of biological and medical importance — $11,250

Stockholms Högskola, Sweden — researches in chemical physiology and embryology — $6,300

Karolinska Institut, Stockholm, Sweden — researches in general biochemistry — $5,900

Eidgenössische Technische Hochschule, Zurich, Switzerland — researches in constitution and syntheses of physiologically active natural substances — $10,500

Rothamsted Experimental Station, England — virus chemistry — $1,135

University of Oxford — X-ray analysis of biologically important large molecules — $1,215

University of Sheffield, England — biochemistry — $1,620

University of Oxford — Dyson Perrins Laboratory of Organic Chemistry — $3,240

University of Cambridge, England — Institute of Biology and Parasitology — researches in cellular physiology — $4,860

University of Oxford, England — Sir William Dunn School of Pathology — biochemical investigations of penicillin — $4,860

University of Birmingham, England — researches in genetics and physiology of reproduction — $3,445

University of Edinburgh — Institute of Animal Genetics — researches in animal genetics — $2,025.

FELLOWSHIPS

The extent to which the fellowships program in the natural sciences has been reduced by the war is shown by the fact that in 1939 the Foundation administered 77 grants; in 1940, 37; in 1941, 18; and in 1942, 15.

Of the 15 fellows in 1942, 10 started their work in 1942, 4 in 1941, and 1, who has been unable to return to England from Switzerland, in 1939. Five fellowships were in the field of mathematics, 2 in plant breeding, and 1 each in plant pathology, plant genetics, physical chemistry, organic chemistry, general biochemistry, general biophysics, zoology, and embryology. The holders of these grants represented 7 countries; 5 were citizens of the United States, 1 was from Great Britain, 1 from Switzerland, and 2 each from Argentina, Brazil, Chile, and Mexico. All of the fellows, with the exception of 1 in Argentina and 1 in Switzerland, worked in the United States.

Besides administering natural science fellowships directly the Foundation has made appropriations to the National Research Council since 1919 for fellowships in the physical sciences (physics, chemistry, and mathematics), and since 1923 for fellowships in the biological sciences. During 1942 the National Research Council supported 38 fellowships, 17 begun in 1942 and 21 in 1941, from funds provided by the Foundation.

The fellowships were granted for research in the following subjects: physics, 2; astronomy, 3; mathematics, 3; chemistry, 11; geology, 2; zoology, 8; botany, 8; and psychology, 1. One of the fellows in botany studied in Bogotá, Colombia, all of the others in the United States.

GRANTS IN AID

In addition to the larger appropriations discussed above, 41 grants in aid were given by the Division of Natural Sciences in 1942. Some of these, such as the grants to the University of São Paulo for development of research in physics and to Stanford University for

research in biochemical genetics, preceded larger appropriations to the same institutions. Others involved short-term support to promising new studies or works near completion. There were 34 grants for research, in the following fields: genetics, 6; physics, 5; mathematics, 5; physiology, 4; molecular and mathematical biology, 3; zoology, 2; astrophysics, biochemistry, biology, chemistry, cosmic ray research, geology and geography, immunology, nutrition, and semantics, 1 each. Besides these research grants, aid went to the Society for the Study of Growth and Development toward expenses of summer symposia, to the Institute of Chemistry, National University, Mexico, for equipment and supplies, and to the National Research Council, Canada, to provide travel and living expenses of Canadian scientists while on scientific missions to the United States. The remaining 4 grants were for traveling expenses of scholars coming to the United States to fill academic posts.

The grants in aid were distributed among the following countries: the United States, 24; England, 8; Brazil, Canada, and Mexico, 2 each; Argentina, Peru, and Switzerland, 1 each. They varied in amount from $75 to $7,500, with more than three-fourths of them over the amount of $1,000. The total sum given was $124,744. $125,000 was appropriated for similar grants in 1943.

THE SOCIAL SCIENCES

THE SOCIAL SCIENCES STAFF

During 1942

Director

JOSEPH H. WILLITS

Associate Director

SYDNOR H. WALKER [1]

Assistant Director

ROGER F. EVANS

Consultant

ANNE BEZANSON

[1] On leave.

THE SOCIAL SCIENCES

THE SOCIAL SCIENCES

GRANTS by The Rockefeller Foundation in the social sciences in 1942 cover many fields of investigation.

It is not surprising that studies of international relations should occupy a prominent place. Students concerned with the problems which war exaggerates and which the peace will face are engaged at many points and in many agencies in preparing the analyses of fact and relationship which are essential to, but, alone, do not create wise solutions in international affairs. Grants for the support of such work were made to the Council on Foreign Relations, the Institute of Pacific Relations (Pacific and American Councils), the Royal Institute of International Affairs, the Canadian Institute of International Affairs, the Swedish Institute of International Affairs, Yale University, the New School for Social Research, and the Economic, Financial and Transit Department of the League of Nations.

The war has created opportunities for work and research that appeared to be studies of an emergency character but which also contained scientific values that extended beyond the emergency. Grants were accordingly made to the Social Science Research Council for the establishment of a branch office in Washington to aid in the effective utilization and conservation of the nation's resources in social science personnel and work. Similarly, grants were made to the University of Chicago for a study of the effects of wartime price controls, to Iowa State University for a study of the effects of wartime policies in the production and distribution of food, and to the University of California for a study of the methods used in and the

social effects of the placing of the Japanese of the Pacific Coast in detention camps.

The largest share in amount of the grants went to the support of fundamental studies of a continuing nature. Included in this category were grants to the Social Science Research Council (Conferences and Planning in the Social Sciences, Public Administration), the Canadian Social Science Research Council, the National Bureau of Economic Research (Economic Research), the Brookings Institution (Research in Economics, in Governmental Administration, and in International Relations), University of Oxford (General), Columbia University (Public Finance), and Princeton University (Urban Research).

The objectives of these grants are mentioned in greater detail in the succeeding pages.

INSTITUTIONAL GRANTS

Council on Foreign Relations

The Foundation recognizes the importance, particularly in wartime, of the need for clarifying and stimulating thinking on key issues of American foreign policy. The Council on Foreign Relations is continuing its collaboration on the problems which grow out of the war and will need attention in the future peace settlement. The contribution which such study by an unofficial agency can make to the government becomes increasingly important and helpful.

The Council's War and Peace Studies Project investigates such topics as: strategic and armament questions; economic and financial questions; political questions; territorial questions; and the peace aims of

European nations. Nearly 400 memoranda have already been transmitted to policy-making officials in the government.

The Foundation's share in supporting this activity, appropriated in 1942, is $70,700 for use in 1943 and 1944.

Institute of Pacific Relations

Pacific Council. The Institute of Pacific Relations is an unofficial and non-political body, founded in 1925 to facilitate the scientific study of the problems of the Pacific area. It is composed of national councils in ten countries. The Pacific Council, which is the governing international body of the Institute, is composed of representatives of the ten national member councils. Its program comprises research, publication, and periodic conferences where questions of policy and results of research are discussed. In the past twelve months the Institute has devoted itself to the preparation and publication of a substantial number of studies, some of which were planned as far back as 1938, and were nearing completion at the time of Pearl Harbor.

The projects proposed for 1943 fall under two headings: (1) The Inquiry Series, the inauguration of which was made possible by a special Foundation grant, concerned with problems which will be faced in the Far East whenever a temporary or permanent peace is negotiated; and (2) The International Research Series which constitutes the regular research program of the Institute and contains studies of a general and long-term nature.

A grant of $107,000, of which $25,000 is an emergency fund, has been made for 1943 and 1944, to carry on this program.

American Council. The American Council is one of the national member councils of the Institute of Pacific Relations. It has developed a program of research, education, and publication in the United States. During the past two years, it has published seven research volumes, fifteen pamphlets for school and adult use, and a variety of special reports, bibliographies, and memoranda in the field of Far Eastern studies. It has responded to requests from Washington for advice and information, held sixteen study conferences and institutes and a large number of seminar discussions, and maintained the *Far Eastern Survey* as a source of authoritative information and analysis in the Far Eastern field. It has also experimented with pamphlet, radio, and film techniques for reaching a wider audience with Institute materials in order to develop in America an understanding of the Pacific area.

As part of its continuing cooperation with the Institute, it, with the Canadian Institute of International Affairs, served as host Council to the triennial Institute of Pacific Relations conference at Mont Tremblant, Quebec, from December 4–14, 1942. There 150 delegates, including many government officials from eleven nations, gathered to discuss wartime and post-war cooperation among the United Nations in the Far East.

Toward the general expenses of this program $30,000 was appropriated, for use during 1943 and 1944.

Royal Institute of International Affairs

The Royal Institute, with headquarters in Chatham House, London, is one of the world's foremost national centers for study and research in international affairs. Since its founding in 1920, it has encouraged and facilitated the study of international questions, and

promoted the exchange of information and thought on current world problems.

Its research program is organized on the basis of study groups as well as of individual projects. It maintains a reference library of unusual resources, arranges discussions on matters of current interest, and distributes digests of discussions or publications embodying research. The importance of its fortnightly *Bulletin of International News* has been heightened since the war and should provide invaluable material for the historian. At the outbreak of the war the Institute placed its resources at the disposal of the government and suspended many of its ordinary activities.

The Institute's present research program is largely devoted to post-war planning and reconstruction. While the war effort has taken over a number of its expert personnel, the latter still find time to serve on study groups which provide them with the opportunity to meet and discuss emerging war problems informally with other authorities working in various government departments, in universities, and elsewhere.

The reconstruction groups are addressed to three sets of problems: immediate post-war measures of relief; problems of economic and social policy; and problems connected with the political reconstruction of Europe. There are also a Far East group, a group concerned with Anglo-Russian relations, and a group on South America. A series of *World Order Papers* contains contributions by such men as: Viscount Samuel, Professor Gilbert Murray, Sir William Beveridge, Sir John Fischer Williams, and Professor Lionel Robbins. Among the pamphlets published is one on medical relief in Europe and another on relief and reconstruction in Europe.

The Foundation's contribution to the research work of the Royal Institute of International Affairs in 1942 was $32,400.

Canadian Institute of International Affairs

The Canadian Institute was founded in 1928, and now has eighteen branches, with a membership of approximately 1,400, including numerous experts in the government service. The Foundation's interest in this unofficial, non-partisan organization dates from 1936. Through the activities of its branches, assisted by a central secretariat, the Institute seeks to advance the study of international politics and economics and to investigate and provide information upon international questions as they relate to Canada. By means of its branch groups the Institute is able to utilize representative indigenous leadership and counsel.

During the past three years a substantial research program has been undertaken which has filled a unique place in Canadian scholarship and has resulted in a number of timely publications, among them being *War Finance in Canada*, *The Military Problems of Canada*, *Canada in Peace and War*, *Canada in World Affairs*, *Canada and the Orient*, *Canada Gets the News*, and *Canada Fights*.

Recently, to extend its potential sphere of influence and shorten the time needed for this influence to be felt, the Institute has issued a series of pamphlets. These include such titles as: *French Canadian Opinion on the War*, *Population: Canada's Problem*, *Canadian Relations with Latin America*, and *The Wheat Problem*. A symposium of studies on the many and varied aspects of Canadian and world reconstruction is now in preparation.

Besides research, other activities of the Institute provide for discussion meetings, study groups, and conferences. An annual study conference is held, as well as a program of regular conferences in Canadian-American relations, organized regionally in cooperation with similar organizations in the United States. During the next few years these conferences expect to concern themselves with the study of post-war reconstruction and consideration of Canada's position in the world after the war.

The sum of $20,000 has been awarded to the Institute toward its general budget during the two-year period ending June 1944.

Swedish Institute of International Affairs

The Institute has continued its programs in research and public education in international problems on which it has been engaged for several years, despite the handicaps of communications and contacts due to the war.

Among its recent research studies which will shortly come from the press are, *Systems of the Federal State*, and, *The Evolution of Foreign Policy in the World from March 1938 to September 1939*. These are in addition to the published study entitled, *The International Law of War and Neutrality*. At least twenty numbers have so far been issued in the pamphlet series, devoted to aspects of present-day international political subjects. The Institute's activities also include the preparation of *Contemporary Archives*, a monthly diary of the war and international events on the basis of the Swedish and the foreign press, beginning with September 1, 1939. It is expected that the archives may be of value for the study of contemporary history in international

politics. The Swedish Institute also arranges lectures and seminars on problems of international relations at the Swedish universities.

The Institute has been able to maintain its contact with scholars in Denmark and in Norway and secured their collaboration in the series of investigations related to post-war problems of international relations.

For the support of this work the Foundation appropriated $11,250 for the Institute's general budget during the year 1942, and $16,250 for use during 1943.

Yale University

For a study of issues in international relations $31,000 has been appropriated to Yale University. Arrangements have been made to bring together a small group of men, possibly from the fields of international law, economics, and international political organization, to give considerable time in 1943 to a study of post-war problems. Yale University is providing the necessary facilities and office space and paying the salary of Professor Jacob S. Viner, economist, of the University of Chicago, who is one of the men selected. Professor Percy E. Corbett, international lawyer, of McGill University, will also be one of the group.

Without duplicating the work of other qualified agencies or individuals, one method of procedure expected to prove profitable is the close examination and the comparative study of the solutions and analyses of post-war problems, which are beginning to be presented to the public in substantial volume. There is a possibility that this investigation might lead to a form of synthesis of research and experience that would state the minimum choices in policy that this country and

others will face after the war and which may be fundamental and preliminary to further efforts in the area of international adjustment.

It is expected that Yale University will provide a scholarly atmosphere with complete freedom from official, institutional, governmental, or other pressure or limitations of any kind. The men will work without specific terms of reference except to consider as a whole the international problems which peace will present, and our state of intellectual preparation for them.

New School for Social Research

The Graduate Faculty of the New School for Social Research are engaged upon a program of studies dealing with certain problems of economic and political demobilization and readjustment in a defeated Germany. On the Graduate Faculty of the New School are distinguished scholars who have also had practical experience in Germany in the fields involved in these studies. Moreover, some of the projects recently undertaken under an earlier Foundation grant have yielded much factual material which can be utilized in these new proposals.

The plans include three studies: (1) Economic Demobilization in a Defeated Germany; (2) Changes in the Economic Structure of Continental Europe and the Position of Germany; (3) The German Civil Service and the Rebuilding of German Civil Administration.

Interest in these studies has been expressed by one of the agencies of our government, which is eager to have the studies made, but which could not employ the persons who make them, because of their technical status as enemy aliens.

The Foundation has made an appropriation of $18,900 to the New School for Social Research for the expenses of these studies, for the period of a year from December 1, 1942.

League of Nations
Economic, Financial and Transit Department

Since August 1940 the major portion of the Department's program has been carried on at the Institute for Advanced Study at Princeton, New Jersey, by the director and ten members of his staff. A small staff remains in Geneva and handles European material for the Princeton group.

The statistical yearbooks for 1939–1940 and 1940–1941 have now been issued, the monthly bulletins of statistics are prepared and published, and the *World Economic Survey*, abandoned in 1940 because of war conditions, was resumed and appeared in October 1941.

The present research program, in addition to these statistical studies, includes studies in the following fields: demographic problems, agriculture, general questions of commercial, financial, or monetary policy, and fiscal policy and principles of taxation in Latin American countries.

A picture of Europe's position in world trade was presented in *Europe's Trade*, a volume published in 1941. A companion volume on the trade of the rest of the world, especially of the dollar-sterling-peso area, will follow shortly. Supplementary studies have also been undertaken of the changes which the war is causing in the balance of payments, and their future significance.

Several projects bearing directly on problems of the post-war world have been initiated. It is hoped to pre-

pare later a synthesis of the post-war programs of the various governments.

In order to assist the League to carry on its activities in this country, the Foundation appropriated the sum of $45,000 to the Economic, Financial and Transit Department of the Secretariat of the League of Nations, at Princeton, for the year 1943.

Social Science Research Council

Washington Personnel Office. Even before the United States entered the war, a vital need was felt in Washington for an agency to promote more effective utilization of social scientists. In the stress of the pre-war emergency the national government had recruited many thousands of persons trained in the social sciences; later, of course, the demand greatly increased.

It was foreseen that unless the recruitment policies were integrated and wisely administered severe shortages would result and skilled talent would be squandered.

After careful study of the problem the Social Science Research Council set up an office in Washington, to work in cooperation with government agencies on three tasks: (1) consulting with government agencies on policies and methods of recruitment; (2) advising with individuals who wished to contribute their talents where they could be utilized most effectively; and (3) consulting with university officials regarding the temporary release of members of their faculties.

The Council already had joined with the other national scientific councils in promoting the Roster of Scientific and Specialized Personnel, but responsible officials felt that this was not enough. Now, the office which has been set up in Washington provides a place to which persons may turn for extra-governmental advice

concerning social science problems. Similar services had earlier been provided for engineers and specialists in the various fields of medical and natural sciences.

For the expenses of this office the Foundation has appropriated the sum of $25,000 for a one-year period.

Conferences and Planning. One of the primary functions of the Social Science Research Council is the stimulation and planning of research. The Council, as a general staff, attempts to keep in view the whole range of social inquiry, to assess promising points and lines of attack, to explore these areas, to produce thoroughly considered operating plans, and to stimulate their execution.

In these efforts the Council brings together workers from many sciences, often from the physical and biological sciences as well as the social disciplines. It engages in a continuous process of evaluation of undertakings of three general types: service jobs, usually to meet immediate governmental needs; research on continuing problems of modern society; and research directed at bringing about an increase in the capacity of the social sciences to achieve results.

Its exploratory work has important values, both negative and positive. For example, on the negative side, the intensive canvass of many sectors of inquiry provides a background for judgment of specific research proposals resulting in avoidance of waste from ill-directed or less well-directed efforts. The positive values of this work are, of course, even more important. Such work provides at least a thoughtful assessment of priorities in social research; it induces anticipation of coming problems; it results in carefully developed outlines for research in specific problem areas; it focusses attention on the attainment of more conclusive, and socially more useful, results from research.

Through its research outlines, through conferences and individual consultation, the Council stimulates and guides a large amount of research that calls for no financial support.

For the continuation of its planning and conference activities, the Council has been granted an appropriation of $100,000 over a two-year period, beginning July 1, 1942.

Public Administration Committee. The agencies through which society will seek to meet its diverse problems are multiform, and total effort, whether for defense or for the post-war world, will receive its primary direction through the agency of government. For the past seven years the Foundation has supported the activities of the Public Administration Committee, whose original objectives were to capture and record and lay the basis for the appraisal of measures initiated in the United States for grappling with the consequences of the world-wide social and technological changes that were taking place. The end objective was, if possible, to add to the store of principles of administration so that administrators who must make decisions might profit by recent and current experience.

The Committee formulated a series of major studies of two general types: (1) administrative problems of new and emerging governmental activities; and (2) appraisal and review of significant developments in administration of the last three decades.

More recently the Committee has focussed its resources and attention mainly on planning and stimulating rather than on executing research. A broadening of the program to include the field of government, with public administration as one sector, is now contemplated. Such a program would deal less with the mechanics of administration than with the development of

sound bases for policy determination and more effective relationships in the expanding governmental structure.

For this program the Foundation has granted the sum of $60,000 during a two-year period to the Social Science Research Council for use by its Committee on Public Administration.

Canadian Social Science Research Council

Twenty thousand dollars were allotted to the Canadian Social Science Research Council for a two-year period ending in August 1944. The Council was organized in September 1940, after a year of exploration in the social sciences in Canada. One of the discouraging situations revealed was that a considerable number of completed works by competent scholars was likely to remain unpublished for lack of assistance. A 1941 grant in aid to the Council was partly used for this purpose.

Four standing committees have now been set up: current research in social science; grant in aid; publication; and post-graduate training. Because of the regional nature of the Canadian economy and the small number of social scientists in any discipline except economics this general committee set-up will help to improve the liaison among those doing research and training in the several fields.

While the war precludes organization of any large-scale projects, the Council can give encouragement to specific undertakings by individuals of significant but limited subjects.

The need for such an organization as the Council has been accentuated by the withdrawal of senior social scientists to responsible government positions. The Council's work has already proved useful to both universities and government.

National Bureau of Economic Research

The National Bureau of Economic Research is an independent agency, organized in 1920, to engage in the study of economic activities and their interrelations. Its studies encompass such important subjects as: the ebb and flow of business activity; the flow of national income, and the measurement of its amount and distribution; the formation and consumption of capital; trends in wage rates and earnings, nominal and real; production and productivity; the anatomy of prices; finance and credit, beginning with the financing of the consumer and of business and the behavior of investment credit; and the interrelations between fiscal policy and economic activity. In the past seven years its program has been broadened and the Bureau has become a focal center for cooperation among many agencies interested in economic research. It has become an agency, apart from government, widely used by universities, by government, and by business for the disinterested study of economic activities.

The financial research program, initiated approximately four years ago as an experiment in continuous research into basic problems of banking and finance, was undertaken through the efforts of the Association of Reserve City Bankers and with the cooperation of federal and state agencies. During the war period, this program will stress those areas of finance in which war and post-war strains are likely to be felt most acutely. For example, attention will be directed to the impact of the war on bank lending activities, on the financial structure of business, and on bank investment portfolios. Equity financing, problems of private international investment, and the development and plan of selective credit control in central banking policy will

also be studied both for the war emergency and the post-war period.

Another program, that of research in fiscal policy, initiated in 1939, parallels the work in financial research. A factual and theoretical examination of the difference between income as defined for business and for tax purposes is being made, as well as a study of defense and war financing.

The study of the national income has long been a major interest of the National Bureau. A recent report, *National Income and Its Composition, 1919–1938*, is the outcome of the work of more than two decades. Studies of this type are fundamental in the formulation and prosecution of certain financial aspects of the war effort, furnishing a background of the national financial structure and its changes over the twenty-year period.

A valuable contribution made by the National Bureau, in addition to the basic research, is the training opportunity offered in furthering the advanced scientific development of younger men.

To assist in the continuance of its general program, as well as of its special programs of financial research, the Foundation has appropriated to the National Bureau the sum of $255,000 for use during the period ending December 31, 1944.

Brookings Institution

The Foundation's continuing interest in the Brookings Institution was evidenced by an appropriation of $150,000 toward the support of its general program for a two-year period beginning July 1, 1942.

The research program of the Institution deals with the broad fields of economics and government, and involves the application of social research to questions of

Photograph Excised Here

Recent publications of the Brookings Institution.

social policy. Its publications reach a wide audience, are for the most part confined to questions of public importance, and exert a genuine influence in forwarding intelligent analysis of public issues in this country.

For the next three years the Institution is planning a program involving three major groups of studies: (1) post-war reconstruction; (2) requirements for the successful operation of the economic system; and (3) improvement of governmental organization and administration. In the first group work has already begun on a project entitled, *The United States and the Post-War World*. The second group is to be devoted to study of the complex issues involved in the operation of private enterprise in the kind of government-controlled economy which the trends in recent years have been developing. In the third group the more basic investigations will be concerned with the legislative process, possible changes in the constitutional system, and the organization of governmental controls over economic life.

The government service function of the Institution is one which has increased substantially in recent years. The opportunities for direct service both to Congress and the executive departments led the trustees of the Institution in 1939 to give formal approval to setting up an expanded program called the Government Service Function. Since that time there has been a wide range of requests from congressional committees, individual congressmen, and heads of executive departments.

