

**The
Population
Council**

*Annual
Report
1957*

The Population Council

REPORTS OF THE EXECUTIVE OFFICERS

For the Year Ended December 31, 1957

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230 Park Avenue
New York 17, N. Y.

Office of the Medical Director:

The Rockefeller Institute
New York 21, N. Y.

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The Population Council

Report of the President

FOR THE YEAR 1957

IN 1957 the Population Council completed its fifth year of operation. In the five-year period its staff has grown from a skeleton force to include by the end of 1957 a Demographic Director and Associate Director, a Medical Director and Assistant Director, a demographic research office, and a well-equipped and staffed research laboratory at the Rockefeller Institute. The Council's expenditures for administration and appropriations for grants, fellowships, research by its own staff and other purposes have risen from \$147,263.37 in 1953, \$254,703.04 in 1954, \$420,375.08 in 1955, and \$501,700.32 in 1956 to \$776,697.26 in 1957.

The geographical scope of the Council's activities has greatly expanded. Foreign demographic grants and fellowships, which began with India, Japan and Egypt, have now been extended to include Burma, the Philippines, Pakistan, Vietnam, Korea and Taiwan; Brazil, Chile and Peru; Puerto Rico and Jamaica; Poland and Hungary; and exploratory work in Africa. Centers for scientific training in population studies, which in 1953 were limited to the United States and one or two European countries, are now available in India and Chile under the auspices of the United Nations, and other training centers are being planned.

The Council's program of demographic and medical fellowships, which began in 1953 with awards to a few Fellows, mostly American, is now each year returning to work in their native countries a small but steady stream of men and women trained in demographic and medical research. Research on the physiology of reproduction has been encouraged by grants to laboratories not only in this country, but in Austria, Sweden, England, Denmark, Germany, Japan, India, Argentina, Peru, Chile, Canada and Israel.

All these changes might seem to indicate that the Council is increasingly in a position to contribute to the understanding and so, perhaps, to the solution of problems of world population growth and change. But the larger scope of the Council's work must be balanced against the rate at which problems of population have themselves increased during the same five years.

In this period world population is estimated to have grown by 233 millions, a number greater than the total population of either the United States or of the Soviet Union in 1956. In most of western Europe the postwar upsurge in births has now ceased, and birth rates are stabilized, at least temporarily, slightly above those of the prewar period. This return to lower levels has not yet occurred in the United States, though it is doubtful that our population will long continue to grow at its present rate. It is in the countries where the populations are already large in proportion to their developed or available resources, and where there is a minimum base for economic growth, that we must expect the most rapid increase in population during the next generation. The high death rates of many of these areas are dropping rapidly with the spread of simple measures of public health and it is highly unlikely that their birth rates will fall with anything like the same speed. The people in several of these countries are at present increasing at a rate sufficient to double their numbers in each generation, and this rate of increase may well extend to other and larger areas in the near future. It is hard to see how the levels of living for the mass of the people can be raised in the face of continuous rapid increases in numbers.

In those countries which are already highly industrialized, production is increasing more rapidly than population. In the less industrialized countries the reverse is often the case; population tends to increase more rapidly than production. The disparity between individual consumption in the industrial countries and the individual consumption in the underdeveloped countries is growing each year. The situation bodes no good for the peace of the world. If corrective measures are to be taken, there needs first to be an understanding in the areas concerned of the retarding effect of too rapid population growth on the production and consumption of goods, the spread of education, and the improvement of health and of conditions of living generally. The Population Council continues to have as one of its major purposes the study of these problems by local personnel, trained in objective scientific methods and able to interpret the results to their own people.

The transfer to other countries of our experience in the scientific study of population problems is important for a number of reasons. The social sciences in general, and the subdivision of demography in particular, are well advanced in the United States, but in most other countries outside of Europe they are unknown or barely making a beginning. The contribution which the United States can make in the next few years is unique. There is an opportunity here not only to disseminate knowledge, but to forestall an emotional approach to the complex and potentially explosive problems of population. The science of demography deals with the quantitative analysis of measurable units. Its findings, like those of any scientific inquiry, present demonstrable facts. These can provide a non-controversial approach to human problems. Such an approach is particularly important to the solution of problems of world population and the population problems of individual countries. An

emotional or ideological approach could rapidly turn questions of population into highly divisive issues, and postpone their solution to a distant future when it would be too late to avert disaster.