While the war has not seriously interfered with the Institution's research program, the program for advanced graduate students, of which there have been about sixteen annually, will be discontinued for the duration.

Photograph Excised Here

Typical scenes from region included in the Iowa University study of production and distribution of food.

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University of Oxford, Social Studies Research Committee

A grant of $24,300 was voted to the University of Oxford for its Social Studies Research Committee for the year ending June 30, 1943.

Since a substantial number of the projects initiated by Foundation grants have been taken over into the program of the University or of the Colleges, an increased proportion of the Foundation's appropriation is now being devoted to the Institute of Statistics as a central office and research laboratory for a series of economic investigations. These relate for the most part to wartime economic and financial problems, or to initial exploration of the problems to be faced in the restoration of future international economic relationships.

Among the research projects are studies of family budgets, food policy, and nutrition, which attempt to discover the influence of rationing as well as of changes in consumption habits and wartime diets; studies of the movement of national income under the impact of war; the operation and technique of economic controls; and the effect of the war on commodity markets.

Other research interests of the Institute relate to the social reconstruction survey, the agricultural reconstruction study, a program of colonial studies, and a program of studies of problems of international economic reconstruction.

University of Chicago

The importance and timeliness of a study of wartime price controls are recognized in the appropriation of $11,175 to the University of Chicago. This project is being undertaken jointly by the Committee on Price

Determination of the Conference on Price Research and the Cowles Commission for Research in Economics, which transferred to Chicago a few years ago.

The study, providing an independent appraisal of the principles and techniques involved, will approach the problems from the point of view of the firms subjected to the price controls, and may add to the findings of various government agencies which are concerned with price questions.

The general objectives of the study are:

1. To ascertain the criteria actually employed in the establishment of price ceilings or other price controls;
2. To formulate the theoretical expectations as to how such controls would operate;
3. To find out how effectively such controls do operate and what their consequences are, partly by study of published data, but mainly by means of field interviews with purchasing agents and sales managers.

Materials on price controls from official sources, relevant statistical data on selected industries subject to price control, and trade journals will be studied. There will also be discussions with price control officials to learn the criteria used in setting price controls.

Interviews will be confined to the area close to Chicago, with provision for satisfactory coverage of sellers and buyers of the particular products which have been selected for intensive study.

Iowa State College

The sum of $10,000 was voted to Iowa State College toward the expenses of a study of governmental policies affecting the production and distribution of food in wartime. The grant was for a period ending June 1943.

This study has been recommended by the Secretary

of Agriculture, who felt the need for a critical appraisal by persons outside the government, of current policies and programs as they affect food requirements and farm production.

Attention will be focussed at first on the following aspects of the problem: (1) the management in wartime of the distribution of the food supply; (2) the effect of available manpower upon farm production; and (3) the question of farm price policy. It is expected that the lines of production to be expanded and the obstacles to larger outputs can also be investigated. It is hoped that recommendations as to food production, distribution, and consumption policies will result.

The proposed study will be of service not only in the emergency by contributing to the refinement of measures having to do with the production and distribution of food, but also in the long run, by permitting a study of problems in the revealing transformations through which they pass under war conditions.

University of California

The forced migration and resettlement of the Japanese population in California as a war measure has been the subject of much heated discussion, and the predicted consequences of this unusual undertaking have been many and varied.

Scholars in the University of California saw in this dramatic episode in American history an opportunity to make a unique social study. The Foundation originally made a one-year grant in aid of $7,500 for exploratory purposes, and later supplemented this by an appropriation of $15,000 over a two-year period beginning June 1, 1943, contingent upon securing a similar amount from other sources.

The assurance of cooperation on the part of government and other agencies involved has been obtained and already a substantial beginning has been made in the collection of data. The Tule Lake Relocation Center will be the main locus of the study.

Members of the staff outside the camp have collected as complete records as possible on a rapidly changing scene, including such items as shifts of public opinion, activities of pressure groups, and effects on agricultural communities of the withdrawal of Japanese farmers. The most important part of the preliminary task has been the organization of observations within the temporary assembly centers. Exploratory field studies were made in four of these centers under three main headings: administrative organization, social organization, and social maladjustments. Data are being collected by a staff including some qualified Japanese-American former graduate students at the University, with the full cooperation of the administrative personnel of the camp.

Values of a scientific and scholarly kind should result from this current history for both anthropology and sociology; one of the most significant of which should be the analysis of the incidence, change, modification, and persistence of the many conflicting ways of behavior under the impact of a crisis which broke the established line of experience of a large population group. The study will also give an historical record of a major forced mass migration in this country.

COLUMBIA UNIVERSITY

The sum of $22,600 has been appropriated for a study of the economic aspects of public finance, over a three-year period beginning approximately April 1, 1942.

The problems that will be considered are of decisive importance to the development of our economic system.

In general terms, the aim of this project is to describe and analyze the role of public finance in a modern economy with special reference to the economic aspects. Relations between public and private sectors will be emphasized, and the parts played by each in the production, distribution, and use of the national income will be compared.

In the beginning the project will be a description of the public finance components of national income and general measurements of economic activity; a re-examination of the shifting and incidence and effects of taxation, to discover what problems are important in our economy in the light of our present tax system and of changes that might come up for consideration; and an analysis of the economic aspects of government borrowing and debt repayment. War and depression finance will not be studied primarily in terms of current policy but in a long-run framework as well.

PRINCETON UNIVERSITY

In June 1941, the Bureau of Urban Research was established at Princeton for the consideration of certain problems of our urban communities. It is supervised by an inter-departmental committee representing various university departments and schools.

During its first year the Bureau studies resulted in several publications: *Local Planning Activity in the United States*, which summarized the country's planning efforts and offered directions for future community research; *Urban Planning — a Pilot Study*, which tested small scale surveys of citizen opinion toward local problems; and *Urban Reference*, which explained

the Bureau's system of collecting selected material concerning cities.

Its present research program, for which the Foundation voted an appropriation of $15,000 covering a two-year period, includes an analysis of the behavior of costs in cities. Studies of the impact of defense and war expansion on urban communities and of defense and war developments affecting urban areas are also being undertaken in cooperation with the Princeton Local Government Survey. It is hoped to make a contribution toward the better redevelopment of many American cities after the war.

FELLOWSHIPS

In 1942, the Foundation appropriated $25,000 for the support of fellowships in the social sciences during 1943. It administered 15 fellowships from funds allocated previously. Of these only 1 was a new appointment, 1 was a renewal, 2 were extensions, and the remainder were carried over from previous years.

The war continues to affect the fellowship program, as is illustrated in the downward trend of new appointments shown in the tabulation at the end of this section.

Summarized below are the countries represented by the persons receiving fellowships, their fields of research, and the countries in which they studied:

Country of Origin	*No. of Fellows*	*Field of Interest*	*No. of Fellows*	*Country of Study*	*No. of Fellows*
France	3	Economic Geography	1	Chile and Argentina	1
Mexico	1	Economics	6	United States	14
Norway	2	International Relations	4		
Sweden	1	Political Science	2		
Turkey	1	Social Psychology	1		
United States	7	Social Work	1		
	15		15		15

Another series of fellowships is administered by the Social Science Research Council. In 1942, of the 37 awards administered, 11 were post-doctoral and 26 pre-doctoral. Of the total, 21 were new awards. A Canadian and an Icelander received awards in this group. Funds for these fellowships were allotted previously, and to provide for next year's appointments, a continuing grant of $75,000 was made available to the Council.

With the opportunity for post-doctoral study in Europe cut off, the Council has been appointing an increased proportion of pre-doctoral fellows. It is worthy of note that the number of first-rate candidates has increased since the beginning of the war.

The following tabulation indicates the fields of study in which the fellows have received research training in the United States and other countries:

Fields of Study	*No. of Fellows*	*Countries of Study*	*No. of Fellows*
Anthropology	5	United States (continental)	25
Economics	13	Argentina	2
Geography	1	Brazil	2
History	5	Chile	2
Political Science	6	Great Britain	2
Psychology	2	Guatemala	1
Sociology	5	Mexico	2
		Bolivia	2
		Alaska	1
		Ecuador	1
		Peru	1
		Paraguay	1
		Uruguay	1
		Colombia	1
	37		44*

The number of persons who have received fellowships in the social sciences from The Rockefeller Foundation and the Social Science Research Council since 1924 is

* Fellows studying in more than one country account for the discrepancy.

given below. The new appointments are listed in the years shown:

	1924–1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	Total
The Rockefeller Foundation.....	315	78	48	47	40	22	24	29	21	11	9	1	645
Social Science Research Council.....	222	54	15	14	13	19	12	21	29	29	20	21	469*

GRANTS IN AID

A fund of $125,000 was provided for the purposes of grants in aid in the social sciences during 1942. This was supplemented by an appropriation of $10,000 later in the year.

Of the 48 separate grants made by the Foundation, the distribution by countries was as follows: England, 5; Canada, 3; Brazil, 2; Switzerland, 1; and the United States, 37.

Two distinguished British social scientists were invited to visit the United States to meet with representative American groups and individuals. This exchange was in furtherance of a plan to promote interchange of unofficial American and British views on problems growing out of the war. The first visitor was Professor Arnold Toynbee, of the Royal Institute of International Affairs, now director of the British Government's Foreign Research and Press Service. The second visitor was Sir Hector Hetherington, vice-chancellor of the University of Glasgow. As a member of the Permanent Committee of Vice-Chancellors of Great Britain, he has been directly concerned with problems of manpower control as they affect the universities. American educators and government executives had recommended that an invitation be extended. They were thereby given an op-

* Includes 107 fellowships in agricultural economics and rural sociology.

portunity to learn directly of Britain's experience in adjusting educational and war needs.

The continuance of assistance for several of the refugee scholars was made by eight grants, distributed over four different institutions.

In addition, a variety of studies were aided. These fell in the following fields: economic aspects of production for war; political and economic origins of the world dilemma; history of the diplomatic relations between Great Britain and Austria-Hungary in the immediate pre-war period; prices and price policies; Italian war financing; agricultural labor; post-war international problems; and post-war organization and policy.

The Graduate Institute of International Studies of Geneva was given a grant to complete and publish studies of international organization which had been initiated by the Geneva Research Center. A grant in aid was also given to the University of Minnesota to permit it and the University of Manitoba jointly to explore the possibilities of a study of the relation between the economies of the Prairie Region and the various alternative post-war settlements.

A number of small grants were awarded to various institutions to permit individuals to terminate studies which were well along the way to completion.

The grants ranged from $100 to $7,500 and totaled $140,870.

THE HUMANITIES

THE HUMANITIES STAFF

During 1942

Director

DAVID H. STEVENS

Associate Director

JOHN MARSHALL

Assistant Director

WILLIAM BERRIEN

THE HUMANITIES

THE HUMANITIES

THOUGH humanistic study and teaching in the universities and colleges may seem to be in abeyance for the duration of the war, in some fields the war has brought a notable quickening of effort.

Such quickening is particularly marked in the study and teaching of foreign languages. Wartime demands for instruction in languages little taught in the United States brought a prompt response in a number of universities. Languages of particular present importance are Russian, Chinese, Japanese, Portuguese, and others even less known, like Malayan, Thai, and Arabic. In the case of those for which teaching materials were available, intensive courses gave learners the opportunity quickly to acquire sufficient ability for such services as reading contemporary documents or analyzing radio broadcasts. Wherever teaching materials were lacking, the first step was to develop and publish them. The number of students in some languages soon exhausted available stocks of texts and dictionaries; their prompt replenishment was essential.

With this acceleration of language study it has been realized that understanding of the culture for which the language speaks is equally important. Many scholars in the humanities who possessed such understanding were called into government service at the outbreak of the war. Others, remaining in the universities, have developed and have offered intensive courses on foreign cultures; these, like those for language study, give practical training for various types of wartime service.

This wartime stimulation has had its effect in the whole range of study and teaching in the humanities. The success of intensive instructions for languages

hitherto little studied has led to an assurance that similar methods are applicable in the study of French, German, and Spanish; and the new emphasis on study of foreign cultures has directed research and teaching toward better service for international understanding.

In connection with its interest in the study of foreign languages and cultures, the Foundation during 1942 made grants to the University of California, Yale University, the Harvard-Yenching Institute, the Institute of Pacific Relations, the American Council of Learned Societies, the American Council on Education, Cornell University, and the Colegio de México.

The adversity which the humanities in the universities and colleges are now undergoing in fields less directly concerned with wartime service, is having the healthy effect of raising fundamental questions regarding the present organization of research and teaching. In the belief that this tendency holds future promise, the officers of the Foundation concerned with its program in the humanities made a special effort during 1942 to keep in touch with new developments in their field. A grant to Stanford University reflects this interest in the revitalization of the humanities in university and college teaching.

At the same time, the impact of the war brought to the forefront questions regarding the role of the humanities in North American life. To explore these questions, the officers during 1942 held six conferences with scholars, writers, critics, and journalists who represented three regions of the continent. The first dealt with the St. Lawrence Valley; three, with the Great Plains; and two, with the maritime and industrial areas of northeast Canada and New England.

The aim in these conferences was to get a clearer view of the present cultural situation of these regions, which

typify different ways of North American life. In each, the queries were identical. What responsibilities and opportunities have our humanists — scholars, writers, critics — to encourage native growth? What similar responsibilities and opportunities have our universities, colleges, and schools? To what extent are the people of the continent being helped to a better understanding of what they are, what they belong to, and what they live by? Most important of all, what responsibilities and opportunities have all humanists to make the people of this continent better understood by each other and by other people?

Grants of 1942 that reflect this interest in regional studies of North America were made to Cornell University, the University of Missouri, the Texas State Historical Association, the Carolina Art Association, and Colonial Williamsburg, Inc.

The Foundation during 1942 continued its contributions in the drama, film, and radio. In spite of the motion picture, amateur drama has had an interesting and significant growth during the last decade in America. Work at Smith College and at the University of North Carolina was assisted by the Foundation in 1942. It is now a truism to say that motion picture film and radio have tremendous importance as interpretators of life and as factors in determining the character of national life itself. Whether intended for instruction, entertainment, or propaganda, whether factual or fictional in treatment, they furnish much of the essential documentation of contemporary life. In 1942 in connection with the Foundation's interest in these two media of mass communication, contributions were made to the American Film Center, the Library of Congress, and the Rocky Mountain Radio Council.

No matter in what form human utterance may be

recorded in the future, it is difficult to visualize a world in which books and libraries will not be useful. During 1942, in connection with its interest in libraries, the Foundation made appropriations to the American Library Association, the National Central Library, London, the University of New Mexico, and the University of Buenos Aires.

Other grants of 1942 were to the Library of Congress for studies of Communication Trends in Wartime; to the New School for Social Research for studies of Totalitarian Communication in Wartime; to the Museum of Modern Art for its Educational Project; to the American Council of Learned Societies for general support and for a critical history of Federal Arts Projects; and to the Delegates of the Press, University of Oxford, for aid to refugee scholars.

STUDIES IN LANGUAGE AND FOREIGN CULTURES

University of California
Far Eastern Language Teaching

The University of California has received a grant of $36,000 to meet the need for efficient teaching of oral Chinese. A year ago the Foundation appropriated $15,000 as an emergency aid to the College of Chinese Studies at Peiping, part of which was used to extricate the working library of this College and to bring it to Berkeley, California, where it will be invaluable for Chinese studies. Recourse will also be had to the aid of properly trained native teachers. Military and other governmental agencies are supplying students. Once more war exigencies are promoting a type of work which in time of peace goes forward slowly.

YALE UNIVERSITY
FAR EASTERN STUDIES

Intensive courses in Chinese require materials suited to the needs of students in many fields of study. The Foundation has tried to aid in the development of such materials. As early as 1935 a grant was made to the American Council of the Institute of Pacific Relations to prepare more adequate materials for teaching the Chinese language. In 1937 a grant was made to Yale University for the development of Chinese studies over a five-year period. At the end of this period Dr. George A. Kennedy, who had been in charge of this project, immediately started work on texts to be tested experimentally at Yale University and at summer sessions in other schools.

New methods of teaching were tried out in the summer of 1936, when use was made of the recent Chinese practice in the education of adult illiterates by employing a basic vocabulary of not more than 1,000 characters. Graded readings based on this limited vocabulary have been made available. In 1936 Dr. Kennedy also purchased in China fonts of Chinese type which students could use in learning the characters. Yale University now has a Chinese printing office operated by the Department of Oriental Studies of the Graduate School which is one of the best equipped in the United States. The number of pieces making up the various fonts is nearing the half million mark. At present this printing office is kept busy by requests for books, technical dictionaries, and aids urgently needed for new wartime activities.

The work at Yale University is another instance of the war reaching into university halls and giving recognition to unusual linguistic research. The sum given to

Yale University for this work under the direction of Dr. Kennedy was $10,760.

Harvard-Yenching Institute
Japanese Dictionaries

The Harvard-Yenching Institute is a Massachusetts corporation formed in 1928, with office and library at Harvard University. Its primary purpose is to carry on research and educational work in Oriental culture.

The increasing enrollment of young men and women in intensive courses in Japanese has put a strain on the supply of available dictionaries. At the beginning of 1942 at four centers, Harvard, Yale, Columbia, and the University of California, 200 students were giving full time to the language and at least fifty more were at work in other centers. The indications were that enrollments would rise sharply during the course of the next few years at these and other institutions.

These classes needed quick access to dictionary materials. Each student should have his own. The two standard dictionaries most urgently needed were virtually unavailable. To meet this situation the Foundation made two grants of $10,000 and $5,000 to the Harvard-Yenching Institute. Within five days after the Foundation's first appropriation had been made, 2,000 copies of a 507-page *Beginner's Dictionary* had been reproduced by a photographic process and gathered into cloth bindings. In addition, 2,000 copies of another important Japanese-English dictionary were reproduced by the same photographic process.

Institute of Pacific Relations
Source Materials, Chinese History

In addition to the training of experts in technical skills in the humanistic field required by war, there is

an increasing demand for a greater volume of new material pertaining to Oriental culture. To meet part of this need the Foundation in 1942 gave $56,100 to the Institute of Pacific Relations for the production of English translations of source materials on Chinese history. This work is under the direction of Dr. K. A. Wittfogel and selected Chinese scholars.

The purpose is to provide indispensable source materials of interest to every student of Far Eastern subjects. It is not possible to understand China unless a much better idea of its complex history is obtained than can be gleaned from Western textbooks. This research work is laying the basis for a solid continuation of scholarly interest in Chinese culture. Scholars of this country look upon this Chinese history project as a piece of comprehensive and difficult research which will yield exceptional returns. It is especially illuminating in the new light thrown on anthropological aspects of the development of China. When completed the work will provide a documented record of the social and cultural history of China from 221 B.C. up to the present.

American Council of Learned Societies
Chinese History

One of the present interests of the American Council of Learned Societies is to encourage the translation into English of new works on the history of Chinese thought useful as class texts and general reference reading. A grant of $6,000 was made to the Council in 1942 for work of this character under the direction of Dr. Hu Shih, former Chinese Ambassador.

Until the beginning of his diplomatic service Dr. Hu Shih gave a large share of his time during twenty years to a work on the history of Chinese thought. The first volume was published in 1919. Present plans include

revision of this volume and compilation of additional volumes on the history of the nineteenth century. These works are to be in the Chinese language and therefore immediately useful to all scholars at more advanced levels of their work. Translating them into English and possibly into other modern languages will also make them available to a wider sphere of scholars unacquainted with the Chinese language. Likewise of great assistance to this wider circle will be a single volume in English by Dr. Hu Shih giving a synopsis of the entire historic development of Chinese thought.

American Council on Education
Teaching Far Eastern Subjects

Recently the American Council on Education, recognizing the importance of study of the Far East in colleges and secondary schools, has been reviewing all previous work, with a view to bringing better materials into use in courses at the secondary school and college levels. During 1942 material was tested at the workshops for teachers which some twenty universities offered during the summer. At each workshop specialists on the Far East led discussions in a small group of representative teachers. To aid this work the Foundation granted the sum of $9,900 to the American Council on Education for use during the year 1942.

Cornell University
Cultural History

To create centers of influence upon teaching and upon public understanding with reference to subject fields not adequately treated in orthodox courses of American schools and colleges, aid was given to Cornell University in the amount of $15,000 for summer programs

aiming at preparing materials to introduce American students to the history of ideas and cultural patterns of the Far East, Latin America, and the British Commonwealth of Nations. Present work at Cornell will help to translate the flood of current data from these areas into school and college instructional material of high quality. The method of procedure is to establish as a workshop a corporate group of representative teachers. Full use is made of visiting consultants. There are no set lectures but much discussion, consultation, and interchange of opinion. The grant of the Foundation is for a three-year period.

Colegio de México
Center for Historical Research

The Foundation has appropriated $29,340 to the Colegio de México toward expenses of its Center for Historical Research. This Colegio was organized in October 1940 to advance research in history, physiology, and biological sciences, taking over a former institution, La Casa de España, formed by friends of Spanish refugees in 1938 with direct support of its program from the Mexican Government. The Center for Historical Research constitutes one of the units of the Colegio. The Colegio also supports a press for publication of research with a substantial record of output.

The director is Dr. Alfonso Reyes, a distinguished humanist who formerly, in collaboration with the University of Mexico, conducted the work at La Casa de España. The Colegio is organized as an independent unit around which is developing a national plan for teaching and research in the humanities, attracting scholars also from other Central American republics. The plan involves cooperation with other institutions

in the Federal District and with provincial libraries. The Foundation grant for two years will contribute toward projects, fellowships, and research plans of the director.

AMERICAN STUDIES

STANFORD UNIVERSITY
SCHOOL OF HUMANITIES

Stanford University is organizing a new School of Humanities directed toward giving third and fourth year college students well-devised training for creative or scholarly work. Plans for the School, drafted after the study of humanities programs in twenty representative universities, take into account some of the new trends which make curriculum revisions inevitable. They include survey courses in aspects of world civilization, instruction in drama and speech at university level, and courses in general language and world literature, as well as new offerings on Latin American and Far Eastern cultures. The purpose is to present to the students, not a mosaic of parts taken from many college departments, but a new, well-integrated course on a seminar basis, avoiding close specialization. The Rockefeller Foundation grant of $47,500 for three years, supplies funds for an additional staff with an outlook broader than that of scholars trained in the accepted manner for departmental service. The emphasis is not on the separate disciplines but on the breaking down of the barriers between the disciplines to gain a fresh view of human culture which is broad enough to include characteristic values from the history and life of all peoples.

UNIVERSITY OF MISSOURI
AMERICAN HISTORY

During 1942, the Foundation appropriated $15,000 to the University of Missouri for use over a three-year period in the development of regional studies in American history. The University of Missouri works in close collaboration with the Missouri Historical Society. The two libraries are housed in the same building. Each has developed a body of reference material on different phases of southern and western history. Publications of the University are the quarterly, *The Missouri Historical Review*, the *Weekly News Letter* distributed to the press for the column, "This Week in Missouri History," and monographs in the *University of Missouri Studies*. Officers of the University and of the Society systematically promote national distribution of information on their resources. One unique possession of the Historical Society is a complete file of St. Louis newspapers going back to pioneering and colonization periods. Large collections of family papers and letters from western pioneers have also been located. It is now proposed to organize and abstract such material as can be brought to the University, and also to have field workers carry on supplementary investigations. Within three years very large additions can be made to present collections.