The scientific approach lays a base for the understanding of population problems by the intellectual groups in every country and is the only basis for developing sound policies for changing the fertility patterns of people when their rapid increase threatens their aspirations for better conditions of living. Individual decisions as to size of family are then more likely to be made in a rational way, appropriate to the improvement of family life. If intelligent pressures for change are to come from within the countries concerned, it is necessary to train men and women in scientific procedures and to return them to jobs in their own countries so that, as they establish themselves in positions of influence, they can initiate and take part in programs of research and publication and in the training of a larger group of successors.

The work of the Council received stimulus in 1957 from a grant of one million dollars from the Ford Foundation, to be spent over a five-year period, and from a grant from the Markle Foundation for the Council's Medical Division. Following on a previous grant from the Rockefeller Brothers Fund, construction is now going forward on enlarged laboratory space for the Council at the Rockefeller Institute for Medical Research. A grant has been made to the Council from the National Institutes of Health in support of the work to be carried on in this laboratory. Finally, gifts made by others to the National Committee on Maternal Health, together with a substantial grant from the Council, have enabled the National Committee to undertake under the best medical auspices an important program of research to evaluate the effectiveness, acceptability, safety and cost of various methods and materials of fertility control.

The work of the Demographic and Medical Divisions is described by the respective Directors in the reports which follow. The enthusiasm and dedication of a highly competent staff and the constant support and encouragement of an unusual Board of Trustees continue to contribute vital elements to the Council's work.

THE DEMOGRAPHIC PROGRAM

Report of the Demographic Director

THE DEMOGRAPHIC PROGRAM is based on the belief that knowledge and interest must precede intelligent action in the solution of the world's population problems. Such knowledge and interest are often lacking in the very countries where the problems seem to outsiders to be most acute. At the same time nationalist sentiment, particularly among the newly emerged nations, makes it necessary that such knowledge and interest have primarily local roots and motivations. For these reasons the Demographic Division has increasingly directed its efforts at promoting scientific work in demography and related fields in the so-called underdeveloped areas, though continuing its support to population study in the United States.

The expanding activity of the Council is reflected in the increasing number of countries represented in the demographic fellowship program. This program began in 1953 with eight fellowships, six to students from the United States and one each to students from Japan and Egypt. In 1957 sixteen awards were made to Fellows from thirteen different countries.

Previous Council Fellows have now returned to their countries of origin and are beginning to assume positions of responsibility in their governments and their universities. It is anticipated that an increasing activity of the program will be maintaining liaison with the Fellows and on occasion providing support for their work. A Newsletter was inaugurated in 1957 to help Fellows of previous years keep in touch with one another's activities and with the developing program of the Council.

Previous reports have discussed the Council's interest in promoting international conferences and activities of international agencies in the field of population. The Council made grants in support of the World Population Conference, held in Rome in 1954; of the two United Nations Regional Seminars on Population Problems held in Bandung and in Rio de Janeiro in 1955; and of the United Nations Demographic Training and Research Centre for Latin America in Santiago, Chile, in 1956. These were followed in 1957 by a major grant to the United Nations toward the establishment and maintenance of its Demographic Teaching and Research Centre for Asia in Bombay, India.

In 1957 a number of travel grants were made to enable qualified persons to participate in international conferences. Travel funds were provided eight participants in the Assembly of the International Union for the Scientific Study of Population which met with the International Statistical Institute in Stockholm in August.

The Council served as co-sponsor of the 22nd Symposium on Quantitative Biology at Cold Spring Harbor on June 3-12, 1957. The subject of the Conference was "Population Studies—Animal Ecology and Demography." The Council made a grant of \$5,000 to the Long Island Biological Association chiefly to pay the expenses of foreign participants.

Three demographic grants were made to American and British universities in order to promote their studies in the field of population.

The first of these, a grant of \$14,840, was made to the Population Investigation Committee, University of London, to enable it to continue for three years its participation in the British national survey of the characteristics of a sample of British children born during the month of April 1946 and followed continuously since then. The Council's grant will also permit a special survey of the reproductive histories and of the changing expectations with regard to completed size of family among the parents of these children.