TEXAS STATE HISTORICAL ASSOCIATION
AMERICAN HISTORY

An appropriation for another regional study was given to the Texas State Historical Association, which has close relations with the University of Texas. The Association has also state representation in staffs of other institutions. In addition to maintaining a publication, *Southwestern Historical Quarterly*, and issuing

monographs, it has undertaken the publication of the *Junior Historian*, written by and for young people in the secondary schools. This journal is prepared by local chapters of young people who have the encouragement of the Association in studying the history of their immediate locality and of the State.

Some of the members of the Association are in business or in industry in sections of Texas where it is possible to collect unpublished documents useful to the work of the Association. Pioneers still living have facts that can be preserved only by interview. Large collections of unpublished materials at the University are available to scholars and historians. In many instances small grants will enable writers to complete their manuscripts on significant phases of southwestern history. With that in view the Foundation appropriated $15,000 to be used during the three years from July 1, 1943, toward the completion of studies of the Association.

Carolina Art Association
Charleston Civic Services Committee

The Carolina Art Association is one of the strongest and oldest organizations of its kind in the South. It was incorporated in 1858 and is at present engaged in creating a central planning board for the protection of one of the historic cities of the United States. Its program has included a variety of activities aimed at presenting art and cultural interests to the people. In 1937 this Association took on the added responsibility of operating the new Dock Street Theatre, a restoration of the old Charleston playhouse which was originally opened in 1736. Today this theatre serves some 2,400 members with a sequence of modern plays throughout the year and has recently extended its activities into the training

camps, giving plays for the military and naval population of the region.

In 1941 the Association faced the necessity of keeping from destruction historic houses of Charleston threatened by the push and thrust of rising population. Large architectural exhibits have been prepared showing work of each generation back to 1790. These involve timely aspects of city planning with reference to recreational areas, school facilities, and modern housing projects. The Civic Services Committee is now projecting its program of city development through plays and radio programs, evening forums for workers, and by help to local organizations engaged in the work of preservation and reconstruction.

In pursuing its new civic interest the Carolina Art Association encountered two obvious needs: an inventory of the whole city to determine buildings worthy of preservation, and a clearing house to set standards and draw plans. Index cards made for over 1,000 buildings with photographs and notes attached have been reviewed by architects and other authorities. Toward this new project the Foundation granted the sum of $24,000 for use during a period of three years.

Cornell University
York State Region Study

Cornell University has had for some years an active interest in the traditions of upstate New York. Research work has been promoted in the field of folklore and folk music, and in the field of drama there has been constant writing of plays suitable for production by community and rural groups. Such literary and historical studies are paralleled by research in the physical and social aspects of New York life from the time of its

earliest settlement. A variety of interests of this nature are represented in the departments and schools of the University.

To give this work form the University now has an Institute of History and Folklore as a permanent center not only for scholarly studies of the region but also for creative interpretation of such material in literature, music, drama, and the graphic arts, and for the active dissemination of new knowledge. The Foundation has made a grant of $18,000 for studies of this region during a five-year period.

Colonial Williamsburg, Inc.
Virginia Gazette

In 1933 and 1934 The Rockefeller Foundation aided the compilation of the *Virginia Historical Index* which makes available to scholars early Virginia records of historic interest. An index to the *Virginia Gazette*, for which The Rockefeller Foundation has now supplied $18,500 for a three-year period, is intended to supplement this record by providing important facts concerning the daily life of the Virginia colony. No adequate history of colonial life can be written which does not incorporate the rich materials found in the files of this journal, which, for most of the colonial period, was the only newspaper published. The important documents are those for the years 1736–1780, when the *Virginia Gazette* maintained a steady record of publication in the original form, producing a mine of invaluable information on social, economic, religious, and political phases of Virginian colonial life. In all, there are 1,165 issues, containing the equivalent of about 25,000 octavo pages. The new index will be an analytic record of references to that body of text.

American Council of Learned Societies
Critical History of Federal Arts Projects

The proposed critical history, for which $40,000 has been furnished to the American Council of Learned Societies, is to deal with the Federal Arts Projects in art, theatre, music, writing, and the survey of historic records. For more than six years these projects operated on a national basis and gave employment to upwards of 40,000 persons, many of whom were given an opportunity for creative expression. No government of any democratic nation other than the United States has ever undertaken an enterprise of this sort on so large a scale. The story of it should be preserved for the future.

Present plans for a critical history contemplate seven monographs suitable for commercial publication. When completed they will be of value not only to historians and people in general, but also more particularly to others who in the future may well be responsible for planning and administering similar enterprises.

DRAMA, FILM, AND RADIO

American Film Center
General Support

The American Film Center was established in 1938 to meet the increasing need for an organization to provide impartial guidance and advice in the production, distribution, and use of motion pictures of educational and cultural value. The Center is incorporated as a nonprofit agency, with offices in New York City. In 1942, the Foundation made a grant of $50,000 toward the general support of the Center during 1943 and 1944.

The nature of the Center's work can be illustrated by one of a series of films produced during 1941 and

1942. A committee of the Center, composed of specialists in nutrition, had for some time studied the possible uses of films in bringing this subject to a wider audience. When the value of a general film for theatrical showing had been agreed on, funds to finance its production were secured from one of the large packing companies. The script for the film was prepared with the help of leading nutritionists, and its approval by the Federal Security Agency led to the release of the finished film under its sponsorship as a part of its nutritional campaign. Subsequently this film, *Hidden Hunger*, was made available for non-theatrical showing, and four more non-theatrical films were made and released, each dealing with some special phase of the subject.

In this instance, as in others, the Center served first to focus the need for motion pictures in a given field, and second to arrange the production and distribution of films to meet those needs.

Library of Congress Motion Pictures

For documentation of contemporary life, it is clearly of interest, both to the present and to coming generations, that such indispensable source material as is provided currently by the motion picture film should not be lost. In this respect the Library of Congress is assuming a new responsibility. Through application of the deposit provisions of the Copyright Act, excellent source material can be secured, but until recently no plan has existed for the handling, cataloguing, storage, and preservation of this material.

With a grant of $25,000 the Foundation is financing a cooperative agreement between the Library of Congress and the Film Library of the Museum of Modern

Art. The latter is a non-profit organization that has had half a decade of activity in choosing, acquiring, preserving, cataloguing, and studying motion pictures of all types, and in making them available in the public interest. Films already in its possession cover four decades of motion picture production, embracing foreign as well as domestic, old as well as new, topical, instructional, propaganda, and fictional matter — all told, over 16,000,000 feet of film, constituting the largest and most carefully selected collection existing anywhere in the world. The Library of Congress is relying on the experience developed by the Film Library of the Museum of Modern Art in setting up its own film depository. For the present, the Film Library is to retain, store, maintain, and preserve representative productions from those deposited for purposes of copyright in the Library of Congress, and is to make this selected material available to government agencies, responsible researchers, and others, under a plan to be laid down by the Library of Congress.

Smith College
Drama

During wartime when the draft is making inroads upon the manpower of stage, screen, and college, the women's colleges are in a good position to continue some of the new work that has been developed in drama dealing with the local scene. The folk theatre and the college theatre can operate with a minimum of financial outlay, accomplishing much on a modest budget.

Continuing its support of dramatic work at important college centers, the Foundation in 1942 made a grant of $14,000 to Smith College to expand its drama program during the next two years. The director in

charge of the new work is Mrs. Hallie Flanagan Davis, formerly head of dramatic work at Vassar and director of the Federal Theatre Project, who has now been appointed dean of Smith College and professor of drama. Smith College has one of the most superbly equipped open air theatres in the country. The College has already been called upon as one of the four key centers in the State of Massachusetts for providing dramatic performances for the community and Army camps in the New England area. By such regional service, the departments of drama, dance, music, and art will make the college a center for training in community work as well as in individual types of creative expression.

University of North Carolina
Drama

The Department of Drama of the University of North Carolina has had steady development during the past ten years, with rapidly growing influence throughout the State by its relations with secondary schools and community groups. Its advanced courses in playwriting, pageantry, lighting, and direction make it one of the most successful departments in the United States in the training of teachers and directors. Instruction in film and radio also is offered to persons interested in these forms of dramatic presentation.

Present changes in drama activities at the University reflect the common experience of universities in wartime. In addition to carrying on their class work, the men in the Department now are working with government on needs of Army camps in the State.

The Foundation has contributed to support of drama work at the University of North Carolina since 1934, under its program of aid to a limited number of such

training centers. In 1942 a grant of $9,750 was made for expenses of the Department during 1942 and 1943.

Rocky Mountain Radio Council

At Denver, in the Rocky Mountain Radio Council, there has been established an experimental, non-profit, program-building organization, based on the assumption that radio can enable educational institutions and civic organizations to serve the entire population of the area. Because virtually all the radio stations in the region cooperate, the Council was responsible for some seventeen hundred broadcasts during the current year. Many of these, in recorded form, were broadcast to the people of the region by stations without other facilities for dealing with questions of importance.

Representatives of the Denver stations have been meeting each week as a committee, of which Mr. R. B. Hudson, director of the Council, is chairman, to develop policy for the local handling of war news. As a result of such planning, the regional significance of news of national importance has been presented in an efficient, fair, and impartial manner which has won the Council wide recognition. The Foundation in 1942 made a final appropriation of $15,000 over a three-year period toward expenses of the Council, which, as yet, are not met from earnings and contributions.

LIBRARIES

American Library Association
Catalogue of Library of Congress Card Index

The American Library Association has received $37,500 toward the cost of producing the card index of the Library of Congress in book form. A beginning has now been made on reducing this entire index of several

million cards to book form by means of photography. The plan is to reproduce the total card index in a series of about 160 volumes of 640 pages each, and to sell the sets at a moderate price.

Expenses for supplying an entire set of Library of Congress cards formerly averaged about $7,000. Present procedure, which leaves data from the cards still entirely legible and available in familiar book form, has cut this cost to $750 or less per set. The immediate purpose is to make available to selected institutions abroad this most important single bibliographical resource developed by American librarianship. South and Central American libraries especially will have prompt use for this catalogue. European libraries will need it when the war closes, if only as a source of information on books for purchase. American scholars abroad will eventually be benefited by the greater availability of this catalogue. The Foundation's grant was to assure a proper distribution of the printed catalogue outside the United States, supplementing the plan to supply libraries within this country with a trade edition.

American Library Association
Board on International Relations

The war has greatly increased outside interest in the United States, its people, its way of life, the products of its culture. The American Library Association is establishing a central office in Washington, D. C., where the Association can be of service to the government in its new cultural, as well as economic and political, relations with other countries. The central office of the American Library Association will act as a clearing house to effect economies in international library projects.

Early in the year the American Library Association

Photograph Excised Here

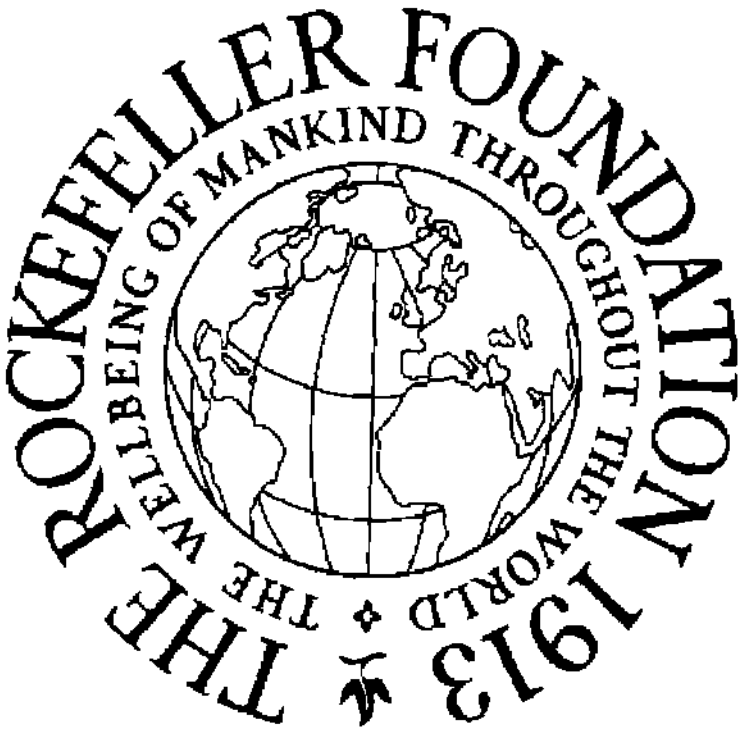
National Library, Bogotá, Colombia.

established a Board on International Relations which took over responsibility for the foreign programs of the Association and also the direct supervision of all its international activities involving library cooperation with Latin America, Europe, the Orient, and war areas in general. This Board is also cooperating closely with the Committee on Work with the Foreign Born, the Committee on Refugee Librarians, Committee on the Revision of the Anglo-American Catalog Code, the Joint Committee on Library Literature in Translation, and the Canadian Library Advisory Board.

For the work of this Board the sum of $25,000 has been made available to the American Library Association for use during a two-year period.

American Library Association
Colombian Library School

Support was given in 1942 to the American Library Association for conducting a summer school for librarians in Bogotá, Colombia. The instruction was in four main topics: administration, history, and purposes of libraries; book selection; information on bibliography, classification, and cataloguing; and methods of giving service to the public with emphasis on reference work, adult education, and the needs of children. This proposal came from Dr. Daniel Samper Ortega, formerly librarian of the National Library, who was appointed by the Ministry of National Education in Colombia as liaison officer between the National Library and the American Library Association. Dr. Samper Ortega has made extended visits to the United States to acquaint himself with the best features of university and library work in this country. The plan had the approval of the Colombian Ministry of National Education, and the



Photograph Excised Here

Courtesy Life

Chinese font, Yale University.

teaching staff was made up from the staff of the National Library and from North Americans trained in library work. The purpose was to have thirty carefully selected students, with general lectures to larger groups. The amount of the grant was $9,250, to be used largely for salaries and travel of the American staff, for books and materials, and in special cases for student aid.

American Library Association
Canadian Library Council

Until recently Canada lacked facilities to use microphotography as a means of exchange between libraries, nationally or internationally, apart from a small microphotographic laboratory in the Toronto Public Library. A number of Canadian libraries have reading machines and could make good use of film materials on loan or as permanent acquisitions. The present plan is to enable the Canadian Library Council to obtain and operate equipment adequate to supply microcopies of Canadian materials wanted by libraries in Canada and in other countries. The equipment will be used first to copy the scattered files of Canadian newspapers before 1870 which represent the most important single source for Canadian history in the period ending with confederation in 1867. Proceeds from the sale of these copies will return to the Council as a fund for other microphotographic projects. It is estimated that the copying of these papers, a total of some 725,000 pages, can be completed within a three-year period.

The Foundation has furnished $17,500 to the American Library Association for use of the Canadian Library Council in establishing both a microphotography and a general advisory service for Canadian libraries. The latter aims at providing a field visitor or visitors to

maintain contacts among Canadian libraries and with library work in the United States. The purpose is to overcome the handicapping effect of long distances between libraries in Canada and the resulting isolation from the larger centers of library activity. The new project will aid the Canadian Library Council in becoming a strong central agency for better national library service.

National Central Library, London

The National Central Library, which is the clearing house for library information and library service in England, has in recent years, with Foundation aid, become a center also for information on American books and periodicals. In 1937 the Foundation made a grant establishing this branch of its bibliographical service. During the war the Library is continuing its service to urban, county, and university libraries throughout the British Isles. This Library not only lends books from its own shelves, but it also arranges for the loan of books between libraries through its special stock of bibliographical information. Recently it has taken on the additional work of supplying necessary information about librarianship and library technique, for which there is a demand by government departments, national research associations, and agencies engaged in war production. The Library has likewise undertaken responsibility for the loan of educational books to men of both Britain and America in the armed services.

In 1941 a fire due to enemy action caused the loss of more than half the books of the National Central Library. Fortunately the catalogues and bibliographical material escaped destruction and the Library continued its work without a break. The new grant in 1942 of

$9,760 is to be used for the general operations of this Library and especially in the replacement of lost books.

University of New Mexico

As explained in the Annual Report of 1938, the State of New Mexico, through its University located at Albuquerque, has organized a center of research in Spanish American history and culture. There is close collaboration with the Laboratory of Anthropology at Santa Fe, to which the Foundation has in the past contributed. As a consequence, New Mexico has become one of the best laboratories for regional study in the Spanish American tradition, with especial reference to Mexico.

Considerable quantities of documentary material now constitute the basis of a number of valuable collections. During the few years since the operation of the grant made by the Foundation in 1938, which provided bibliography and reference books for advanced students, the University has by its own efforts enlarged library resources for graduate study. Additional material is still needed in certain fields for postgraduate work, namely, history, anthropology, literature, and language. The Foundation has now provided a grant of $25,000 to obtain a supply of journals, books, and manuscripts needed for sustaining the research program.

University of Buenos Aires
Bibliographical Center

The University of Buenos Aires has a college and six professional schools served by libraries located in various quarters of the city, with a staff of 135 persons and in all some 700,000 books and pamphlets. It is now proposed to centralize this library service, and a plan

has been drawn up providing for new quarters in the part of the city convenient to the largest number of students, with sufficient room for modern services, including a microfilm laboratory and a complete Library of Congress catalogue. There is also provision for instruction in library practice to serve the growing demands of the country for trained administrators. One of the first activities will be the making of a union catalogue of all holdings at the new center, the preparation of which will serve as a training in modern library practice. The Foundation is providing $47,250 to the University of Buenos Aires for this undertaking.

OTHER GRANTS

Library of Congress
Studies of Communication Trends in Wartime

An account has been given in former reports of activities in the Library of Congress concerned with a broad study of communication trends in wartime. A systematic analysis of what has appeared in print, broadcasting, and motion pictures was attempted. These efforts should be valuable in producing basic data for a history of communication during the war. Government departments are making excellent use of personnel trained in this type of work. In 1942 the Library of Congress received a final grant of $33,000 to carry on this work. The analytical methods pursued are now being applied to such recently produced materials as war posters and speeches. A by-product of the work has been the preparation of an annotated bibliography of propaganda materials issued by the major powers. Many

of the techniques used in this type of study are statistical in nature, with full use of coding procedures. In general the study calls for a variety of skills involving variously trained personnel. During 1942 approximately fifty persons active in this type of work were transferred to the Department of Justice, and sixteen others to other government agencies.

Universities, too, are interested in this type of technical analysis. Princeton has for some years had within its School of Public and International Affairs an Office of Public Opinion Research, which is now the center of a large body of material on polling procedures. Columbia University has an Office of Radio Research engaged in valuable methodological studies involving appraisals of radio communication and listening. It seems likely that in years to come there will be a niche in university programs for this type of research on mass communication.

New School for Social Research
Totalitarian Communication in Wartime

Continuing the work of analyzing foreign wartime propaganda, such as was carried on last year with Foundation support at the Princeton and Stanford University radio listening centers, the Foundation made a grant of $19,740 to the New School for Social Research so that it may go on with its study of totalitarian communication in wartime. The work at this school takes the form of intensive analysis of radio broadcasts originating in European countries with which we are at war. War propaganda has become a complex art based on standard technical procedure and susceptible to careful classification and scrutiny from various angles.

The work at the New School for Social Research is

directed by two unusually qualified scholars, Dr. Ernst Kris and Dr. Hans Speier. Dr. Kris, formerly assistant curator of the Kunsthistorisches Museum in Vienna, is a well-known psychologist who from 1939 through 1940 worked in England in the Foreign Broadcast Monitoring Service of the British Broadcasting Corporation. Dr. Speier, formerly docent at the Deutsche Hochschule für Politik in Berlin, is primarily a sociologist. These men have developed a corps of thoroughly trained research assistants imbued with scientific purpose and in a position to make a real contribution to the American war effort.

The purpose of the study is to discover the bent and underlying intentions of the propaganda process to which Europe is being subjected. The interest of government agencies in this type of work and a spreading interest in it also in academic circles make it likely that it will find its place in university research after the war. In its larger aspects this project is making a fundamental contribution toward the knowledge of the part played by mass communication in modern life.

Museum of Modern Art Educational Project

The war has curtailed the usual visits by school children to museums. To counteract this, the Museum of Modern Art, New York City, is emphasizing circulating exhibits as a method of continuing educational work in public and private secondary schools.

An extensive survey has shown that many schools are interested in securing exhibits, and to satisfy this need the Museum of Modern Art has available forty-two sets of pictures suitable for circulation. In getting together these exhibits considerable reliance has been placed on

the collaboration of young people themselves in the selection and organization of the material.

The Foundation has made a grant of $13,500 in furtherance of this educational project. Present emphasis is on the preparation of inexpensive exhibits and portfolios to be made available even to small rural schools.

American Council of Learned Societies
General Support

During the last fifteen years the position of the American Council of Learned Societies has moved rapidly from one of representation of its member societies to one of leadership in the development of unworked or neglected fields of knowledge, with a view to creating in this country a range of research and a body of scholars which will constitute an adequate national coverage of the humanities. The Council has now taken on the additional function of serving government needs. Demands for results from the work of its Committee on Latin American Studies have become more urgent. The effort of the Council to develop other unworked fields is also bearing fruit at a time when the country needs the service of people in command of such languages as Chinese, Japanese, Turkish, Arabic, and Russian. The work of the Council's committees in developing competence in these languages has become even more timely than was anticipated, as is evidenced by the fact that one federal agency, the Federal Communications Commission, found it suddenly necessary to recruit a staff of 350 persons for listening to foreign broadcasts, 75 per cent of which are in languages other than English. The officers of the Council also are directing, under a recent grant of the Foundation, a project for microfilming in Great Britain cultural material liable to destruction.

Toward general support of the American Council of Learned Societies, including expense of its executive office in Washington, D. C. and of conferences, an appropriation of $80,000 for a two-year period was made by the Foundation in 1942.

Delegates of the Press, University of Oxford Aid to Refugee Scholars

The task of giving aid to refugee scholars through a grant to the Delegates of the Press, University of Oxford, of which an account was given in the Annual Report of The Rockefeller Foundation of last year, was successfully carried out during 1941. Men were chosen on the basis of need and ability to produce substantial works of learning approved by the Delegates of the Press. There was no restriction of nationality or subject matter. The persons aided were natives of various European countries and the subjects studied ranged through medicine, art, and the sciences to classics and the philosophy of law. The grants given assured a modest subsistence to eighteen eminent scholars, enabling them to engage for one year on work for which they were particularly fitted, and in some cases to carry on substantial works of learning, towards which British scholars on their return from war will once more contribute. The work was continued during 1942 by a grant of $5,000 with the intention of giving special consideration to older men with long range projects, the completion of which would be endangered unless immediate assistance were given.

GRANTS IN AID

During 1942 the Foundation's grants in aid were a useful adjunct to its larger appropriations in encourag-

ing development of the new fields in the humanities. Film and radio, little-known modern languages, Far Eastern and regional studies, as well as the earlier fields of concentration — drama and library work — all received emphasis in the grants in aid program.

Grants were given in 1942 for the preparation of a history of the motion picture in pre-Nazi Germany, for the production of film for teaching English to non-English-speaking people, for a study of the problems of educational film production, for preparing a report on documentary film-making in Great Britain, and for incorporating work with motion pictures into the curriculum of the School of Design in Chicago. The improvement of radio broadcasting and its use for educational purposes were furthered by grants to universities and to the Library of Congress. Aid was given for emergency needs in teaching and special studies in Japanese, for the advancement of Portuguese teaching, and for teaching English as a second language. Money was appropriated to complete a history of Chinese literature, to compile a gazetteer of Japanese place names, and to study methods of teaching history and contemporary culture of the Far East. Regional conferences supported dealt with French Canadian studies, the Great Plains, the Northern Plains, the eastern maritime region, and the southern New England area. Ten grants were given for the development of drama, particularly Canadian, eight for the improvement of library facilities, especially in Central and South America. Princeton University was aided in the reorganization of its humanities program.

In all, 65 grants were made, totaling $160,034. Varying in amount from $107 to $7,500, most of the grants were for use in the United States, with 6 in Canada, 2

each in Mexico and Argentina, 1 in China, and 1 in various parts of Latin America. Among those who received grants in aid were 6 refugee scholars.

FELLOWSHIPS

From a fund of $50,000 appropriated in 1941 the Humanities Division of the Foundation administered directly 39 fellowships in 1942. Of these, 26 were new grants, 13 continuations from 1941. Holders of fellowships were scholars from Argentina (1), Venezuela (1), Brazil (2), China (2), Guatemala (2), Puerto Rico (2), Canada (3), and the United States (26). Though most of the fellows studied in the United States, 2 were in Canada, 1 in Bolivia, 1 in Guatemala, 1 in Colombia, and 1 in various parts of Latin America.

Wartime communication, which was the subject of study by 9 fellows last year, continued to receive attention during 1942 with 7 grants given for research at the Library of Congress, the New School for Social Research, and the Office of Radio Research, Columbia University. Five fellows made studies of radio audiences, and another did research on public opinion. Grants were given to 6 persons for work on Far Eastern subjects at Columbia, Cornell, and Harvard-Yenching Institute. Latin American studies were strengthened by 5 awards, 4 to citizens of the United States who went to Latin America, and 1 to a citizen of Guatemala who studied at the University of Chicago. Four Latin Americans and 1 Chinese scholar received fellowships for research on methods of language teaching. Three fellows, 1 each from China, Puerto Rico, and Venezuela, studied international librarianship. Four grants were made in the field of drama, 2 for North American studies, and 1 for research on methods of visual presentation in museums.

CHINA PROGRAM

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FOR its China Program during the year 1942–1943, the Foundation appropriated a sum of $72,000 in 1942. Five projects received $20,500 of this amount; $33,500 was for local and foreign fellowships; and $18,000 for grants in aid. In addition, the Foundation gave $50,000 to the Associated Boards for Christian Colleges in China for a fifth year of emergency aid to nine private foreign colleges. In spite of the many administrative difficulties caused by the unheard of increase in cost of living in China and the scarcity of able personnel, a remarkably large number of institutions are still carrying on vigorously. Considerable devotion has been shown by staff members in remaining at their comparatively poorly paid posts, and valuable work is being accomplished.

EDUCATION AND RURAL RECONSTRUCTION

National Council for Rural Reconstruction — $500

The Foundation's program of rural reconstruction was able to operate according to its original plan for only about two years, and has suffered many vicissitudes since its inauguration in 1935. The National Council for Rural Reconstruction, which was to have provided an institute for graduate training in rural reconstruction to which the other teaching institutions of the

China Program were to send staff members as visiting, full, or part-time teachers and research workers, and graduate students for training, has been forced to discontinue its work completely, chiefly because of the extreme difficulty in securing transportation. In order to keep the Council together so that the skeleton of the organization may be available for a resumption of this form of cooperation in the future, an office is to be maintained in Chungking to take care of routine correspondence and the Council's records.

Chinese National Association of the Mass Education Movement — $8,000

Because of the great need for personnel in all activities in China, the Mass Education Movement concentrated on the Junior College Division of its National College for Rural Reconstruction, which was recently established at Hsieh-Ma-Chang in Szechwan Province, for the training of administrative and technical personnel in the major fields of rural reconstruction. Practical training at this time is very urgent. Under the graduate program a number of students working on fellowships received training in research under the supervision of staff members of the College.

A plan of cooperation was arranged with a hydraulic project which was being developed by the National Hydraulic Power Commission in the immediate vicinity of the campus of the National College for Rural Reconstruction. Water will be supplied for irrigation and the power developed will be used for electric lighting and for small-scale industries to be organized cooperatively in the neighboring communities. The contribution of the Mass Education Movement to this project is the preparation of the people by education and organization

to take the fullest advantage of the benefits of the water power to be produced.

YENCHING UNIVERSITY
COLLEGE OF PUBLIC AFFAIRS — $4,000

The plant of Yenching University in Peiping was closed when the United States entered war against Japan. Provision for continuation of the work in rural reconstruction was included under the China Program in 1942 in case this work were to be continued in the interior of China. A group of alumni, staff, and friends of the University has formed a Yenching Committee in Chengtu and is working to reestablish Yenching there.

NANKAI UNIVERSITY
INSTITUTE OF ECONOMICS — $4,000

The work of the Nankai University Institute of Economics continued in a comparatively settled and routine way. The regular graduate courses were being conducted at the Institute's headquarters at Shapingpa, Chungking, and the students were reported to be working seriously and making good records. A number of research projects were being carried on under the two general categories of wartime inflation and agricultural economics. Undergraduate instruction was continued, as in the past few years, in cooperation with the National Southwest Associated University in Kunming.

UNIVERSITY OF NANKING
DEPARTMENT OF AGRICULTURAL ECONOMICS — $4,000

During the year 1941–1942 the Department of Agricultural Economics continued its studies of currency and prices. In cooperation with the Farmer's Bank of China an economic study was made of forty farms in each of

ten localities in typical farming sections of Szechwan. The data collected were tabulated and analyzed, and a detailed report was submitted to the Farmer's Bank of China. Summaries in English and Chinese were to be published together. A study of the marketing of the agricultural products of Szechwan was made also.

FELLOWSHIPS

Nine fellowships of the China Program for study in the United States were active at some time during the year 1942. Four were continued from 1940 and four from the year 1941; one began in 1942. The subjects studied were higher education, economics, sociology, social and public administration, biochemistry and nutrition, and in agriculture: farm management and agricultural extension, agricultural entomology, agricultural bacteriology, and ecological plant physiology.

Because of the considerable difficulty in securing passage back to China, three of the fellows have received research aid grants from China Program funds to continue work at the universities in which they had been studying; two whose fellowships expired are now working in the United States under other auspices; three are still on fellowship; and the fellowship of one was suspended while he was acting as adviser to various agencies in Washington.

Under the China Program's grant for the academic year 1941–1942, $60,000 in local Chinese currency was allotted to the Commission on Medical Education for medical fellowships for study in China. From the funds provided for the academic year 1942–1943, the Chinese National Association of the Mass Education Movement received L.C.$60,000; the Institute of Economics of Nankai University, L.C.$70,000; and the College of

Agriculture and Forestry of the University of Nanking, L.C.$50,000, for fellowships to be administered by these institutions.

GRANTS IN AID

From funds provided for the academic year 1941–1942 twelve grants in aid amounting to $20,730 were made. The five made in 1942 were granted in the United States to assist four fellows to continue their work in the institutions in which they had been studying. From the research aid funds for the year 1942–1943 grants were made for the continuation of the studies in sociology and social administration in southwest China of Professor Wu Wen-tsao, formerly of Yenching University; and to the National Agricultural Research Bureau for the continuation of insect control studies.

EMERGENCY AID FOR FOREIGN COLLEGES IN CHINA

Associated Boards for Christian Colleges in China

The difficulties of the foreign colleges and universities in China in meeting their expenses, even with the utmost efforts to economize, are acute because of the serious inflation. In the spring of 1942 a grant of $50,000 was made to the Associated Boards for Christian Colleges in China toward the 1941–1942 budgets of the colleges.

Of the universities in the eastern part of China which were disorganized after the entrance of the United States into war against Japan, Yenching is being reestablished at Chengtu, Lingnan is operating on a large emergency campus at Kukong in free Kwangtung, and students from Shanghai University were to be cared for temporarily at several different centers.

OTHER APPROPRIATIONS

OTHER APPROPRIATIONS

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American Library Association
Purchase of Journals

THE American Library Association received $70,000 toward the expenses incurred during 1943 by its Committee on Aid to Libraries in War Areas in the selection and purchase or microfilming of American scholarly journals for institutions, chiefly in Europe and Asia. This contribution is a continuation of similar support in 1941.

The purpose of this action is to forestall serious gaps in files of some of the valuable American journals in libraries of countries especially affected by the war — principally those in Europe and China, and possibly in India, South Africa, and Australia. The Committee, after reviewing some 400 American scholarly scientific and technical journals, undertook to select the journals likely to be most valuable to European and Asiatic institutions cut off during the war from such publications. Editorial boards have furnished lists of cancelled subscriptions and other information. Excellent cooperation has been received from publishers in the way of information, willingness to give free storage, waiving mailing charges in future, and allowing discounts averaging 15.1 per cent in 1942.

The new funds supplied will be used principally in renewing subscriptions and making increased purchases to counteract losses due to mailing restrictions and consequent cancellation of subscriptions. Purchases amounting to almost $100,000 and representing a total of 275

periodicals have already been made. A statement by the Committee, outlining objectives and accomplishments and printed in 153 scholarly journals, brought immediate additional donations from 167 different sources. Thirty-nine libraries have volunteered storage space, and various library groups have given valuable advice and suggestions.

European Refugee Program

In September of 1940 the Foundation approved a plan for aiding "not more than one hundred outstanding European refugee scholars over a period of two years in this country," and appropriated $35,000 to The New School for Social Research, as the principal agency in this program, for administrative expenses during the period August 1, 1940, to July 31, 1942. In 1942 an additional appropriation of $9,234 was given to The New School for Social Research for work still left to be done in connection with this program.

Since the beginning of the emergency refugee scholar program invitations have been extended to 92 scholars, of whom only 51 were able to reach this country. Thirty-eight grants have had to be cancelled. Three are held open in the hope that the scholars may still be able to come. Of the men who reached this side, 32 were appointed to the New School and 19 to other institutions. Five of those who went to the New School found placement elsewhere; nine are now working in other institutions, and there remain at the New School 18. The divisional distribution of these scholars is as follows: Social Sciences, 14; Humanities, 12; Natural Sciences, 5; Medical Sciences, 1.

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, 1942:

BALANCE SHEET — DECEMBER 31, 1942

ASSETS

INVESTMENTS		
Securities (Ledger value)		$162,595,207.83
(Market value $168,702,704.39)		
CURRENT ASSETS		
Cash on deposit	$3,423,191.31	
Sterling on deposit in London: £15,412–16–0 @ 3.665	56,491.01	
Advances and deferred charges	827,474.04	
Sundry accounts receivable	46,830.62	4,353,986.98
BUILDING AND EQUIPMENT		
In New York	$52,981.43	
In Paris	63,726.20	116,707.63
		$167,065,902.44

BALANCE SHEET — DECEMBER 31, 1942

FUNDS AND OBLIGATIONS

PRINCIPAL FUND		$145,891,088.80
COMMITMENTS		
Unpaid appropriations	$16,758,549.13	
Unappropriated authorizations	1,193,966.42	17,952,515.55
FUNDS AVAILABLE FOR COMMITMENT		3,077,926.42
CURRENT LIABILITIES		
Accounts payable		27,664.04
BUILDING AND EQUIPMENT FUND		116,707.63
		$167,065,902.44

PRINCIPAL FUND

Balance, December 31, 1941	$144,970,630.10
Add	
Contingent project cancelled	1,200,000.00
	$146,170,630.10
Deduct	
Net amount by which the proceeds of securities sold, redeemed, exchanged, etc., during the year failed to equal the ledger value	279,541.30
Balance, December 31, 1942	$145,891,088.80

RESERVE FOR CONTINGENT PROJECTS

Balance, December 31, 1941	$1,200,000.00
Deduct	
Contingent project cancelled	1,200,000.00
Balance, December 31, 1942	$—0—

Unpaid appropriations, December 31, 1941		$18,520,400.28
Appropriations during the year 1942 (For details see pages 261–290):		
Public Health	$2,700,000.00	
Medical Sciences	1,433,710.00	
Natural Sciences	814,895.00	
Social Sciences	1,325,575.00	
Humanities	982,350.00	
Program in China	122,000 00	
Miscellaneous	79,234.00	
Administration and Scientific Services:		
Scientific Services	551,723.00	
General Administration	242,858.00	
	$8,252,345.00	
Unused balances of appropriations allowed to lapse (including $15,616.70 reverting to Unappropriated Authorizations)	917,418.02	7,334,926.98
		$25,855,327.26
Payments on 1942 and prior years' appropriations (For details see pages 261–290):		
Public Health	$2,550,332.76	
Medical Sciences	1,361,770.27	
Natural Sciences	1,060,671.54	
Social Sciences	2,191,996.18	
Humanities	915,190.01	
Program in China	130,760 83	
Miscellaneous	111,361.65	
Administration and Scientific Services:		
Scientific Services	528,400.58	
General Administration	246,294.31	9,096,778.13
Unpaid appropriations, December 31, 1942		$16,758,549.13

FUNDS AVAILABLE FOR COMMITMENT

Funds available for commitment, December 31, 1941			$2,117,908.16
Add			
Income and refunds received during 1942:			
Income		$8,271,037.04	
Refunds		15,046.90	
Unused balances of appropriations allowed to lapse	$917,418.02		
Less: Amount reverting to Unappropriated Authorizations	15,616.70	901,801.32	9,187,885.26
			$11,305,793.42
Deduct			
Appropriations during 1942		$8,252,345.00	
Less: Sum appropriated from Unappropriated Authorizations		75,000.00	
		$8,177,345.00	
Amount authorized during 1942 for later appropriation by the executive committee		50,522.00	8,227,867.00
Funds available for commitment, December 31, 1942			$3,077,926.42

UNAPPROPRIATED AUTHORIZATIONS

Unappropriated Authorizations, December 31, 1941		$1,202,827.72
Add		
Authorizations during 1942 for later appropriation by the executive committee	$50,522.00	
Appropriation lapsed during 1942 which reverted to Unappropriated Authorizations	15,616.70	66,138.70
		$1,268,966.42
Deduct		
Amount appropriated from this account during 1942 and included under appropriations		75,000.00
Unappropriated Authorizations, December 31, 1942		$1,193,966.42

BUILDING AND EQUIPMENT FUND

	Balance Dec. 31, 1941	Changes during 1942 Expenditures	Depreciation	Balance Dec. 31, 1942
Library	$17,850.00	$507.17	$2,785.17	$15,572.00
Equipment	38,693.71	425.18	1,709.46	37,409.43
Paris Office:				
Part interest in Paris office building	63,726.20	.....	.....	63,726.20
	$120,269.91	$932.35	$4,494.63	$116,707.63

APPROPRIATIONS AND UNAPPROPRIATED AUTHORIZATIONS

Outstanding Commitments, December 31, 1941:		
Unpaid appropriations	$18,520,400.28	
Unappropriated authorizations	1,202,827.72	$19,723,228.00
Add		
Net amount appropriated and authorized during 1942	$8,227,867.00	
Less: Net amount lapsed during 1942	901,801.32	7,326,065.68
		$27,049,293.68
Deduct		
Payments on 1942 and prior years' appropriations		9,096,778.13
Outstanding Commitments, December 31, 1942:		
Unpaid appropriations	$16,758,549.13	
Unappropriated authorizations	1,193,966.42	$17,952,515.55*

* Probable payments in the following years:

1943	$11,096,568.55
1944	3,934,491.00
1945	1,026,752.00
1946	592,384.00
1947	1,177,315.00
1948	65,329.00
1949	26,300.00
1950	16,800.00
1951	16,576.00
	$17,952,515.55

APPROPRIATIONS DURING 1942, UNPAID BALANCES OF PRIOR YEAR APPROPRIATIONS, AND PAYMENTS THEREON IN 1942

	Appropriations		1942
	Prior Years	1942	Payments
Public Health			
International Health Division of The Rockefeller Foundation *			
Prior Years (RF 38103, 39096, 40125)	$1,560,456.48	$.....	$1,896,571.50
1942 (RF 41104)	2,200,000.00		
1943 (RF 42105)	.....	2,200,000.00	.....
Revolving Fund to provide working capital (RF 29093)	200,000.00	.....	.....
The Rockefeller Foundation Health Commission (RF 41023, 42066, 42106)	194,099.19	500,000.00	266,252.61
Schools and Institutes of Hygiene and Public Health			
University of Michigan, Ann Arbor			
Site, building, equipment, and operating expenses (RF 40126)	500,000.00	.....	387,508.65
Total — Public Health	$4,654,555.67	$2,700,000.00	$2,550,332.76
Medical Sciences			
Psychiatry, Neurology, and Allied Subjects			
Alcoholic Consultation Bureau, Inc., Newark, New Jersey			
General budget (RF 42007)	$.....	$15,000.00 ✓	$8,611.97
American Psychiatric Association, New York City			
Conferences for professional personnel of state mental hospitals (RF 40012)	4,000.00	.....	4,000.00
Work of Committee on Psychiatric Nursing (RF 42008)	.....	10,000.00 ✓	5,000.00
Catholic University of America, Washington, D. C.			
Teaching and research in psychiatry and child guidance (RF 39026)	36,591.14	.....	17,500.00
Centre Neurologique de Bruxelles, Belgium			
Research in neuroanatomy and neurophysiology (RF 38007)	1,843.63	.....	.....

*A complete financial statement of the work of the International Health Division for 1942 will be found on pages 292 to 306.

	Appropriations		1942
	Prior Years	1942	Payments
Medical Sciences — *Continued*			
Psychiatry, Neurology, and Allied Subjects — *Continued*			
Child Research Council of Denver, Colorado			
Psychological Studies (RF 39028)	$12,300.00	$.....	$2,300.00
Studies in child growth and development (RF 42068)	.....	14,000.00 ✓	1,750.00
Columbia University, New York City			
Research on constitutional aspects of disease (RF 39005, 42064)	8,892.23	54,000.00 ✓	16,000.00
Teaching and research in neurology (RF 38080)	38,810.31	.....	20,000.00
Cornell University, Ithaca, New York			
Research in reflex behavior in relation to neuroses (RF 41012)	4,500.00	.....	3,000.00
Dalhousie University, Halifax, Nova Scotia			
Development of teaching in psychiatry (RF 41072)	12,767.18	.....	4,457.04
Dikemark Mental Hospital, Asker, Norway			
Research on mental disease (RF 39044)	12,492.16	.....	.....
Duke University, Durham, North Carolina			
Teaching and research in psychiatry and mental hygiene (RF 40005)	138,664.55	.....	25,000.00
Forman Schools, Litchfield, Connecticut			
Studies on apraxia and related phenomena in children (RF 39065)	25,458.89	.....	.....
Harvard Medical School, Boston, Massachusetts			
Teaching and research in psychiatry (RF 42018)	.....	48,000.00 ✓	24,000.00
Harvard Medical School and Massachusetts General Hospital, Boston, Massachusetts			
Teaching and research in psychiatry (RF 40006)	24,000.00	.....	24,000.00
Harvard University, Cambridge, Massachusetts			
Research in epilepsy at Harvard Medical School and Boston City Hospital (RF 40007, 42109)	28,500.00	114,000.00 ✓	14,400.00
Research in industrial hazards (RF 40064, 42019)	69,815.84	40,000.00 ✓	80,635.25
Research in neurophysiology (RF 36125)	9,454.19	.....	7,500.00
Studies at the Psychological Clinic (RF 40102)	54,000.00	.....	12,000.00

Institute of the Pennsylvania Hospital, Philadelphia			
Research and teaching in psychiatry (RF 40129)	$60,000.00	$.....	$27,369.85
Institute for Psychoanalysis, Chicago, Illinois			
General activities and training analyses (RF 38021)	29,415.59	.....	21,250.00
Johns Hopkins University, Baltimore, Maryland			
Development of neurology (RF 40008)	8,509.40	.....	5,437.34
Neurological research (RF 37080)	183.32	.....	.....
Research and training in psychiatry (RF 40103, 42020)	18,325.00	36,650.00 v	36,621.63
Judge Baker Guidance Center, Boston, Massachusetts			
Children's psychiatric consultation center (RF 42099)	.....	15,000.00 v	.....
London County Council, England			
Research in psychiatry at Maudsley Hospital (RF 38061)	73,698.35	.....	6,299.98
McGill University, Montreal, Canada			
Research in epilepsy and dementia (RF 38068)	10,443.08	.....	4,767.50
Medical Research Council, London, England			
Research in endocrinology, psychiatry, neurology, and allied subjects (RF 39002)	34,483.31	.....	5,761.01
Research in hereditary mental diseases (RF 37056)	4,299.39	.....	2,424.00
Studies in human genetics in relation to mental disease at Galton Laboratory, University of London (RF 36132)	13,555.12	.....	.....
National Committee on Maternal Health, New York City			
Administrative and research expenses (RF 38084, 39066, 42009, 42100)	2,749.88	24,500.00	8,408.26
Northwestern University Medical School, Chicago, Illinois			
Research in neuroanatomy (RF 37010)	2,607.40	.....	674.77
Tufts College Medical School, Boston, Massachusetts			
Research in brain chemistry (RF 40027)	18,000.09	.....	4,497.83
Research in neurology (RF 40009)	15,000.56	.....	3,750.00

	Appropriations Prior Years	Appropriations 1942	1942 Payments
Medical Sciences — *Continued*			
Psychiatry, Neurology, and Allied Subjects — *Continued*			
Tulane University, New Orleans, Louisiana			
Maintenance of subdepartment of psychiatry (RF 39021, 42021)	$5,000.00	$10,000.00 ✓	$10,000.00
University of Brussels, Belgium			
Research in neurophysiology and endocrinology (RF 39068)	23,145.30	.....	.....
University of Cambridge, England			
Department of Experimental Medicine			
Research (RF 37137)	31,628.12	.....	.....
Department of Experimental Psychology			
Alterations and expenses (RF 37079)	33,528.72	.....	4,077.51
University of Chicago, Illinois			
Teaching and research in psychiatry (RF 41026)	125,000.00	.....	50,000.00
University of Cincinnati, Ohio			
Research in neurology in relation to nutrition (RF 37107)	8,187.08	.....	7,500.00
University of Colorado, Denver. School of Medicine			
Teaching of psychiatry (RF 39022, 42022)	5,240.00	10,000.00 ✓	8,875.00
University of Edinburgh, Scotland			
Research in psychiatry, neurology, and neurosurgery (RF 41055, 42063)	12,815.04	20,760.00 ✓	18,460.42
University of Illinois, Urbana			
Development of neurology and neurosurgery (RF 41091)	11,000.00	.....	4,000.00
Teaching and research in psychiatry at the Medical School in Chicago (RF 39023)	3,010.00	.....	2,435.48
University of Lund, Sweden			
Enlargement of research facilities in neurology (RF 39063)	14,977.70	.....	.....
University of Oslo, Norway			
Research in neuroanatomy and neuropathology (RF 37057)	2,123.69	.....	Cr. 5.40
University of Oxford, England			
Research in brain chemistry (RF 39061)	8,376.80	.....	.....