A grant of \$27,390 was made to the University of Michigan in support of a program of Research in Population and Human Ecology jointly sponsored by the University's Department of Sociology and its School of Public Administration. The Council's grant will supplement funds provided by these departments and by the State of Michigan for the development of the University's work in this field. Dr. David Goldberg, a former Council Fellow, has been engaged as full-time director of the program.

A grant of \$19,500 was made to the African Research and Studies Program, Boston University, to initiate a program of research on the demography of Africa under the direction of Professor Frank Lorimer of the American University, who will divide his time between Washington and Boston. Following a preliminary survey Professor Lorimer plans to visit tropical Africa to explore the possibilities of stimulating local demographic research and cooperative studies.

Formal grants made by the Council in 1957 do not adequately reflect its interest and activity in promoting population research in underdeveloped areas. Important efforts were made during the year to establish closer connections with present and potential centers of demographic work in these countries. For this purpose the Associate Demographic Director, Mr. W. Parker Mauldin, went on leave to undertake an assignment as United Nations expert at the Demographic Teaching and Research Centre in Bombay. The Council was fortunate to obtain the services of Professor Vincent H. Whitney, on leave from his position as Chairman of the Department of Sociology at Brown University, as temporary replacement for Mr. Mauldin in the New York office.

Mr. Mauldin began his tour of duty in September and immediately undertook heavy responsibilities in connection with organizing the teaching program of the new Centre and with arrangements for the successful Inaugural Conference of the Centre held in November. Mr. Mauldin expects to complete this assignment in India in May 1958, having had

an opportunity to travel widely and to visit once or more each of the important centers of government and university research in population study and related fields.

The Council has also been ably represented on an informal basis by Dr. Marshall C. Balfour, Associate Director for Medical Education and Public Health of the Rockefeller Foundation, and its resident representative in India. Through the kindness of the Rockefeller Foundation, Dr. Balfour is to be placed on detached service from the Foundation to serve as representative of the Population Council in Asia. Dr. Balfour expects to undertake these duties for the Council beginning July 1, 1958.

Dr. Kirk is serving as a member of the Technical Board of the United Nations Demographic Training and Research Centre for Latin America in Santiago, Chile, and in this capacity visited the Centre and consulted at length with its officers in November.

It is anticipated that these efforts at promoting demographic work in Asia and Latin America will be reflected in a larger allocation of funds for research grants in these areas in 1958.

THE PROGRAM OF MEDICAL RESEARCH

Report of the Medical Director

THE YEAR 1957 marked completion of the third year of operation of the Medical Program. During this year the areas of its interest were both expanded and consolidated. The expansion has related to provision of support for promising new areas of research in the physiology of reproduction. At the same time, certain older projects have been completed and others have reached a stage of development which indicate that longer term support should be provided for them to realize their potentialities. It is expected that future years will provide increasing numbers of new leads as well as indications for increased support of proven projects. That such is likely is suggested by the fact that increasing numbers of skilled investigators are becoming interested in and devoting their efforts to the study of the physiology of reproduction. Wherever possible, the Population Council is assisting, both here and abroad, in the development of this trend by provision of research grants and fellowships and in stimulating work in areas of study where it is important to secure additional information on basic mechanisms relating to the reproductive processes.

It is our firm belief that improved methods for the control of fertility, either inhibitory or stimulatory, depend for their development upon better understanding of basic physiologic mechanisms. In some areas, existing knowledge of such mechanisms is very inadequate, and it is in these instances that particular attempts are being made to stimulate research. At the same time, the Population Council is endeavoring to promote the rapid development of those leads that promise to have practical application in regulating human fertility.

During the year the Medical Division, with the advice of the Medical Committee, has recommended to the Board of Trustees a total of twenty-four grants, both new and continuing. Of these, twelve are continuation grants and twelve are new awards. These grants have been distributed over a wide range of subjects pertaining to reproduction, but may be considered to fall into seven general categories.

A. *Studies on the physiology of the oviduct and of fertilization.* This is an area of research that requires a great deal of additional information for proper understanding of the mechanisms of egg and sperm transport, their final maturation and union, and embryonic development during tubal transport. Projects falling into this category are under way

at the University of Washington (hormonal relations in the oviduct involved in transport and development of the young embryo); the Worcester Foundation (two studies on the capacitation of spermatozoa and on the tubal factors involved in fertilization and ovum cleavage); and Uppsala University, Sweden (agglutin-antagglutin relationships in sperm transport and in fertilization).

B. *Studies on early development of the embryo.* In this area projects are being supported at the University of Washington (effects of various antimetabolic compounds on the embryo); the Weizmann Institute, Israel (physiologic and biochemical mechanisms related to implantation of the embryo); and the University of Chicago (the effect of reduced numbers of primordial germ cells on the development of the reproductive system). Each of these investigations shows great promise of securing new information regarding the factors related to early embryonic development.

C. *Studies on the physical and chemical properties of cervical mucus.* The single project that is currently supported by the Council is being conducted at the University of Reading, England. The cervical mucus is of particular importance since it is a barrier through which sperm must pass. Its hospitable or hostile characteristics determine whether or not spermatozoa may pass into the uterus and oviducts to effect fertilization of the ovum.

D. *Studies on hypophysial-gonadal interrelations.* In both males and females the gonads depend upon the hypophysis for their normal function. The extent and significance of this relationship looms very large in the control of fertility. For example, a better method of determining the precise time of ovulation would be of inestimable value. The projects which have been supported in this area are at the University of California (an investigation of antagonists to gonadotrophic hormones); the University of Illinois (the relation between progesterone levels and ovulation); the University of Illinois (the effects of tranquilizing compounds on reproductive cycles); Keio University, Japan (the hypophysial-gonadal relations in fertility); and Hamburg University, Germany (use of the weaver-finch assay in determining levels of luteinizing hormone).

E. *Histology and histochemistry of the gonads and associated ducts.* Of fundamental importance in this area of study is a better understanding of the minute structure of the gonads and their ducts. At the present time, our knowledge of the maturation, both morphologic and physiologic, of the germ cells is fragmentary and requires a great deal of investigation. Projects supported recently with grants are those at the University of Chicago (a study by histochemical and electronmicroscopic methods of enzyme systems in the testis and epididymis); McGill University, Montreal (the spermatogenic cycle in primates); the University of Buenos Aires (studies of the testis by radioisotopic and electron-

microscopic methods); and The Connective Tissue Research Laboratory, University of Copenhagen (the connective tissue elements associated with the ovum and their relationship to fertilization).

F. *Studies on factors influencing gonadal function.* The investigations in this area that have been provided with support during the year are as follows: the Carnegie Institution (studies on the site of production of an antispermatogenic factor); San Marcos University, Peru (the relation between high altitude and reproduction); and the University of Innsbruck, Austria (the effects of radiation and of temperature upon reproduction). That certain factors, *e.g.*, hormonal and nutritional, are important to the normal function of the gonads has been established. We must learn about other influences that may play important roles in the control of gonadal activity.

G. *Studies on the effects of steroid compounds on reproductive functions.* During the last few years investigations by a large number of workers have indicated the importance of further attention to this area. It has been well established that many compounds of the estrogen-progesterone-androgen series have profound effects upon the reproductive processes. More recently a group of compounds, effective at a relatively low level when administered orally, have become available for use in human beings. During the year, the following investigations have been provided with support from the Council: The Planned Parenthood Association of Los Angeles (studies on the effects of progestational steroids on fertility); The University of Oregon (studies on the effects of the steroids on spermatogenesis and gonadotrophin levels in man); and the University of Buenos Aires (the effect of estrogenic hormone on the testis).

In addition to its program of research grants, the Council has continued, on a lesser scale, the award of fellowships for training in the physiology of reproduction. These fellowships have provided the opportunity for students from Japan, England, Pakistan, and India to study in this country and to learn research procedures for application in their own laboratories.

The staff of the Medical Division has attended all major scientific meetings concerned with reproduction in this country and some of those held abroad. Among the latter were the International Conference on Hormones in Blood, London, the Annual Meeting of the Dutch Endocrine Society, Amsterdam, the Annual Meeting of the German Endocrine Society in Freiburg, the International Urological Congress in Vienna, the International Congress on Cell Biology in St. Andrews, Scotland, the meeting of the International Planned Parenthood Conference on Spermatocidal Agents in London, meetings of the Executive Committee of the International Endocrine Congress in London and Paris, and the Pan-American Congress on Endocrinology in Buenos Aires. During the course of these foreign and domestic trips, more than forty laboratories

were visited with the idea of evaluating present and future prospects for advancement of knowledge on the physiology of reproduction.