University of Tennessee, Memphis			
Teaching and research in psychiatry (RF 42004)	$.....	$45,000.00 ✓	$8,000.00
University of Toronto, Canada			
Research in psychiatry (RF 39001)	59,163.81	.....	4,816.13
Washington University, St. Louis, Missouri			
Support of Department of Neuropsychiatry (RF 38067, 41027)	125,156.11	.....	45,189.96
Research in neurophysiology (RF 38017)	42,097.69	.....	11,507.73
Worcester State Hospital, Massachusetts			
Research on dementia praecox (RF 40057)	16,250.00	.....	10,442.30
Yale University, New Haven, Connecticut. School of Medicine			
Development of psychiatry (RF 37114, 42108)	112,500.00	300,000.00	75,000.00
Endocrinology			
Columbia University, New York City			
Research in endocrinology (RF 40011, 42065)	11,643.79	17,800.00 ✓	19,400.00
McGill University, Montreal, Canada			
Research in endocrinology (RF 41074)	22,787.50	.....	5,494.53
Massachusetts General Hospital, Boston			
Research on the parathyroid hormone and calcium and phosphorous metabolism (RF 38082)	6,000.00	.....	4,000.00
National Research Council, Washington, D. C.			
Committee for Research in Problems of Sex (RF 41011)	135,742.20	.....	49,986.58
University of California, Berkeley			
Research on hormones and vitamins (RF 39062)	37,611.52	.....	14,873.60
Yale University, New Haven, Connecticut			
Research in endocrinology (RF 39003)	201.16	.....	Cr. 363.30
Teaching of Public Health in Medical Schools			
American Film Center, Inc., New York City			
Developing the use of films in teaching medicine and public health (RF 41075)	7,500.00	.....	3,000.00

	Appropriations Prior Years	Appropriations 1942	1942 Payments
Medical Sciences — *Continued*			
Teaching of Public Health in Medical Schools — *Continued*			
Dalhousie University, Halifax, Nova Scotia			
Development of teaching in public health and preventive medicine (RF 38081)	$2,226.27	$.....	$.....
University of Manitoba, Winnipeg, Canada			
Development of teaching of preventive medicine (RF 40061)	10,800.00	.....	.....
West China Union University, Chengtu			
Support of public health practice field (RF 40063)	6,144.84	.....	4,450.81
Yale University, New Haven, Connecticut. School of Medicine			
Development of teaching of public health and preventive medicine (RF 40062)	4,537.90	.....	1,639.18
Fellowships			
Administered by the Rockefeller Foundation (RF 37129, 38113, 40065, 41057, 41113, 42133)	123,853.06	50,000.00	61,573.55
National Research Council, Washington, D. C.			
Medical Sciences (RF 40056, 42040)	63,652.45	25,000.00	23,107.88
Welch fellowships in internal medicine (RF 41028)	167,776.24	.....	1,202.49
Scholarships for British medical students (RF 40127, 42005, 42110)	53,595.82	200,000.00	74,412.35
General			
Chinese Medical Colleges			
Salaries or equipment (RF 42006)			
Cheeloo Medical College	.....	5,000.00	5,000.00
College of Medicine, National Central University	.....	5,000.00	5,000.00
Hsiangya Medical College	.....	5,000.00	5,000.00
National Kweiyang Medical College	.....	5,000.00	5,000.00
National Medical School of Shanghai	.....	5,000.00	5,000.00
Committee on Research in Medical Economics, Inc., New York City			
Expenses of operation (RF 42111)	.....	15,000.00	.....

Cornell University Medical College, New York City			
Studies of the role of the glands of internal secretion in relation to growth and inheritance (RF 30006)	$4,833.72	$.....	$.....
Dalhousie University, Halifax, Nova Scotia			
Teaching facilities for medical students at new Victoria General Hospital (RF 42038)	.....	150,000.00	.....
Grants in Aid (RF 36148, 37125, 38109, 39116, 40066, 40094, 40138, 41117, 42137)	275,192.67	125,000.00	128,770.62
Group Health Cooperative, Inc., New York City			
Operation and development of medical insurance program (RF 42067)	.....	32,000.00	27,000.00
Harvard University, Cambridge, Massachusetts			
Development of legal medicine (RF 39029)	5,000.00	.....	5,000.00
Medico-legal research (RF 41013)	10,000.00	.....	4,000.00
Johns Hopkins University, Baltimore, Maryland			
Institute of History of Medicine (RF 38022)	97,500.00	.....	15,000.00
School of Medicine, Research fund (RF 39004)	30,000.00	.....	15,000.00
Leland Stanford Junior University, Palo Alto, California			
Researches in kidney diseases (RF 40010)	10,500.00	.....	7,000.00
Medical Administration Service, Inc., of New York City			
Expenses (RF 42023)	.....	22,000.00	22,000.00
Memorial Hospital for the Treatment of Cancer and Allied Diseases, New York City			
Research, teaching, and professional care (RF 41024)	90,000.00	.....	60,000.00
National Health Council, Inc., New York City			
Study of the organization, interrelationships, policies, and opportunities of voluntary agencies in the field of public health (RF 41089)	69,675.00	.....	23,140.25
Research Council of the Department of Hospitals, New York City			
Research on chronic diseases (RF 40104)	44,000.00	.....	10,350.87

	Appropriations Prior Years	Appropriations 1942	1942 Payments
MEDICAL SCIENCES — *Continued*			
General — *Continued*			
University of Buenos Aires, Argentina			
Institute of Physiology. Research (RF 40128)	$17,384.33	$.....	$8,266.09
University of Iceland, Reykjavik			
Scientific equipment for School of Medicine (RF 42039)	.....	15,000.00	5,299.26
University of Paris, France. Radium Institute			
Division of Biophysics (RF 32076)	39,196.42	.....	.....
West China Union University, Chengtu.			
Equipment of University hospital (RF 41056)	2,500.00	.....	2,500.00
Former Program			
Leland Stanford Junior University, Palo Alto, California			
Fluid research fund in medicine (RF 38060)	25,000.00	.....	15,000.00
University of Rochester, New York			
Fluid research fund in medicine (RF 41053)	75,000.00	.....	30,000.00
Washington University, St. Louis, Missouri			
Maintenance of Departments in the School of Medicine (RF 38059)	262,029.24	.....	37,949.95
TOTAL — MEDICAL SCIENCES	$3,124,444.80	$1,433,710.00	$1,361,770.27
NATURAL SCIENCES			
Experimental Biology			
Amherst College, Massachusetts			
Research in genetics, experimental embryology, and growth problems (RF 39104)	$20,301.16	$.....	$2,900.00
Brown University, Providence, Rhode Island			
Researches in genetics (RF 39032)	2,031.14	.....	1,200.00

California Institute of Technology, Pasadena			
Developments of chemistry in relation to biological problems, (RF 41064, 42081)	$20,000.00	$75,000.00*	$24,147.50
Researches in serological genetics (RF 40073)	5,000.00	.....	.....
Research on the structure of antibodies and the nature of immunological reactions (RF 41051, 42049)	27,500.00	20,000.00	21,000.00
Carnegie Institution of Washington, D. C.			
Support of Drosophila Stock Center and Information Service at the Laboratory of Genetics, Cold Spring Harbor, New York (RF 41094)	9,000.00	.....	9,000.00
Catholic University of America, Washington, D. C.			
Researches on decomposition and synthesis of certain polynuclear ring systems (RF 40059)	19,600.00	.....	5,600.00
College de France, Paris. Laboratory of Atomic Synthesis			
Research on biological problems (RF 37093)	5,658.56	.....	.....
Columbia University, New York City			
Researches on electrical properties of cells and tissues (RF 41093)	12,600.00	.....	2,800.00
Research in enzyme chemistry (RF 42044)	.....	15,000.00	2,500.00
Researches on problems of metabolism with the aid of chemical isotopes (RF 38026)	22,701.05	.....	13,821.77
Researches on vitamins and related substances in relation to plant growth (RF 40107)	20,000.00	.....	4,921.00
Connecticut Agricultural Experiment Station, New Haven			
Researches in genetics of growth in plants (RF 40106)	15,000.00	.....	2,700.00
Cornell University, Ithaca, New York			
Researches on aging and longevity (RF 41036)	60,000.00	.....	60,000.00
Research in the field of enzyme chemistry (RF 42050)	.....	22,000.00	3,250.00
Researches in nutrition (RF 36029)	23.29	.....	.....
Duke University, Durham, North Carolina			
Researches on physical chemistry of proteins (RF 40076)	3,000.00	.....	3,000.00

*Appropriation for which funds were previously authorized.

	Appropriations		1942
	Prior Years	1942	Payments
Natural Sciences — *Continued*			
Experimental Biology — *Continued*			
Eidgenossische Technische Hochschule, Zurich, Switzerland. Laboratory of Organic Chemistry			
Researches on constitution and synthesis of physiologically active compounds (RF 38042, 42116)	$20,247.67	$10,500.00	$7,376.25
Fondation Rothschild, Paris, France. Institute of Physicochemical Biology			
Researches in cellular physiology, chemical embryology, and genetics (RF 36067)	34,443.44	.....	.....
Harvard University, Cambridge, Massachusetts			
Researches on the determination of heats of organic reactions (RF 41018)	10,500.00	.....	7,000.00
Researches on the chemical and electrical behavior of proteins (RF 38038)	47,200.98	.....	6,000.00
Indiana University, Bloomington.			
Researches in cytogenetics (RF 40001)	14,000.00	.....	3,998.13
Iowa State College, Ames			
Researches in genetics (RF 40075)	7,500.00	.....	3,712.61
Johns Hopkins University, Baltimore, Maryland			
Department of Chemistry			
Researches in biochemistry (RF 39017)	7,316.70	.....	4,845.88
School of Hygiene and Public Health			
Researches in nutrition (RF 41019)	15,250.00	.....	6,500.00
School of Medicine			
Researches in nutrition (RF 41050)	25,000.00	.....	9,992.00
Karolinska Institute, Stockholm, Sweden			
Researches in Biochemistry (RF 41016, 41103, 42115)	3,293.93	5,900.00	2,830.70
Researches in Biophysics (RF 42085)	.....	3,950.00	949.30
Leland Stanford Junior University, Palo Alto, California			
Research in biochemical genetics (RF 42121)	.....	7,500.00	.....

Long Island Biological Association, Cold Spring Harbor, New York			
Symposia at Cold Spring Harbor Laboratory (RF 42014)	$	$15,000.00	$15,000.00
McGill University, Montreal, Canada			
Researches in cytology and genetics (RF 40072)	4,468.75		1,980 00
Marine Biological Laboratory, Woods Hole, Massachusetts			
Construction and furnishing of addition to library (RF 40037)	3,806.25		
Massachusetts Institute of Technology, Cambridge			
Development of biological engineering (RF 40039)	158,846 09		40,000.00
Operation of the differential analyzer (RF 42080)		25,000.00	
Research on concentrated food formulae (RF 42043		10,300.00	5,150.00
National Research Council, Washington, D. C.			
Research in biophysics (RF 37020)	9,366.04		6,337 44
New York University, New York City			
Researches in cellular physiology (RF 38085)	10,000 00		5,000 00
Northwestern University, Evanston, Illinois			
Research in steroid chemistry (RF 42047)		15,000.00	2,500.00
Princeton University, New Jersey			
Researches in organic chemistry (RF 40058)	28,000.00		4,000.00
Research in plant physiological chemistry (RF 42052)		10,000.00	10,000.00
Roscoe B. Jackson Memorial Laboratory, Bar Harbor, Maine			
Special researches (RF 40024)	6,750.00		4,500.00
Rothamsted Experimental Station, Harpenden, Herts, England			
Research in virus chemistry (RF 42084)		1,135.00	
State University of Iowa, Iowa City			
Researches in general physiology (RF 40022)	15,000.00		6,000.00
Swarthmore College, Pennsylvania			
Researches in general physiology (RF 40002)	5,250.00		3,499.63
University of Berne, Switzerland			
Researches in physiology (RF 37054)	4,970.61		

	Appropriations Prior Years	Appropriations 1942	1942 Payments
NATURAL SCIENCES — *Continued*			
Experimental Biology — *Continued*			
University of Birmingham, England			
Research in genetics and physiology of reproduction (RF 42119)	$.....	$3,445.00	$.....
University of California, Berkeley			
Construction and installation of cyclotron (RF 40036, 42001)	720,172.17	60,000.00	280,987.30
Cyclotron research (RF 39042)	9,765.05	.....	.....
University of Cambridge, England. Institute of Biology and Parasitology			
Researches in cellular physiology (RF 42117)	.....	4,860.00	1,214.75
University of Chicago, Illinois			
Researches in molecular spectra (RF 39030, 41101)	28,500.00	.....	7,234.02
Researches in application of spectroscopic methods to biological problems (RF 40021)	35,000.00	.....	7,475.59
University of Copenhagen, Denmark			
Researches in the Institute of Theoretical Physics (RF 41063)	8,000.00	.....	.....
University of Edinburgh, Scotland			
Research in animal genetics (RF 42120)	.....	2,025.00	505.70
University of Illinois, Urbana			
Researches in biochemistry of amino acids (RF 38039)	22,500.00	.....	15,000.00
University of Leeds, England			
Research on X-ray analyses of biological tissues (RF 38041)	24,849.24	.....	7,316.43
University of London, England			
Research on vitamins, sterols, and related compounds (RF 38070)	39,391.53	.....	2,431.19
University of Minnesota, Minneapolis			
Application of spectroscopy to investigation of lipid metabolism (RF 42003)	.....	9,700.00	4,700.00
Researches in lipid metabolism (RF 39031)	7,506.51	.....	3,000.00
Researches in biophysics (RF 41062)	13,750.00	.....	3,250.00
Research on mechanism of osmosis (RF 39056, 42051)	2,750.00	15,900.00	5,188.96

University of Missouri, Columbia			
Researches in genetics (RF 39041)	$7,024.41	$.....	$3,707.05
University of Oxford, England			
Dyson Perrins Laboratory of Organic Chemistry			
Construction and equipment (RF 39039)	27,295.89	.....	.....
Research on hormone synthesis (RF 36083, 41092, 42088)	7,428.30	3,240.00	3,237.75
X-ray analysis of biologically important large molecules (RF 42086)	.....	1,215.00	607.75
Sir William Dunn School of Pathology			
Biochemical investigation of penicillin (RF 42118)	.....	4,860.00	.....
University of Pennsylvania, Philadelphia			
Researches on permeability of the red blood cell (RF 40023)	6,251.39	.....	2,500.00
University of Rochester, New York			
Research on biological and medical problems (RF 41034)	62,500.00	.....	25,748.77
University of Sheffield, England			
Researches in biochemistry (RF 42087)	.....	1,620.00	814.00
University of Stockholm, Sweden			
Researches in chemical physiology and embryology (RF 38024, 421114)	6,833.28	6,300.00	1,510.95
University of Texas, Austin			
Researches on growth-promoting substances (RF 40070)	6,500.00	.....	4,495.60
Researches in genetics of Drosophila (RF 41052)	22,829.09	.....	11,629.09
University of Toronto, Canada			
Research in nutrition (RF 42045)	.....	14,000.00	2,825.52
University of Uppsala, Sweden			
Research on physical-chemical properties of proteins and other substances of biological and medical importance (RF 40026, 41100, 42113)	9,041.47	11,250.00	8,082.00
Researches in biochemistry of fatty acids, lipoids, and proteins (RF 42083)	.....	1,125.00	543.00
University of Utrecht, Netherlands			
Research in spectroscopic biology (RF 37094)	22,807.71	.....	.....
Researches in biochemistry of growth substances (RF 39007)	17,343.60	.....	.....

	Appropriations Prior Years	Appropriations 1942	1942 Payments
NATURAL SCIENCES — *Continued*			
Experimental Biology — *Continued*			
University of Wisconsin, Madison			
Researches in biochemistry of symbiotic nitrogen fixation (RF 40071)	$15,760.14	$.....	$4,496.97
Research in nutrition (RF 42046)	.....	9,600.00	1,750.00
Research in immunogenetics (RF 38073)	7,893.77	.....	5,250.00
Research in physical chemistry (RF 42048)	.....	14,000.00	1,250.00
Washington University, St. Louis, Missouri			
Researches in carbohydrate metabolism (RF 41020)	12,500.00	.....	4,681.27
Expenses of increased use of its cyclotron (RF 42079)	.....	13,920.00	3,480.00
Research in biochemistry (RF 38074)	2,080.67	.....	Cr. 321.73
Research in general physiology and experimental embryology (RF 38040)	18,020.08	.....	4,781.44
Fellowships			
Administered by The Rockefeller Foundation (RF 36145, 37130, 38114, 39113, 40135, 41114, 42134)	84,363.76	50,000.00	21,752.34
Brown University, Providence, Rhode Island			
Fellowships in applied mathematics (RF 42013)	.....	30,000.00	15,000.00
National Research Council, Washington, D. C. (RF 39103, 41112)	299,967.18	.....	42,187.31
General			
Agricultural Program in Mexico			
Survey and general expenses (RF 41049, 42082)	3,110.89	30,000.00	3,002.89
American Institute of Physics, New York City			
Expenses of its War Policy Committee (RF 42089)	.....	11,000.00	.....
American Mathematical Society, New York City			
Expenses of International Congress of Mathematicians (RF 37108)	5,000.00	.....	.....
Brown University, Providence, Rhode Island			
Installing microfilm photographic laboratory and supplementing through filming the resources of the library in mathematics (RF 39072)	16,630.00	.....	10,125.00
China Medical Board, Inc., New York City			
Peiping Union Medical College, China			
Human paleontological research in Asia (RF 32100, 36137, 41102)	52,322.11	.....	3,907.43

Cornell University, Ithaca, New York			
Researches in molecular structure (RF 40077)	$5,000.00	$.....	$3,500.00
Grants in Aid (RF 36149, 37126, 38110, 39117, 40095, 40108, 40139, 41087, 41118, 42138)	339,504.08	125,000.00	140,060.99
National Research Council, Washington, D. C.			
Administration budget, conferences, special studies, committees, and international scientific projects (RF 41111)	100,000.00	.....	22,500.00
Royal Society, London, England			
Emergency grant for English scientific journals (RF 42002, 42112)	.....	30,050.00	15,000.00
University of São Paulo, Brazil			
Research in physics (RF 42090)	.....	7,500.00	.....
Former Program			
International Commission for the Polar Year 1932–33, Copenhagen, Denmark			
Equipment and expenses (RF 34132)	12,000.00	.....	.....
University of Leiden, Netherlands			
Purchase and endowment of a photographic telescope for the Union Observatory, Johannesburg, Union of South Africa (RF 30021, 34100)	6,575.61	.....	.....
Yale University, New Haven, Connecticut			
Laboratories of Primate Biology			
Maintenance (RF 39008, 42037)	76,018.44	118,000.00	40,250.00
TOTAL — NATURAL SCIENCES	$2,838,412.03	$814,895.00	$1,060,671.54
SOCIAL SCIENCES			
Brookings Institution, Inc., Washington, D. C.			
General program (RF 42060)	$.....	$150,000.00	$37,500.00
Canadian Institute of International Affairs, Toronto, Canada			
General budget (RF 39033, 42061)	8,581.24	20,000.00	11,010.95

	Appropriations		1942
	Prior Years	1942	Payments
Social Sciences — *Continued*			
Canadian Social Science Research Council, Montreal, Canada			
Stimulation of social science research in Canada (RF 42076)	$.....	$20,000.00	$4,443.75
Canton of Geneva, Switzerland			
Department of Public Instruction			
Graduate Institute of International Studies (RF 38045)	160,000.00	.....	45,000.00
Centre D'Études de Politique Étrangère, Paris, France			
General budget (RF 38046)	75,792.16	.....	.....
Columbia University, New York City			
Study of economic aspects of public finance (RF 42031)	.....	22,600.00	5,850.00
Council on Foreign Relations, New York City			
Study groups, research program, and research in problems involved in the peace settlement following the present war (RF 38015, 41001, 41099, 42122)	79,135.79	70,700.00	76,700.00
Dalhousie University, Halifax, Nova Scotia			
Program of training and research in public administration (RF 36093, 41080)	18,914.65	.....	8,914.06
Dutch Economic Institute, Rotterdam, Netherlands			
General budget (RF 39085)	12,158.06	.....	.....
Fellowships			
Administered by The Rockefeller Foundation (RF 36146, 37131, 38115, 39114, 40136, 41115, 42135)	107,006.51	25,000.00	21,797.35
Social Science Research Council, New York City (RF 37051, 40119, 41078, 42078)	157,480.40	75,000.00	44,545.00
Foreign Policy Association, New York City			
General budget (RF 41110)	110,000.00	.....	55,000.00
Geneva Research Center, Switzerland, and University of California, Berkeley			
Collaborative study of commercial policy (RF 38095)	7,001.81	.....	7,001.81
Grants in Aid (RF 38096, 38111, 40101, 41081, 41119, 42093, 42139)	326,105.58	135,000.00	149,244.96
Special fund for study in Latin American countries (RF 41032)	26,100.00	.....	10,331.91

Harvard University, Cambridge, Massachusetts			
Graduate School of Public Administration			
General budget (RF 39109)	$40,000.00	$.....	$20,000.00
Research in social sciences (RF 35086)	52,000.00	.....	.....
Harvard University and Radcliffe College, Cambridge, Massachusetts			
Research in field of international relations (LS 993)	42,731.52	.....	29,395.35
Institute for Advanced Study, Princeton, New Jersey			
Work in Economics (RF 40033)	52,500.00	.....	35,000.00
Work of American Coordinating Committee of International Studies Conference (RF 40018)	390.74	.....	.....
Institute of Economics and Social Research, Paris, France			
Establishment and support (RF 33072)	92,076.42	.....	.....
Institute of International Affairs, Stockholm, Sweden			
General budget (RF 42012)	.....	11,250.00	10,776.50
General budget and special studies of post-war organization (RF 42123)	.....	16,250.00	.....
Institute of Pacific Relations			
American Council, New York City			
General Expenses (RF 40121, 42124)	15,000.00	30,000.00	15,000.00
International Secretariat			
Studies of issues involved in present situation in Far East (RF 38013)	1,726.62	.....	.....
Pacific Council, Honolulu, Hawaii			
General expenses, research program, and emergency fund (RF 40120, 42125)	41,000.00	107,000.00	41,000.00
Iowa State College, Ames			
Study of governmental policies affecting production and distribution of food (RF 42091)	.....	10,000.00	5,000.00
League of Nations, Geneva, Switzerland			
Economic, Financial, and Transit Department, Princeton, New Jersey			
Research programs (RF 37116, 40118, 42034)	65,383.50	45,000.00	65,383.50
Leland Stanford Junior University, Palo Alto, California			
Food Research Institute. Research program (RF 40046)	30,000.00	.....	20,000.00

	Appropriations		1942
	Prior Years	1942	Payments
Social Sciences — *Continued*			
Library of International Relations, Chicago, Illinois			
General budget (RF 36095)	$1,250.00	$.....	$1,250.00
London School of Economics and Political Science, University of London, England			
Emergency fund (RF 39095)	28,177.90	.....	8,082.75
Library development (RF 31030)	9,391.70	.....	.....
Purchase of land for expansion of school plant (RF 31028)	8,686.71	.....	176.76
McGill University, Montreal, Canada			
Research in social sciences (RF 36078)	2,649.79	.....	.....
Massachusetts Institute of Technology, Cambridge			
Industrial Relations Section. Research in the economics of technological change (RF 41042)	25,000.00	.....	7,500.00
National Bureau of Economic Research, New York City			
Support of general programs and special programs of research in finance and fiscal policy (RF 40016, 41002, 42033)	40,000.00	255,000.00	75,000.00
National Institute of Economic and Social Research of Great Britain, London			
General budget (RF 37049)	70,713.05	.....	35,009.80
National Institute of Public Affairs, Washington, D. C.			
Training of personnel for the federal services (RF 40099)	96,250.00	.....	35,000.00
New School for Social Research, New York City			
Study of social and economic controls in Germany and Russia, and general research assistance (RF 41044)	35,250.00	.....	26,500.00
Studies of post-war reconstruction in Germany (RF 42126)	.....	18,900.00	4,725.00
Norwegian Committee for International Studies, Oslo			
Program of research and popular education in international problems in Norway (RF 37102)	10,485.87	.....	.....
Pacific Northwest Council of Education, Planning, and Public Administration, Spokane, Washington			
Administration and special studies (RF 40123)	39,250.00	.....	28,500.00

Princeton University, New Jersey			
Budget of Bureau of Urban Research (RF 42062)	$.....	$15,000.00	$3,750.00
Royal Institute of International Affairs, London, England			
Research program (RF 37004, 42077)	32,136.13	32,400.00	32,328.92
Social Science Research Council, New York City			
Administrative budget (RF 39107)	45,000.00	.....	30,000.00
Committee on Social Security			
Exploratory studies, conferences, and small projects (RF 39082, 40088)	15,242.15	.....	7,965.16
Work in field of social security (RF 39081)	15,133.87	.....	15,000.00
Conferences and planning (RF 38043, 41076, 42059)	61,430.67	100,000.00	58,190.96
Expenses of office in Washington to further effective utilization of social science personnel (RF 42017)	.....	25,000.00	18,750.00
General research projects (RF 31126)	87,349.72	.....	.....
Grants in aid of research (RF 38044, 41077)	79,350.00	.....	14,834.09
Public Administration Committee			
General expenses, exploratory studies, conferences, and small projects (RF 39084, 40089, 42035)	17,000.00	60,000.00	33,283.90
Research in economic history of the United States, the islands, and near-by territory (RF 40116)	247,500.00	.....	.....
Spelman Fund of New York, New York City			
Work in public administration (RF 38049)	1,000,000.00	.....	300,000.00
Syracuse University, New York. School of Citizenship and Public Affairs			
Training course in public administration (RF 39058)	24,000.00	.....	10,000.00
University of California, Berkeley. Bureau of Public Administration			
Establishing measurement standards for local government activities in the San Francisco-Oakland metropolitan region (RF 39059)	5,000.00	.....	5,000.00
Study of effects of Japanese migration and resettlement in California (RF 42092)	.....	15,000.00	.....

	Appropriations		1942
	Prior Years	1942	Payments
Social Sciences — *Continued*			
University of Chicago, Illinois			
Aid to social science facilities (RF 41041)	$127,500.00	$.....	$50,000.00
School of Social Service Administration			
Current expenses (RF 39045)	15,000.00	.....	11,226.48
General endowment (RF 34057)	500,000.00	.....	500,000.00
Study of wartime price controls (RF 42032)	.....	11,175.00	5,587.50
University of Delaware, Newark, New Jersey			
Study of individual income distribution (RF 40117)	6,762.50	.....	.....
University of Louvain, Belgium. Institute of Economics			
General budget (RF 38102)	10,600.29	.....	.....
University of Minnesota, Minneapolis			
Analysis of the distribution of family and individual income in Minnesota (RF 41086)	30,000.00	.....	30,000.00
Program of training for public service (RF 36065, 40035)	39,171.72	.....	18,648.36
Study of employment and unemployment in St. Paul (RF 41079)	25,225.00	.....	25,225.00
University of Oslo, Norway. Institute of Economics			
Research program (RF 36112)	5,500.00	.....	.....
University of Oxford, England			
Social Studies Research Committee (RF 41031, 42036)	6,113.20	24,300.00	24,250.25
University of Paris, France			
Research in social sciences (RF 35072)	26,233.82	.....	.....
University of Pennsylvania, Philadelphia. Wharton School			
Industrial Research Department. General budget (RF 40047)	62,500.00	.....	26,304.61
University of Sofia, Bulgaria. Statistical Institute of Economic Research			
General budget (RF 37110)	3,394.24	.....	.....
University of Southern California, Los Angeles. School of Government			
Development of program (RF 38033, 40124)	18,655.06	.....	8,000.00

University of Virginia, Charlottesville. Bureau of Public Administration			
Program of service and research (RF 39108)	$12,000.00	$.....	$5,511.50
Yale University, New Haven, Connecticut. Institute of International Studies			
Research program (RF 41040)	44,000.00	.....	17,500.00
Study of certain issues in international relations (RF 42127)	.....	31,000.00	.....
TOTAL — SOCIAL SCIENCES	$4,449,988.39	$1,325,575.00	$2,191,996.18
HUMANITIES			
Drama			
American Foundation for the Blind, New York City			
Development of dramatic training work (RF 40109)	$7,500.00	$.....	$3,722.93
Cornell University, Ithaca, New York			
State-wide program in music and drama (RF 40015)	8,265.84	.....	5,700.00
Leland Stanford Junior University, Palo Alto, California			
Work in drama (RF 40030)	9,000.00	.....	6,500.00
National Theatre Conference, Cleveland, Ohio			
General expenses and revolving fund to cover royalty fees on plays for noncommercial production (RF 38054)	3,521.29	.....	2,500.00
Support of activities and projects (RF 40131)	40,000.00	.....	11,552.96
Smith College, Northampton, Massachusetts			
Development of program in drama (RF 42055)	.....	14,000.00	3,500.00
Stevens Institute of Technology, Hoboken, New Jersey			
Research in control of sound and light for dramatic purposes (RF 39075)	4,050.00	.....	2,699.65
University of North Carolina, Chapel Hill			
Work in drama (RF 42075)	.....	9,750.00	.....
Western Reserve University, Cleveland, Ohio			
Department of Drama and Theatre (RF 41107)	35,000.00	.....	35,000.00
Libraries and Museums			
American Council of Learned Societies, Washington, D. C.			
Microfilming projects (RF 41005, 41083)	125,000.00	.....	6,361.63

	Appropriations Prior Years	Appropriations 1942	1942 Payments
Humanities — *Continued*			
Libraries and Museums — *Continued*			
American Library Association, Chicago, Illinois			
For work of its Board on International Relations (RF 42094)	$.....	$25,000.00	$.....
Canadian Library Council			
Establishing microphotographic and general advisory services for Canadian libraries (RF 42025)	.....	17,500.00	.....
Book catalogue of Library of Congress card indexes for foreign distribution (RF 42069)	.....	37,500.00	.....
Studies of library cooperation with Latin America (RF 39047)	2,500.00	.....	2,500.00
American Library in Paris, Inc., France			
General budget (RF 40042)	20,000.00	.....	.....
Bibliothèque pour Tous, Berne, Switzerland			
Book purchases and development of regional services (RF 39049)	5,000.00	.....	5,000.00
British Museum, London, England			
To enable the Museum to offer to American Libraries, at a discount, subscriptions to the new edition of its Catalogue of Printed Books (RF 29086, 30076)	81,671.60	.....	840.06
Library of Congress, Washington, D. C. Hispanic Foundation			
Development of catalogue of Hispanic material and organization of bibliographical services (RF 39097, 41065)	11,122.21	.....	10,865.80
Museum of Modern Art, New York City			
For work of its Educational Project (RF 42096)	.....	13,500.00	1,500.00
National Central Library, London			
General operations and maintenance of Bureau of American Bibliography (RF 37059, 42053)	3,755.29	9,760.00	10,959.65
National Library of Peiping, China			
Development of library services (RF 36072)	750.00	.....	750.00

Princeton University, New Jersey			
Index of Christian Art (RF 38100)	$30,000.00	$ . .	$7,000.00
Society of the Friends of the Bibliothèque Nationale, France			
Printing of the General Catalogue (RF 29089)	1,000 00	. . .	. . . . .
Special microfilming projects in England in connection with the program of the American Council of Learned Societies (RF 41084)	40,000.00	. . . .	24,035.72
University of Chile, Santiago			
Development of its central library (RF 39094)	810.83	. . . .	. . . . .
University of Oxford, England			
Development of the Bodleian and other University libraries (RF 31121)	535,635.10	. . .	33,460 36
Radio and Film			
American Film Center, Inc., New York			
Division of Program and Exhibition (RF 41046)	6,000.00	.....	6,000.00
General budget (RF 40132, 42131)	25,000.00	50,000 00	25,000.00
Columbia University, New York City			
Office of Radio Research (RF 41045)	47,500 00	.....	22,500.00
Harvard University, Cambridge, Massachusetts			
Lecturer in broadcasting (RF 39086)	6,000 00	. . . . .	6,000.00
Library of Congress, Washington, D. C.			
Development of methods of cataloguing, analyzing, and making available for use, the motion pictures deposited with the Library of Congress under the National Copyright Act (RF 42011)	.....	25,000.00	20,000 00
Museum of Modern Art, New York City			
Film Library (RF 40068)	20,000.00	.....	15,000.00
Study of films in wartime communication (RF 41067)	2,500.00	.....	2,500.00
National Film Society of Canada, Ottawa			
General budget (RF 39054, 41030)	15,708.53	.....	6,045.29
Rocky Mountain Radio Council, Denver, Colorado			
General budget (RF 40043, 42072)	5,750.00	15,000.00	6,750.00

	Appropriations		1942
	Prior Years	1942	Payments
Humanities — *Continued*			
Studies of American Culture			
American Council of Learned Societies, Washington, D. C.			
Preparation of a critical history of the Federal Arts Projects (RF 42029)	$.....	$40,000.00	$18,750.00
Colonial Williamsburg, Inc., Williamsburg, Virginia			
Compiling an index to the *Virginia Gazette* for the years 1736 to 1780 (RF 42028)	.....	18,500.00	1,550.00
Cornell University, Ithaca, New York			
Studies of the York State region (RF 42074)	.....	18,000.00	2,250.00
Special grant in aid fund for planning and coordination of regional studies bearing on the cultural tradition of North America (RF 41106)	25,000.00	.....	14,888.24
Texas State Historical Association, Austin			
Southwestern history study (RF 42130)	.....	15,000.00	.....
University of Chicago, Illinois			
Completion of materials for Dictionary of American English (RF 41097)	25,000.00	.....	15,000.00
University of Missouri, Columbia			
Program of American history research and teaching (RF 42129)	.....	15,000.00	.....
Far Eastern Interests			
American Council on Education, Washington, D. C.			
Studies of methods of teaching history and contemporary culture of the Far East (RF 42026)	.....	9,900.00	9,900.00
American Council of Learned Societies, Washington, D. C.			
Cataloguing American collections of Chinese and Japanese books (RF 37120)	23,216.52	.....	.....
Committee on Far Eastern Studies (RF 41029)	15,000.00	.....	4,134.18
Special intensive instruction in the Chinese, Japanese, and Russian languages (RF 41082)	50,000.00	.....	36,321.61
Summer seminars in Far Eastern studies (RF 38088)	1,500.00	.....	.....
Studies in Chinese history (RF 42132)	.....	6,000.00	.....

College of Chinese Studies, Peiping			
General expenses (RF 41007)	$7,476.93	$.....	$260.83
Columbia University, New York City			
Books and teaching materials in Far Eastern languages (RF 38030)	2,500.00	.....	2,500.00
Visiting lecturer on Japanese cultural history (RF 39093)	6,000.00	.....	.....
Cornell University, Ithaca, New York			
Development of Far Eastern studies (RF 38087)	2,000.00	.....	1,500.00
Development of Russian studies (RF 40052)	8,250.00	.....	3,000.00
Summer programs in history and culture of the Far East, the British Commonwealth, and Latin America (RF 42010)	.....	15,000.00	7,125.00
Harvard-Yenching Institute, Cambridge, Massachusetts			
Reproducing texts essential to teaching of Japanese and Chinese languages in American universities (RF 42016, 42097)	.....	15,000.00	15,000.00
Institute of Pacific Relations, American Council, New York City			
English translations of source materials on Chinese history (RF 39052, 42070)	4,950.00	56,100.00	14,674.09
Leland Stanford Junior University, Palo Alto, California			
Development of Far Eastern studies (RF 39053)	6,251.42	.....	1,650.00
Orthological Institute of China, Peiping			
General budget (RF 40028)	4,048.67	.....	2,745.83
Princeton University, New Jersey			
Development of Far Eastern studies (RF 38029)	4,999.27	.....	3,200.00
Royal Ontario Museum of Archaeology, Toronto, Canada			
Teaching and research in Far Eastern subjects (RF 37121)	5,078.11	.....	5,000.00
United Engineering Trustees, Inc., New York City			
Preparation of Dictionary of Japanese Technical Terms (RF 41108)	20,000.00	.....	12,500.00
University of California, Berkeley			
Intensive teaching of Far Eastern languages (RF 42015)	.....	36,000.00	12,000.00

	Appropriations Prior Years	Appropriations 1942	1942 Payments
HUMANITIES — *Continued*			
Far Eastern Interests — *Continued*			
University of Chicago, Illinois			
Books and teaching materials in Far Eastern languages (RF 38031)	$10,000.00	$.....	$2,185.56
Development of new materials for teaching Chinese language and literature (RF 36122)	2,011.99	.....	2,011.99
Development of Chinese studies (RF 41098)	15,000.00	.....	4,944.00
Yale University, New Haven, Connecticut			
Work in Far Eastern studies (RF 42071)	.....	10,760.00	2,690.00
Latin American Interests			
American Council of Learned Societies, Washington, D. C.			
Work in field of Latin American studies (RF 40067, 40097)	27,000.00	.....	7,130.74
Handbook of Latin American Studies (RF 38012)	7,715.38	.....	7,715.38
Special summer institute for intensive study of the Spanish and Portuguese languages, and preparation of texts (RF 41006)	10,000.00	.....	5,000.00
American Library Association, Chicago, Illinois			
Summer school for librarians in Bogotá, Colombia (RF 42027)	.....	9,250.00	9,250.00
Argentine-North American Cultural Institute, Buenos Aires			
Development of program of teaching English, drama, and creative arts (RF 40081)	7,632.52	.....	3,822.24
Brown University, Providence, Rhode Island			
Increasing collections of material on early American history and Hispanic culture (RF 40069)	25,568.57	.....	5,728.26
Colegio de México, Mexico City			
Expenses of Center for Historical Research (RF 42095)	.....	29,340.00	3,667.50
Duke University, Durham, North Carolina			
Purchase of books and other documentation in field of Latin American studies (RF 40049)	20,000.00	.....	5,000.00

National Institute of Anthropology and History, Mexico City			
Development of its program (RF 40130)	$13,873.00	$.....	$6,514.09
Pan American Union, Washington, D. C.			
Division of Intellectual Cooperation (RF 40029)	4,000.00	.....	4,000.00
Tulane University, New Orleans, Louisiana			
Purchase of books and other documentation in field of Latin American studies (RF 40051)	10,800.00	.....	3,600.00
University of Buenos Aires, Argentina			
Expenses of establishing a bibliographical center and an institute of library practice (RF 42128)	.....	47,250.00	.....
University of Michigan, Ann Arbor			
Program of teaching English to advanced students of Spanish-American background (RF 41085)	11,500.00	.....	7,000.00
University of North Carolina, Chapel Hill			
Purchase of books and other documentation in field of Latin American studies (RF 40050)	13,000.00	.....	3,000.00
University of New Mexico, Albuquerque			
Materials for Latin American studies (RF 42073)	.....	25,000.00	5,000.00
Fellowships			
Administered by The Rockefeller Foundation (RF 38116, 39115, 40090, 40137, 41116, 42136)	88,930.44	50,000.00	38,825.74
Authors' League of America, Inc. (RF 38053)	4,062.88	.....	.....
National Theatre Conference, Cleveland, Ohio (RF 39019)	7,817.99	.....	7,817.99
General			
American Council of Learned Societies, Washington, D. C.			
Developing personnel and resources in teaching modern languages (RF 41070)	40,000.00	.....	40,000.00
General support (RF 34157, 38105, 41029, 42024)	115,166.86	80,000.00	53,008.66
Carolina Art Association, Charleston, South Carolina			
Work of Charleston Civic Services Committee (RF 42056)	.....	24,000.00	5,500.00

	Appropriations		1942
	Prior Years	1942	Payments
Humanities — *Continued*			
General — *Continued*			
Delegates of the Press, University of Oxford, England			
Aid to refugee scholars (RF 41047, 42054)	$2,500.00	$5,000.00	$5,000.00
Grants in Aid (RF 38112, 39088, 39119, 40082, 40084, 40092, 40100, 40141, 41095, 41120, 42140, 42141)	294,718.69	140,000.00	129,057.94
Harvard University, Cambridge, Massachusetts			
Research in field of criticism and in uses of languages (RF 39018)	26,132.66	.....	11,000.00
Leland Stanford Junior University, Palo Alto, California. School of Humanities.			
Development of program (RF 42058)	.....	47,500.00	10,000.00
Library of Congress, Washington, D. C.			
Studies of communication trends in wartime (RF 42057)	.....	33,000.00	16,500.00
National Buildings Record, London, England			
Documentation of architectural records (RF 41071)	11,915.30	.....	6,062.75
New School for Social Research, New York City			
Study of totalitarian communication in wartime (RF 41014, 42030)	3,990.00	19,740.00	18,795.00
Payne Fund, New York City			
Preparation of materials for teaching English to foreign-born residents of the United States (RF 40053)	3,789.22	.....	3,723.28
Princeton University, New Jersey. School of Public and International Affairs			
Studies of public opinion (RF 41109)	50,000.00	.....	25,000.00
Former Program			
American School of Classical Studies, Athens, Greece			
Fellowships in archeology in connection with excavation of the Athenian Agora (RF 40055)	1,800.00	.....	1,800.00
Museum to house objects excavated at the Agora (RF 37089)	125,000.00	.....	Cr 13,354.94
Total — Humanities	$2,258,237.11	$982,350.00	$915,190.01

PROGRAM IN CHINA			
Associated Boards for Christian Colleges in China, New York City			
Emergency grants to private universities and colleges in China (RF 42042)	$.....	$50,000.00	$50,000.00
Chinese Mass Education Movement, Peipei, Szechwan			
General budget (RF 41037, 42041)	6,000.00	8,000.00	10,000.00
Emergency Fund (RF 39016)	1,793.70	.....	.....
Fellowships — Foreign and Local (RF 37047, 39050, 40044, 41037, 42041)	98,633.55	33,500.00	39,142.51
Grants in Aid (RF 39050, 40044, 41037, 42041)	39,462.15	18,000.00	17,258.02
Nankai University, Institute of Economics, Shapingpa, Chungking			
General budget (RF 41037, 42041)	1,398.40	4,000.00	3,398.40
National Council for Rural Reconstruction, Peipei, Szechwan			
General budget (RF 41037, 42041)	3,000.00	500.00	2,788.89
University of Nanking, Chengtu, Szechwan			
Department of Agricultural Economics (RF 40044, 41037, 42041)	9,764.74	4,000.00	8,000.00
Yenching University, Peiping. College of Public Affairs			
General budget (RF 40044, 41037, 42041)	11,390.22	4,000.00	173.01
TOTAL — PROGRAM IN CHINA	$171,442.76	$122,000.00	$130,760 83
MISCELLANEOUS			
American Library Association, Chicago, Illinois. Committee on Aid to Libraries in War Areas			
Selection and purchase or microfilming of American scholarly journals for institutions, chiefly in Europe and Asia (RF 41058, 41105, 42107)	$75,000.00	$70,000.00	$75,000.00
Emergency Committee in Aid of Displaced Foreign Scholars, New York City			
Salary of assistant, traveling, and stenographic services (RF 41088)	7,500.00	.....	6,977.26
History of The Rockefeller Foundation (RF 37037)	6,114.87	.....	3,829.34
New School for Social Research, New York City			
Administration of grants to European refugee scholars (RF 40083, 42098)	16,094.88	9,234.00	11,651.36
Grant in Aid Fund for refugee scholars (RF 41021)	1,758.55	.....	774.06

		Appropriations		1942
		Prior Years	1942	Payments
Miscellaneous — *Continued*				
Royal Society, London, England				
Microfilm apparatus, to facilitate the circulation of current foreign periodicals (RF 41096)		$12,946.10	$.....	$10,956.53
Special Research Aid for European Scholars (RF 39092)		12,360.68	.....	2,173.10
Total — Miscellaneous		$131,775.08	$79,234.00	$111,361.65
Administration and Scientific Services				
Scientific Services				
1941		$46,265.59	$.....	$21,507.42
1942		541,287.00	.....	506,893.16
1943		.....	551,723.00	.....
General Administration				
1941		47,514.85	.....	16,244.06
1942		256,477.00	.....	230,050.25
1943		.....	242,858.00	.....
Total Administration and Scientific Services		$891,544.44	$794,581.00	$774,694.89
		$18,520,400.28		
LESS				
Unused balances of Appropriations allowed to lapse				
The Rockefeller Foundation	$734,805.50*			
International Health Division	182,612.52	917,418.02		
Grand Totals		$17,602,982.26	$8,252,345.00	$9,096,778.13

* Includes $15,616.70 which reverts to Authorizations.

REFUNDS ON PRIOR YEAR CLOSED APPROPRIATIONS

Brazil — Central Office, Rio de Janeiro	(IH 39053)	$18.33	
Buffalo Museum of Science, New York	(RF 41068)	1,586.51	
Canadian Institute of International Affairs, Toronto	(RF 36075)	132.00	
Costa Rica, Malaria Studies	(IH 39070)	589.50	
Costa Rica, Tuberculosis Studies	(IH 39013)	220.50	
Encyclopaedia of the Social Sciences, New York	(RF 32114)	928.25	
Grants in Aid, Natural Sciences 1936	(RF 36079)	113.00	
Greece, Malaria Studies	(IH 38094)	326 65	
Harvard University, Cambridge, Massachusetts	(RF 38019)	1,124.99	
Library of Congress, Washington, D. C.	(RF 40111)		
	(RF 40133)	29.94	
National Council of Rural Reconstruction, China	(RF 40044A)	1,191.80	
National Institute of Public Affairs, Washington, D. C.	(RF 37106)	2,108.37	
Princeton University, New Jersey	(RF 40054)	222.35	
Research and Developmental Aid Grants	(RF 38076)	1,030.03	
Research Council, Department of Hospitals, New York City	(RF 38008)	14.34	
University of Chicago, Illinois	(RF 38016)	2,003.71	
University of Denver, Colorado	(RF 41033)	7.00	
University of Illinois, Urbana	(RF 40105)	3,398.95	
Washington University, St. Louis, Missouri	(RF 39069)	.68	$15,046.90

INTERNATIONAL HEALTH DIVISION

Designations During 1942, Unpaid Balances as at December 31, 1941 of Prior Year Designations, and Payments Thereon During 1942

	Prior Designations	1942 Designations	1942 Payments
Control and Investigation of Specific Diseases and Deficiencies			
Diphtheria			
United States			
Johns Hopkins University, Baltimore, Maryland. School of Hygiene and Public Health			
1941–44 (IH 41005, 42005)	$1,152.16	$5,000.00	$960.73
Infective Hepatitis			
Study 1942–43 (IH 42016)	.....	30,000.00	.....
Intestinal Parasites, including Hookworm			
United States			
Johns Hopkins University, Baltimore, Maryland. School of Hygiene and Public Health			
1941–42 (IH 41028)	4,360.00	.....	3,799.65
Malaria			
Caribbean Area			
Consultant			
1942 (IH 41080)	.....	6,525.00	6,525.00
Cuba			
1940–42 (IH 39071, 40077, 41027)	12,773.38	.....	6,786.01
Haiti			
1940–43 (IH 40009, 41022, 42018)	9,670.97	9,000.00	10,237.08

El Salvador			
1940–42 (IH 40010, 40078, 41037)	$6,301.17	$2,100.00	$7,758.85
Trinidad and Tobago			
1941–43 (IH 41018, 41082, 42012)	3,162.58	8,230.00	2,609.26
Europe			
England			
University of Cambridge. Institute of Biology and Parasitology			
1939–42 (IH 39014, 41034)	590.72	.....	.....
Mediterranean Region			
1939–40 (IH 39021)	4,028.79	.....	.....
Portugal			
1941–42 (IH 40034, 41011, 41039)	4,541.10	6,000.00	3,752.21
Far East			
China			
1940–43 (IH 39077, 41062)	7,361.74	30,000.00	9,324.49
India			
1941–42 (IH 40035, 41013, 41040)	13,734.69	3,840.00	12,593.96
Mexico			
Drainage Equipment			
1942 (IH 40003)	877.36	.....	745.58
South America			
Brazil			
Anopheles Gambiae Control			
1941–43 (IH 40033, 41083)	70,752.04	.....	58,721.40
British Guiana			
1939–42 (IH 39018, 41036)	5,493.68	4,600.00	1,649.19
Peru			
1941–42 (IH 41009, 41038)	10,000.00	9,000.00	9,967.49

	Prior Designations	1941 Designations	1942 Payments
Control and Investigation of Specific Diseases and Deficiencies — *Continued*			
Malaria — *Continued*			
United States			
Chemotherapy studies			
1941–44 (IH 40065)	$20,656.44	$.....	$4,104.33
Florida			
1941–43 (IH 40031-32, 41004, 41027, 41061)	15,584.33	30,000.00	16,318.27
University of Chicago, Illinois			
1941–42 (IH 40073)	4,000.00	.....	2,000.00
Mental Hygiene			
United States			
Johns Hopkins University, Baltimore, Maryland. School of Hygiene and Public Health			
1941–43 (IH 40036, 41041)	9,671.14	10,540.00	10,281.85
Tennessee			
1941–42 (IH 40037, 41063)	12,880.39	2,363.00	12,629.72
Nutrition			
Canada			
University of Toronto			
1941–44 (IH 41016)	9,000.00	.....	2,571.79
Mexico			
1942–43 (IH 41078)	.....	20,000.00	3,080.67
United States			
North Carolina			
1941–43 (IH 40038, 41042, 41074)	6,652.79	19,950.00	9,138.79
Tennessee			
1942–44 (IH 41075, 42009)	.....	25,000.00	1,292.26
Vanderbilt University School of Medicine, Nashville, Tennessee			
1941–43 (IH 36047, 40074, 40075)	37,961.52	.....	14,395.06

Rabies			
United States			
Alabama			
1940–42 (IH 36047, 39035, 40039, 41043, 42006)	$10,228 35	$23 500 00	$13,312 18
Respiratory Diseases			
Influenza Studies			
Europe			
Hungary			
1941 (IH 40043)	5,257 76		
United States			
California			
1941–43 (IH 40040, 41044)	15,673 57	26,100 00	15,542 45
Minnesota			
1941–43 (IH 40041, 41045)	9,931 39	12,820 00	11,842 24
New York			
1941–42 (IH 40042, 41046)	2,284 58	705 78	1,200 53
Ohio State University, Columbus			
1942–44 (IH 41071)		16,000 00	3,358 88
University of Michigan, Ann Arbor			
1941–44 (IH 40069-70)	17,500 00		7,000 00
Respiratory Virus Research			
South America			
Argentina			
1940–43 (IH 39024, 40017)	18,851 90		7,576 68
Study of Respiratory Infections			
United States			
Columbia University, New York City			
1941–43 (IH 41003)	9,005 86		2,740 40
University of California, Berkeley			
1942 (IH 41030)	4,100 00		

	Prior Designations	1942 Designations	1942 Payments
Control and Investigation of Specific Diseases and Deficiencies — *Continued*			
Syphilis			
United States			
California			
1939–42 (IH 39008)	$13,672.68	$.....	$8,778.04
Johns Hopkins University, Baltimore, Maryland. School of Hygiene and Public Health			
1941–44 (IH 40067-68)	45,898.00	.....	11,107.76
North Carolina			
1940–43 (IH 39022, 42008)	6,631.05	5,025.00	6,080.47
Tuberculosis			
Caribbean Area			
Jamaica			
1939–42 (IH 38087, 40028, 41081)	19,111.60	.....	12,522.42
United States			
Committee on Neighborhood Health Development, New York City			
1938–42 (IH 36047, 38031, 40006)	2,875.00	.....	2,874.88
Tennessee			
1941–43 (IH 40071-72)	19,089.00	.....	10,901.86
Typhus Fever			
Far East			
China			
1942–43 (IH 41087)	.....	7,000.00	.....
Studies			
1940–42 (IH 40001)	4,574.71	.....	4,574.71

Yellow Fever			
Caribbean Area			
Central America and West Indies			
1939-41 (IH 38088)	$1,703.98	$.....	$1,660.03
Panama			
1940–43 (IH 39072, 41017, 42011)	1,765.38	5,600.00	702.59
Africa			
Central and East Africa			
1941-42 (IH 40049, 41051)	23,237.84	35,000.00	36,572.48
West Africa			
1942-43 (IH 42021)	.....	28,700.00	.....
South America			
Bolivia			
1941 (IH 40047)	4,711.35	.....	4,374.50
Brazil			
1941–42 (IH 40046, 41049)	35,640.72	75,000.00	88,891.56
Studies of jungle yellow fever			
1940–43 (IH 40018-19, 40029, 41027, 41031)	11,186.55	.....	5,582.07
British Guiana			
1941-42 (IH 40044, 41047)	1,170.63	2,760.00	1,411.14
Colombia			
1941–43 (IH 40045, 41048, 42003)	17,550.26	54,500.00	53,565.57
Peru			
1940–42 (IH 39044, 40048, 41008, 41050)	13,731.21	13,110.00	3,351.28
Other Studies			
Collection and testing of wild animals for use in the study of diseases of public health interest			
1938-44 (IH 38080, 39063, 40066, 41020, 41068, 42050)	20,340.95	25,546.00	6,742.35

	Prior Designations	1942 Designations	1942 Payments
Control and Investigation of Specific Diseases and Deficiencies — *Continued*			
Other Studies — *Continued*			
Far East			
India — Sanitation Research			
1942 (IH 41052)	$	$7,250.00	$4,648.49
Statistical analyses of records of certain specific diseases			
1940–43 (IH 39047)	500.00	.....	22.00
Laboratories of the International Health Division at The Rockefeller Institute for Medical Research, New York City			
1941-42 (IH 40050, 41053)	45,368.49	160,000.00	176,110.77
State and Local Health Services			
Public Health Administration			
Canada			
Nova Scotia			
1937–42 (IH 36022)	2,901.38	.....	1,939.83
Mexico			
1941–44 (IH 40051, 41027, 41064)	1,306.72	7,445.00	2,755.46
State Health Services			
Canada			
Alberta and British Columbia			
Sylvatic Plague and Rocky Mountain Spotted Fever Studies			
1938–42 (IH 41007, 41076)	809.14	4,235.00	4,682.97
Manitoba			
Division of Industrial Hygiene			
1942–43 (IH 42001)	.....	3,910.00	.....
Division of Local Health Services			
1942–46 (IH 42002)	.....	8,280.00	.....
Division of Vital Statistics			
1938–44 (IH 37085, 39005)	2,558.12	.....	521.52

Nova Scotia			
Division of Vital Statistics			
1938–42 (IH 37026)	$2,595.90	$.....	$888.71
Ontario			
Emergency Recruitment of Public Health Personnel			
1941–43 (IH 41015)	9,553.75	.....	885.00
Prince Edward Islands			
Provincial Laboratory			
1939–43 (IH 38035)	15,300.00	.....	.....
Quebec			
Division of Tuberculosis			
1939–42 (IH 39006)	3,639.01	.....	2,789.20
Far East			
Ceylon			
Control of Soil-Borne Diseases			
1940–42 (IH 39076)	1,741.51	.....	1,143.58
China			
Szechuen Provincial Health Administration			
1941–42 (IH 40082, 41054)	3,018.10	15,000 00	16,446.75
India			
Sanitation			
1941 (IH 40058, 41035)	8,142.53	.....	7,526.93
South America			
Bolivia			
Division of Endemic Diseases			
1942 (IH 41085)	.....	19,200.00	.....
Ecuador			
National Institute of Hygiene, Guayaquil			
1941–46 (IH 41019, 41025)	73,000.00	.....	39,870.50

	Prior Designations	1942 Designations	1942 Payments
STATE AND LOCAL HEALTH SERVICES — *Continued*			
State Health Services — *Continued*			
United States			
Committee on Neighborhood Health Development, New York City			
Nursing Service			
1938–42 (IH 37079)	$1,992.48	$.....	$1,874.88
Mississippi			
Coordinated School-Health-Nutrition Service			
1942–44 (IH 41073, 42007)	.....	24,000.00	.....
National Institute of Health, Montana			
1941–42 (IH 41029)	600.00	.....	600.00
Local (County) Health Departments			
Canada			
British Columbia			
1936–43 (IH 36021, 38024)	18,374.09	.....	846.50
Nova Scotia			
1942–45 (IH 41077)	.....	32,200.00	.....
Quebec			
1938–43 (IH 38025)	7,701.42	.....	4,332.20
Caribbean			
Cuba			
1938–42 (IH 37088, 41055)	2,989.87	3,000.00	3,084.58
Europe			
Albania			
Tirana Health Center			
1936–41 (IH 36028, 37089)	65.17	.....	.....

Finland			
1940–45 (IH 40012, 40079)	$18,748.85	$.....	$.....
Greece			
1936–42 (IH 36029, 37034)	2,935.29	.....	.....
Portugal			
1941–42 (IH 40059, 41010, 41086)	4,915.69	4,000.00	307.46
Turkey			
1936–42 (IH 36016, 37093)	57,878.42	.....	.....
Far East			
India			
Assam			
1941–46 (IH 41012)	19,800.00	.....	.....
Bengal			
1938–43 (IH 38011)	15,785.74	.....	3,823.08
Bombay			
1939–44 (IH 38097)	15,536.67	.....	4,004.80
Delhi			
1937–42 (IH 36110)	10,400.05	.....	1,319.58
Madras			
1937–40 (IH 36044)	4,029.45	.....	492.59
Mexico			
1936–44 (IH 35084, 37086, 40026–27, 40076, 41065, 41079, 42010)	13,473.43	11,730.00	6,013.59
South America			
Chile			
Quinta Normal Health Center, Santiago			
1942–47 (IH 42013–14)	.....	63,600.00	.....

	Prior Designations	1941 Designations	1942 Payments
Public Health Education			
Schools and Institutes of Hygiene and Public Health			
Canada			
University of Toronto			
1940–44 (IH 39004, 39067)	$31,342.75	$.....	$11,598.14
Europe			
Bulgaria			
Institute and School of Hygiene, Sofia			
1938–41 (IH 38010, 39075)	19,501.06	.....	.....
European institutes of hygiene			
Developmental aid			
1940–41 (IH 39074, 40030)	1,223.04	.....	Cr. 45.00
Spain			
National Institute of Health, Madrid			
1940–43 (IH 40024)	5,772.25	.....	273.87
Turkey			
School of Hygiene, Ankara			
1940 (IH 39059)	1,353.86	.....	Cr. 326.75
Far East			
China			
National Institute of Health			
1940–42 (IH 40021, 40060, 41057)	20,231.93	23,000.00	25,313.15
Philippine Islands			
Institute of Hygiene, Manila			
1941–44 (IH 40083, 41026)	16,000.00	.....	6,000.00

South America			
Brazil			
São Paulo Health Center			
1941–42 (IH 41024, 41056)	$1,000.00	$6,000.00	$2,003.72
United States			
Harvard University			
School of Public Health, Boston, Massachusetts			
Developmental aid			
1940–44 (IH 40004)	10,125.00	.....	3,750.00
Department of Nutrition			
1942–46 (IH 41070)	.....	100,000.00	10,000.00
Study of public health administrative practices			
1940–43 (IH 40007)	18,000.00	.....	.....
Johns Hopkins University, Baltimore, Maryland. School of Hygiene and Public Health			
Developmental aid			
1940–44 (IH 39066, 40008)	71,416.63	.....	21,916.70
Field Training and Study Area			
1937–44 (IH 37018, 41066)	18,024.22	25,000.00	10,389.76
Land (IH 38032–33)	10,000.00	.....	Cr. 6,558.63
Schools of Nursing			
Caribbean Area			
Panama			
Santo Tomás Hospital			
1937–42 (IH 37015)	10,230.59	.....	4,382.66
Europe			
Denmark			
Aarhus Postgraduate School for Nursing			
1938–41 (IH 37029)	5,853.04	.....	.....
Portugal			
Escola Tecnica de Enfermeiras, Lisbon			
1941–42 (IH 40080, 41058)	1,331.04	12,500.00	1,929.71

	Prior Designations	1942 Designations	1942 Payments
Public Health Education — *Continued*			
Schools of Nursing — *Continued*			
Europe — *Continued*			
Rumania			
Bucharest School of Nursing			
1936–41 (IH 35085)	$5,047.81	$.....	$.....
Spain			
Madrid School of Nursing			
1940–43 (IH 40020)	20,000.00	.....	.....
South America			
Argentina			
National University of the Littoral, Rosario			
1942–47 (IH 42019-20)	.....	24,530.00	3,469.38
Brazil			
University of São Paulo			
1941–44 (IH 41032, 41084)	1,000.00	30,000.00	5,710.47
Colombia			
Bogotá School of Nursing			
1943–47 (IH 42061)	.....	50,000.00	.....
Venezuela			
National School of Nursing, Caracas			
1941–46 (IH 41023)	20,000.00	.....	5,972.20
United States			
Skidmore College, Saratoga Springs, New York			
1939–43 (IH 38019)	9,500.00	.....	6,500.00

Fellowships, Travel of Government Health Officials and Teachers of Public Health, and Training of Health Workers			
1938–42 (IH 37076, 39060, 39073, 40061, 41006, 41021, 41059)	$168,800.47	$200,000.00	$181,198.04
Other Training			
Caribbean Area			
British West Indies Training Station, Jamaica			
1942–44 (IH 42017)	.....	12,750.00	.....
Mexico			
1941–44 (IH 40062, 41067)	1,126.50	5,520.00	1,902.69
United States			
North Carolina			
Public Health Education and School Health Service			
1939–43 (IH 38034)	10,754.34	.....	3,358.30
FIELD SERVICE			
Field Staff			
1941–42 (IH 40063, 41060)			
Salaries	3,388.90	468,000.00	459,282.31
Commutation	9,657.82	48,000.00	51,897.74
Travel	13,275.05	163,000.00	166,603.11
Medical examinations	841.33	1,000.00	418.44
Field equipment and supplies	954.59	4,000.00	2,623.65
Pamphlets and charts	2,476.84	11,000.00	5,695.55
Express, freight, and exchange	808.56	1,000.00	Cr. 192.44
Insurance and retirement allowances	26,665.95	56,000.00	48,931.33
Bonding	1,298.41	1,500.00	626.74
Field Office expenses	681.87	.....	183.78

	Prior Designations	1942 Designations	1942 Payments
Field Service — *Continued*			
Field Offices			
Caribbean Area			
Central Office 1941 (IH 40052)	$1,563.65	$7,455.00	$7,671.45
Cuba 1941 (IH 40054)	648.10	1,595.00	1,878.49
Far East			
India			
Central and Bengal Offices			
1941–42 (IH 40056–57)	5,856.87	8,415.00	10,543.63
Philippine Islands			
1941 (IH 40084)	1,525.47	.....	93.00
South America			
Brazil			
1941–42 (IH 40055, 41069)	4,990.76	10,000.00	7,579.51
Rio de La Plata and Andean Region			
Argentina 1940–42 (IH 40023, 41033)	9,312.14	.....	7,831.42
Bolivia 1942 (IH 42004)	.....	3,000.00	1,325.90
Chile 1942 (IH 42004)	.....	3,000.00	2,349.24
Peru 1942 (IH 41069)	.....	3,000.00	1,464.82
Miscellaneous			
1942 (IH 41069)	.....	2,500.00	526.05
Director's Fund for Budget Revisions (IH 41027)	4,237.35	.....	.....
Director's Fund for Miscellaneous Expenses (IH 41014)	524.27	.....	57.69
Exchange Fund (IH 30052, 33077)	21,521.44	.....	.....
	$1,560,456.48	$2,199,129 78*	$1,896,571.59

* The Foundation appropriated $2,200,000 for the work of the International Health Division during 1942, the undesignated balance of $870.22 being allowed to lapse as of December 31, 1942.

TRANSACTIONS RELATING TO INVESTED FUNDS

Securities Purchased

$380,000	USA Treasury Bonds 2s, Sept. 15, 1949-51 @ par	$380,000.00
6,600,000	USA Treasury Bonds 2s, Dec. 15, 1949-51 @ 100.085	6,605,625.00
6,000,000	USA Treasury Bonds 2½s, June 15, 1962-67 @ par	6,000,000.00
3,840,000	USA Treasury Certificates of Indebtedness ½s, Nov. 1, 1942 @ par	3,840,000.00
2,250,000	USA Treasury Certificates of Indebtedness .65%, May 1, 1943 @ par	2,250,000.00
4,000,000	USA Treasury Certificates of Indebtedness 7/8s, Nov. 1, 1943 @ par	4,000,000.00
3,000,000	USA Treasury Certificates of Indebtedness 7/8s, Dec. 1, 1943 @ par	3,000,000.00
67,500	(Maturity value) USA Savings Bonds, Jan. 1, 1954 (12 year appreciation bonds) @ 74	49,950.00
67,500	(Maturity value) USA Savings Bonds, July 1, 1954 (12 year appreciation bonds) @ 74	49,950.00
		$26,175,525.00

Securities Received Through Exchange

$6,000	Wabash R.R. Gen. Mtg. Income Ser. A 4s/81 @ 37	$2,220.00	
78,000	Wabash R.R. Gen. Mtg. Income Ser. B 4¼s/91 @ 29.5	23,010.00	
360	shares Wabash R.R. 4½% Pfd. Stock @ $21.50 per share	7,740.00	
	(All of the above received in reorganization for $120,000 Wabash R.R. 2nd Mtg. 5s/39 having a ledger value of 97.8, or $117,360, and were taken into the books at the opening sales price on July 2, 1942)		$32,970.00
200,000	The Laclede Gas Light Co. Ref. & Ext. 5s/42 (C/D) received from Central Hanover Bank & Trust Co., in exchange for bonds deposited. The Certificate of Deposit was then exchanged for the original bonds extended to April 1, 1945		204,759.41
			$237,729.41

TRANSACTIONS RELATING TO INVESTED FUNDS — *Continued*

Securities Received in Payment of Income			
$1,174.80	Wabash R.R. Gen. Mtg. Income Ser. A 4s/81 @ 37	$434.67	
15,274.80	Wabash R.R. Gen. Mtg. Income Ser. B 4¼s/91 @ 29.5	4,506.06	
70.5	shares Wabash R.R. 4½% Pfd. Stock @ $21.50 per share	1,515.75	
	(All of the above received on account of interest accrued from Feb. 1, 1937 to Dec. 31, 1940 on $120,000 Wabash R.R., 2nd Mtg. 5s/39 (C/D)		$6,456.48
Additions to Ledger Value			
Cost of converting the following securities from registered to coupon form:			
$200,000	Baltimore & Ohio R.R. Ref. & Gen. Ser. A 5s/95 @ $1.00 per $1,000 bond	$200.00	
551,000	Chicago & Alton R.R. Ref. 3s/49 @ $1.00 per $1,000 bond	551.00	
1,233,000	Illinois Central R.R. Ref. 4s/55 @ $1.50 per $1,000 bond	1,849.50	
1,000,000	Illinois Central R.R. — Chicago, St. Louis & New Orleans R.R. Joint 1st Ref. Ser. A 5s/63 @ $1.50 per $1,000 bond	1,500.00	
1,390,000	Northern Pacific Ry. Ref. & Imp. Ser. A 4½s/2047 @ $1.00 per $1,000 bond	1,390.00	
			$5,490.50
Payment to the Bondholders' Committee of $15 per $1,000 bond re: $250,000 Raleigh & Gaston R.R. Fifty-year 1st Mtg. 5s/47 (C/D)			3,750.00
Legal expenses in connection with reorganization proceedings re: $1,918,500 St. Louis Southwestern Ry. Gen. & Ref. Ser. A 5s/90			800.00
Increase in value on account of interest increment on $67,500 (Maturity value) USA Savings Bonds, May 1, 1953 (12 year appreciation bonds)			337.50
			$10,378.00
			$26,430,088.89

		Amount Received	Ledger Value
Securities Sold			
$42,000	Chicago, Milwaukee & St. Paul Ry. Gen. Ser. C 4½s/89 @ 44.96	$18,883.59	$43,260.00
65,000	Consolidation Coal Co., Secured Notes 3s/50, sold at par for the sinking fund	65,000.00	65,000.00
430,000	Denver & Rio Grande R.R. First Cons. 4s/36 @ 20.428	87,839.14	414,622.54
£70,800	Mexico, Republic of, Cons. External Loan of 1899 5s/45 @ $67.50 for each £100 face amount	47,790.00	120,360.00
$10,000	New Orleans, Texas & Mexico Ry. Non-cumulative Income Ser. A 5s/35 (C/D) @ 44.699	4,469.91	9,945.00
500,000	Pittsburgh, Cincinnati, Chicago & St. Louis Ry. Cons. Ser. I 4½s/63 @ 119.67	598,331.08	515,000.00
250,000	Raleigh & Gaston R.R. 1st Mtg. Fifty-year 5s/47 (C/D) @ 105	262,500.00	241,250.00
4,000,000	USA Treasury Bonds 2s, March 15, 1948-50 @ 101.03125	4,041,250.00	4,110,667.61
10,000,000	USA Treasury Notes 1⅛s, Dec. 15, 1943 @ 101.06	10,106,093.75	10,109,654.61
5,000	Wabash R.R. Gen. Mtg. Income Ser. A 4s/81 @ 44.699	2,234.95	1,850.00
3,000	shares Chicago & Eastern Illinois R.R. Com. (No par) @ $1.51 per share	4,529.86	3,750.00
50,000	shares National Fuel Gas Co., Cap. (No par) @ $9.92 per share	496,000.00	387,500.00
667½	shares Tilden Iron Mining Co., Cap @ $109.90 per share	73,358.25	18,256.29
		$15,808,280.53	$16,041,116.05
Securities Redeemed or Paid at Maturity			
$8,750	Calgary Protestant Public School Dist. No. 19, Providence of Alberta 5s/42, paid at maturity at par less 10% discount, or 90	$7,875.00	$7,437.50
10,000	Phelps Dodge Corp. Conv. Deb. 3½s/52, redeemed June 15, 1942 @ 105	10,500.00	10,859.00
5,000	Phelps Dodge Corp. Conv. Deb. 3½s/52, redeemed Dec. 15, 1942 @ 103	5,150.00	5,429.69
79,800	Provident Loan Society of New York Certificates of Contribution, redeemed Feb. 6, 1942 at par	79,800.00	79,800.00
50,000	St. Louis-San Francisco Ry. Equip. Ser. CC 4s/42, paid at maturity at par	50,000.00	45,072.09
3,840,000	USA Treasury Certificates of Indebtedness ½s, Nov. 1, 1942, paid at maturity @ par	3,840,000.00	3,840,000.00
2,048	shares Ohio Oil Co., 6% Non-voting Cum. Pfd., redeemed June 16, 1942 @ $110 per share	225,280.00	211,968.00
2,867	shares Ohio Oil Co., 6% Non-voting Cum. Pfd., redeemed Dec. 22, 1942 @ $110 per share	315,370.00	296,734.50
		$4,533,975.00	$4,497,300.78

TRANSACTIONS RELATING TO INVESTED FUNDS — *Continued*

				Amount Received	Ledger Value
Securities Surrendered in Exchange					
$200,000	The Laclede Gas Light Co., Ref. & Ext. 5s/42, deposited with Central Hanover Bank & Trust Co., and Certificate of Deposit received in exchange			$204,759.41	$204,759.41
120,000	Wabash R.R. 2nd Mtg. 5s/39 (C/D), exchanged for:				
	$6,000	Wabash R.R. Gen. Mtg. Income Ser. A 4s/81 @ 37	$2,220.00		
	78,000	Wabash R.R. Gen. Mtg. Income Ser. B 4¼s/91 @ 29.5	23,010 00		
	360	shares Wabash R.R., 4½% Pfd. Stock @ $21.50 per share	7,740 00	32,970 00	117,360.00
				$237,729 41	$322,119.41
Reduction in Ledger Value					
Payment of 10%, or $100 per $1,000 bond, received on account of principal re: $167,000 Philadelphia & Reading Coal & Iron Co., Ref. S. F. 5s/73				$16,700 00	$16,700 00
Special dividend of $3.00 per share received on 27,000 shares Northern Pipe Line Co., Cap. Stock (Par $10)				81,000.00	81,000 00
				$97,700 00	$97,700.00
				$20,677,684 94	$20,958,236 24
Balance				280,551 30	
				$20,958,236 24	$20,958,236 24
Amortization of Premium Paid on Purchase of Securities					
$4,000,000	USA Treasury Bonds 2s, Mar. 15, 1948–50				$11,832 39
6,600,000	USA Treasury Bonds 2s, Dec. 15, 1949–51				315 85
10,000,000	USA Treasury Notes 1⅜s, Dec. 15, 1943				40,698 27
					$52,846.51

RECONCILIATION

Ledger value of securities, December 31, 1941		$157,176,201.69
Ledger value of securities:		
Purchased	$26,175,525.00	
Received through exchange	237,729.41	
Received in payment of income	6,456.48	
Additions to ledger value	10,378.00	26,430,088.89
		$183,606,290.58
Ledger value of securities:		
Sold	$16,041,116.05	
Redeemed or paid at maturity	4,497,300.78	
Surrendered in exchange	322,119.41	
Reduction in ledger value	97,700.00	
	$20,958,236 24	
Amortization of premium paid on purchase of securities	52,846.51	21,011,082.75
Ledger value of securities, December 31, 1942		$162,595,207.83

In addition to the above there was received the sum of $1,010 which was used to reduce the amount by which the proceeds of securities sold, redeemed, exchanged, etc., during the year failed to equal the ledger value, or $280,551.30, resulting in a net charge to principal of $279,541.30:

Liquidating dividends of $3.00 per share on 220 shares Chehalis & Pacific Land Company which are carried on the books at a total value of $1.00	$660.00
Refund received from the Reorganization Committee re Chicago, Rock Island & Pacific Ry. 3½s/47 which was received after the redemption of the securities	350.00
	$1,010.00

SCHEDULE OF SECURITIES ON DECEMBER 31, 1942

BONDS

NAME	PAR	LEDGER VALUE		MARKET VALUE	
		PRICE	TOTAL	PRICE	TOTAL
American Telephone & Telegraph Co. Conv. Deb. 3s, Sept. 1, 1956 (Temporary certificates)	$67,500	110.	$74,250.00	107.	$72,225.00
Baltimore & Ohio R.R. Ref. & Gen. Ser. A 5s, Dec. 1, 1995 (Stamped)	1,750,000	80.01	1,400,200.00	32.625	570,937.50
Baltimore & Ohio R.R. Ref. & Gen. Ser. F 5s, March 1, 1996 (Stamped)	495,500	101.88	504,839.38	32.625	161,656.88
Burlington, Cedar Rapids & Northern Ry. Cons. 1st 5s, April 1, 1934	64,000	101.56	65,000.00	11.625	7,440.00
Calgary Protestant Public School District No. 19, Province of Alberta 5s, June 2, 1943-1948	44,750	85.	38,037.50	90.	40,275.00
Chicago & Alton R.R. Ref. 3s, Oct. 1, 1949	551,000	65.10	358,701.00	16.	88,160.00
Chicago City & Connecting Rys. Coll. Trust 5s, Jan. 1, 1927 (C/D)	1,305,000	52.	678,600.00	4.25	55,462.50
Chicago, Milwaukee & St. Paul Ry. Gen. Ser. C 4½s, May 1, 1989	458,000	103.	471,740.00	44.5	203,810.00
Chicago, Milwaukee, St. Paul & Pacific R.R. Ser. A 5s, Feb. 1, 1975	446,300	62.59	279,366.99	18.5	82,565.50
Chicago, Milwaukee, St. Paul & Pacific R.R. Conv. Adj. Ser. A 5s, Jan. 1, 2000	1,785,200	36.85	657,819.58	4.75	84,797.00

Chicago & North Western Ry. Gen. 5s, Nov. 1, 1987	$201,000	98.09	$197,175.00	34.	$68,340.00
Chicago Rys Co. 1st 5s, Feb. 1, 1927 (25% paid) (C/D) (500 bonds @ $750 each)	375,000	96.	360,000.00	48.	180,000.00
The Chicago, Rock Island & Pacific Ry. 1st & Ref. 4s, April 1, 1934	3,345,000	68.79	2,301,182.55	19.125	639,731.25
Chicago, St. Louis & New Orleans R.R. Cons. 3½s, June 15, 1951	200,000	66.	132,000.00	60.25	120,500.00
Cleveland, Cincinnati, Chicago & St. Louis Ry. Gen. 4s, June 1, 1993	700,000	83.89	587,250.00	71.	497,000.00
Cleveland Short Line Ry. 1st 4½s, April 1, 1961	500,000	95.	475,000.00	71.	355,000.00
Consolidation Coal Co. Secured Notes 3s, July 1, 1950	420,000	100.	420,000.00	100.	420,000.00
Denver & Rio Grande R.R. 1st Cons. 4s, Jan. 1, 1936	380,000	96.42	366,410.61	21.875	83,125.00
Denver & Rio Grande Western R.R. Gen. 5s, Aug. 1, 1955 (Assented subject to plan)	574,000	59.	338,660.00	3.25	18,655.00
Edmonton School District No. 7 Deb. 5s to April 15, 1953, then 4½s, to Feb. 1, 1967	350,000	81.	283,500.00	90.	315,000.00
Erie R.R. Co. 1st Cons. Ser. B 4s, Jan. 1, 1995	266,250	87.	231,637.50	93.25	248,278.13
Erie R.R. Co. Gen. Income Ser. A 4½s, Jan. 1, 2015	266,250	48.	127,800.00	55.25	147,103.13
Illinois Central R.R. Ref. 4s, Nov. 1, 1955	1,233,000	82.61	1,018,579.50	46.625	574,886.25
Illinois Central R.R. & Chicago, St. Louis, New Orleans R.R. Joint 1st Ref. Ser. A 5s, Dec. 1, 1963	1,000,000	90.15	901,500.00	48.	480,000.00
Imperial Chinese Government Hu Kuang Rys. S.F. Loan of 1911 5s, June 15, 1975	£189,000	34.	321,300.00	14.75	111,510.00
Kansas City, Fort Scott & Memphis Ry. Ref. 4s, Oct. 1, 1936	$274,000	96.55	264,562.64	60.	164,400.00
Kansas City Southern Ry. Ref. & Imp. 5s, April 1, 1950	550,000	84.	462,000.00	69.5	382,250.00
The Laclede Gas Light Co. Ref. & Ext. 5s, April 1, 1945	200,000	102.38	204,759.41	100.25	200,500.00
Lake Shore & Michigan Southern Ry. 1st 3½s, June 1, 1997	926,000	87.	805,620.00	79.125	732,697.50

BONDS — *Continued*

NAME	PAR	LEDGER VALUE		MARKET VALUE	
		PRICE	TOTAL	PRICE	TOTAL
Louisville & Nashville — Southern Ry. Monon Coll. Joint 4s, July 1, 1952	$775,000	72.	$558,000.00	93.25	$722,687.50
Mexico, Republic of, Class "A" Certificates for interest in arrears	150,228.75	6.	9,013.73	.....	.....
Missouri-Kansas-Texas R.R. Prior Lien Ser. A 5s, Jan. 1, 1962	331,250	78.5	260,031.25	40.75	134,984.38
Missouri-Kansas-Texas R.R. Prior Lien Ser. B 4s, Jan. 1, 1962	331,250	64.5	213,656.25	33.5	110,968.75
Morris & Essex R.R. 1st Ref. 3½s, Dec. 1, 2000	175,000	82.75	144,812.50	37.5	65,625.00
Mutual Fuel Gas Co. 1st 5s, Nov. 1, 1947	250,000	100.	250,000.00	111.5	278,750.00
National Rys. of Mexico Prior Lien S.F. 4½s, July 1, 1957 (Assenting)	350,000	13.	45,500.00	6.	21,000.00
Secured 6% Notes due Jan. 1, 1933, for coupons due Jan. 1, 1914	1,125	59.	663.75	.....	.....
National Rys. of Mexico Ctf. Ser. A for interest in arrears	47,857.50	5.5	2,632.16	.....	.....
National Rys. of Mexico Ctf. Ser. B for interest in arrears	94,500	.5	472.50	.....	.....
New Orleans, Texas & Mexico Ry. Non Cum. Income Ser. A 5s, Oct. 1, 1935 (C/D)	65,000	99.45	64,642.52	40.	26,000.00
New York Central R.R. Secured S.F. 3¾s, April 1, 1946	979,000	97.95	958,912.15	99.25	971,657.50
New York, Lake Erie & Western Docks & Imp. Co. 1st Ext. 5s, July 1, 1943	350,000	90.13	315,452.15	101.5	355,250.00
Northern Pacific Ry. Ref. & Imp. Ser. A 4½s, July 1, 2047	1,390,000	85.15	1,183,540.00	50.5	701,950.00

Northwestern Elevated R.R. 1st 5s, Sept. 1, 1941	$500,000	70.	$350,000.00	8.5	$42,500.00
Pennsylvania R.R. Gen. Ser. A 4½s, June 1, 1965	1,500,000	98.25	1,473,750.00	102.	1,530,000.00
Phelps Dodge Corp. Conv. Deb. 3½s, June 15, 1952	93,100	108.59	101,101.23	104.75	97,522.25
Philadelphia & Reading Coal & Iron Co. Ref. S.F. 5s, Jan. 1, 1973 (10% paid) (167 bonds @ $900 each)	150,300	93.61	140,701.42	20.	30,060.00
Reading Co. Gen. & Ref. Ser. A 4½s, Jan. 1, 1997	333,000	94.25	313,852.50	78.625	261,821.25
St. Louis-San Francisco Ry. Equip. Ser. CC 4s, May 15, 1943	50,000	89.66	44,827.69	100.8	50,400.00
St. Louis-San Francisco Ry. Prior Lien Ser. A 4s, July 1, 1950	1,500,000	73.	1,095,000.00	18.5	277,500.00
St. Louis-San Francisco Ry. Cons. Ser. A 4½s, March 1, 1978	2,500,000	14.2	355,000.00	19.75	493,750.00
St. Louis Southwestern Ry. Gen. & Ref. Ser. A 5s, July 1, 1990	1,918,500	66.85	1,282,540.12	27.75	532,383.75
Southern Pacific Co.—Central Pacific Stock Coll. 4s, Aug. 1, 1949	100,000	76.	76,000.00	72.75	72,750.00
Southern Pacific R.R. 1st Ref. 4s, Jan. 1, 1955	100,000	86.	86,000.00	70.	70,000.00
Standard Oil Co. (New Jersey) 25 year Deb. 3s, June 1, 1961	15,000,000	98.	14,700,000.00	105.125	15,768,750.00
United States of America Treasury Certificates of Indebtedness Ser. C .65% dated Sept. 21, 1942, due May 1, 1943	2,250,000	100.	2,250,000.00	100.0372	2,250,837.00
United States of America Treasury Certificates of Indebtedness Ser. D 7/8% dated Nov. 2, 1942, due Nov. 1, 1943	4,000,000	100.	4,000,000.00	100.06	4,002,400.00
United States of America Treasury Certificates of Indebtedness Ser. E 7/8% dated Dec. 1, 1942, due Dec. 1, 1943	3,000,000	100.	3,000,000.00	100.02	3,000,600.00
United States of America Treasury Bonds 2s, dated May 15, 1942, due Sept. 15, 1949-51	380,000	100.	380,000.00	100.469	381,781.25
United States of America Treasury Bonds 2s, dated July 15, 1942, due Dec. 15, 1949-51	6,600,000	100.08	6,605,309.15	100.406	6,626,812.50
United States of America Treasury Bonds 2½s, dated May 5, 1942, due June 15, 1962-67	6,000,000	100.	6,000,000.00	100.125	6,007,500.00

BONDS — *Continued*

NAME	PAR	LEDGER VALUE		MARKET VALUE	
		PRICE	TOTAL	PRICE	TOTAL
United States of America Treasury Bonds 2¾s, dated Oct. 20, 1941, due Sept. 15, 1967-72	$500,000	100.	$500,000.00	100.781	$503,906.25
United States of America Savings Bonds Defense Ser. F, dated May 1, 1941, due May 1, 1953 (12 year appreciation bonds) *Maturity value	67,500*	74.5	50,287.50	74.5	50,287.50
United States of America Savings Bonds Defense Ser. F, dated Jan. 1, 1942, due Jan. 1, 1954 (12 year appreciation bonds) *Maturity value	67,500*	74.	49,950.00	74.	49,950.00
United States of America Savings Bonds Defense Ser. F, dated July 1, 1942, due July 1, 1954 (12 year appreciation bonds) *Maturity value	67,500*	74.	49,950.00	74.	49,950.00
Wabash R.R. Gen. Mtg. Income Ser. A 4s, Jan. 1, 1981	2,174.80	37.	804.67	44.	956.91
Wabash R.R. Gen. Mtg. Income Ser. B 4½s, Jan. 1, 1991	93,274.80	29.5	27,516.06	34.25	31,946.62
Washington Ry. & Electric Co. Cons. 4s, Dec. 1, 1951	435,000	83.5	363,225.00	108.75	473,062.50
Western Pacific R.R. 1st Ser. A 5s, March 1, 1946 (Assenting)	200,800	83.	166,664.00	36.125	72,539.00
TOTAL BONDS	.....	.....	$61,797,299.96	.....	$53,225,145.55

PREFERRED STOCKS

NAME	SHARES	LEDGER VALUE		MARKET VALUE	
		PRICE	TOTAL	PRICE	TOTAL
Atchison, Topeka & Santa Fe Ry. 5% Non-Cum.	5,000	$98.25	$491,250.00	$66.00	$330,000.00
Atlanta, Birmingham & Coast R.R. 5% Guar. Cum.	4,062	94.00	381,828.00	60.00	243,720.00
Bethlehem Steel Corp. (Delaware) 7% Cum.	400	129.07	51,629.47	109.875	43,950.00
Chicago City & Connecting Rys. Participation Certificates (No par) (C/D)	17,530		1.00	.0625	1,095.63
Colorado & Southern Ry. 4% 1st Non-Cum.	4,800	54.00	259,200.00	3.50	16,800.00
Consolidated Edison Co. of New York, Inc. $5 Cum. (No par)	13,333	91.75	1,223,302.76	91.00	1,213,303.00
Denver & Rio Grande Western R.R. 6% Cum.	3,280	5.00	16,400.00	.50	1,640.00
Erie R.R. 5% Ser. A	6,283½	32.50	204,213.75	39.50	248,198.25
Illinois Central R.R. 6% Non-Cum. Ser. A	2,857	15.50	44,283.50	18.375	52,497.38
International Harvester Co. 7% Cum.	45,721	115.00	5,257,915.00	162.625	7,435,377.63
Missouri-Kansas-Texas R.R. 7% Cum. Ser. A	10,499	41.98	440,772.00	3.375	35,434.13
Ohio Oil Co. 6% Non-Voting Cum.	1,910	103.50	197,685.00	111.25	212,487.50
Pere Marquette Ry. 5% Cum.	5,740	49.66	285,048.76	20.375	116,952.50
Standard Oil Co. (Ohio) 5% Cum.	15,000	101.00	1,515,000.00	110.00	1,650,000.00
United States Steel Corp. 7% Cum.	6,600	133.86	883,462.50	112.00	739,200.00
Wabash R.R. 4½%	430½	21.50	9,255.75	23.625	10,170.56
TOTAL PREFERRED STOCKS	.....	.....	$11,261,247.49	.....	$12,350,826.58

COMMON STOCKS

NAME	SHARES	LEDGER VALUE		MARKET VALUE	
		PRICE	TOTAL	PRICE	TOTAL
American Telephone & Telegraph Co. Cap.	5,400	$181.67	$981,002.50	$127.375	$687,825.00
The Buckeye Pipe Line Co. Cap. (Par $50)	49,693	62.77	3,119,109.72	38.00	1,888,334.00
Central National Bank of Cleveland (Par. $20)	8,482	32.11	272,397.43	11.25	95,422.50
Chehalis & Pacific Land Co. Cap. (Par $10)	220		1.00		1.00
Chicago City & Connecting Rys. Participation Certificates (No par)	10,518		1.00		.....
Cleveland Arcade Co. Cap.	2,500	98.62	246,555.56	75.00	187,500.00
Cleveland Trust Co. Cap.	638	192.23	122,641.62	82.25	52,475.50
Consolidated Edison Co. of New York Inc. (No par)	22,200	45.26	1,004,792.50	15.50	344,100.00
Consolidation Coal Co. Rights to purchase Common Stock	5,875		.....		.....
Continental Oil Co. (Delaware) Cap. (Par $5)	60,627	11.15	676,125.70	27.375	1,659,664.13
Eureka Pipe Line Co. Cap (Par $50)	12,357	45.00	556,065.00	24.25	299,657.25
Illinois Central R.R.	4,070	9.62	39,173.75	8.125	33,068.75
Indiana Pipe Line Co. Cap. (Par $7.50)	74,535	9.20	685,722.00	5.50	409,942.50
International Nickel Co. of Canada, Ltd. (No par)	30,600	65.14	1,993,253.40	29.00	887,400.00
Interstate Natural Gas Co. Inc. Cap. (No par)	33,763	14.96	505,042.25	16.25	548,648.75
Kennecott Copper Corp. Cap. (No par)	33,100	59.78	1,978,731.03	29.00	959,900.00
Middle West Corp. Cap. (Par $5)	68,351.92	9.75	666,431.22	4.75	324,671.62
National Fuel Gas Co. Cap. (No par)	793,060	7.75	6,146,215.00	8.875	7,038,407.50
National Transit Co. Cap. (Par $12.50)	126,481	12.70	1,606,308.70	10.625	1,343,860.63

New York Transit Co. Cap. (Par $5)	24,784	$6 50	$161,096.00	$7 25	$179,684.00
Northern Pipe Line Co. Cap. (Par $10)	27,000	5 33	144,000 00	8 00	216,000.00
Ohio Oil Co. (No par)	94,684	35 37	3,349,446 50	11 75	1,112,537.00
Phelps Dodge Corp. Cap. (Par $25)	37,600	52 72	1,982,151 40	24 625	925,900 00
Provident Loan Society of New York Certificates of Contribution	$186,200	100%	186,200 00	100%	186,200 00
Southern Pipe Line Co. Cap. (Par $10)	24,845	$6 25	155,281 25	$7.125	177,020.63
South West Pennsylvania Pipe Lines Cap. (Par $10)	8,000	34 28	274,237 86	21 00	168,000.00
Standard Oil Co. of California Cap. (No par)	60,967	17 25	1,051,680 75	29 25	1,783,284 75
Standard Oil Co. of Indiana Cap. (Par $25)	691,140	28 90	19,973,946 00	28 50	19,697,490 00
Standard Oil Co. (New Jersey) Cap. (Par $25)	1,109,478	32.98	36,593,938 27	46 125	51,174,672 75
Standard Oil Co. (Ohio) (Par $25)	135,648	25 50	3,459,024 00	36 75	4,985,064 00
Union Tank Car Co. Cap (No par)	240,000	6 69	1,606,087 97	24.00	5,760,000 00
Wilson Realty Co. Cap.	591		1 00		....
TOTAL COMMON STOCKS		.....	$89,536,660 38	.....	$103,126,732.26

SUMMARY

	LEDGER VALUE	MARKET VALUE
Bonds	$61,797,299.96	$53,225,145 55
Preferred Stocks	11,261,247.49	12,350,826 58
Common Stocks	89,536,660.38	103,126,732 26
	$162,595,207.83	$168,702,704.39

PRICE, WATERHOUSE & CO.

CERTIFIED PUBLIC ACCOUNTANTS

56 PINE STREET, NEW YORK

March 29, 1943

OPINION OF INDEPENDENT PUBLIC ACCOUNTANTS

TO THE BOARD OF TRUSTEES OF THE ROCKEFELLER FOUNDATION:

We have examined the balance sheet of The Rockefeller Foundation as of December 31, 1942, and the related statements and summaries of funds and appropriations for the year 1942 and the list of investment securities as of December 31, 1942. Our examination was made in accordance with generally accepted auditing standards applicable in the circumstances, and included such tests of the accounting records and other supporting evidence and such other procedures as were considered necessary.

The investment securities at December 31, 1942, were counted by us or confirmed to us by the custodians, and the bank balances at that date were confirmed to us by the depositaries.

Following the policy previously authorized, no effect has been given in the accompanying statements to accrued income not received or to expenditures made from advance accounts not reported in time to be recorded when the books were closed as of December 31, 1942.

In our opinion, with the foregoing explanations, the accompanying balance sheet and related statements and summaries of funds and appropriations, and the list of investment securities fairly present the position of The Rockefeller Foundation at December 31, 1942, and the results of its operations for the year 1942, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

PRICE, WATERHOUSE & CO.

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