During the year, a laboratory for the study of the physiology of reproduction has been put into operation at the Rockefeller Institute. Among the projects under study have been evaluations of the effect of the various new steroids on reproduction, study of anti-estrogenic and anti-androgenic substances in relation to fertility, immunological phenomena and reproduction, studies on the use of the weaver finch as an assay method for the luteinizing hormone, and an exploration of the relation between sex-chromatin and genetic sex. As a result of these studies, seven papers have been published from the laboratory of the Population Council and others are in prospect. A part-time librarian has been retained to assist in the evaluation of published materials. Plans are in progress for an expansion of the Council's laboratory to accommodate additional staff and a wider research program.

FINANCIAL REPORT

AS OF DECEMBER 31, 1957

The financial statements of the Population Council, Inc. for 1957 have been examined by Lybrand, Ross Bros. & Montgomery—certified public accountants.

BALANCE SHEET

ASSETS

OPERATING FUND

Cash		\$ 297,562.39		
Marketable securities at cost				
(approximate market value \$397,849)				
U.S. Treasury and other obligations	\$ 389,150.00			
Common Stocks	8,650.00	397,800.00		
Deposit		425.00		
Due from Reserve Fund		11,220.00	\$ 707,007.39	

RESERVE FUND

Cash		1,111.90		
Marketable securities at cost				
(approximate market value \$1,513,989)				
U.S. Treasury and other obligations	210,295.31			
Common Stocks	1,050,310.62	1,260,605.93	1,261,717.83	
			<u>\$1,968,725.22</u>	

FUNDS AND LIABILITIES

OPERATING FUND

Unpaid Appropriations		\$ 326,832.79		
Accounts Payable		149.59		
Balance December 31, 1957:				
General	\$ 192,764.14			
1954 Ford Foundation Grant	187,260.87	380,025.01	\$ 707,007.39	

RESERVE FUND

Due Operating Fund		11,220.00		
Balance December 31, 1957		1,250,497.83	1,261,717.83	
			<u>\$1,968,725.22</u>	

AMOUNTS AVAILABLE FOR APPROPRIATION

Balance January 1, 1957		\$ 460,787.63
Gifts Received:		
Rockefeller Brothers Fund	\$120,000.00	
Rockefeller Brothers Fund (Medical laboratory construction)	50,000.00	
Ford Foundation	200,000.00	
Markle Foundation	5,000.00	
National Institutes of Health	15,778.00	
Trusts from which payments may be made to organizations in which John D. Rockefeller 3rd is interested.	250,000.00	
	<u>640,778.00</u>	
Interest and Dividends	55,641.02	
	<u>696,419.02</u>	
Less: Net loss from sale of securities	(484.38)	695,934.64
		<u>1,156,722.27</u>
Less:		
<i>Administration and Staff Research</i>		
Administration	\$103,246.37	
Staff Research:		
Demographic offices	19,403.09	
Medical laboratory	31,639.03	
Travel and miscellaneous	13,029.55	
<i>Grants and Fellowships Authorized (net after refunds and adjustments)</i>		
Demographic Grants	147,365.05	
Demographic Grants for UN Centers	55,218.15	
Demographic Fellowships	72,470.49	
Medical laboratory construction	100,000.00	
Medical Grants	215,313.49	
Medical Fellowships	16,312.04	
Medical Genetic Grants	2,700.00	<u>776,697.26</u>
Funds available December 31, 1957 per balance sheet*		<u><u>\$ 380,025.01</u></u>

*Includes \$187,260.87 balance of 1954 Ford Foundation Grant to be used for international demographic centers.

GRANTS IN THE FIELD OF DEMOGRAPHY

1957

GRANTS PAYABLE TO:	<i>Amount of Grant</i>
<i>Boston University</i>	\$ 19,500.00
For support of studies of African demography under the direction of Professor Frank Lorimer in 1958 and 1959.	
<i>Demographic Teaching and Research Centre, Bombay, India</i>	2,500.00
To provide travel and living expenses of Dr. L. D. Sanghvi during his trip to the United States and Europe in the summer of 1957.	
<i>Dr. John Durand</i>	3,000.00
In support of independent research and travel during 1957 and 1958.	
<i>International Union for the Scientific Study of Population</i>	5,511.80
To provide travel funds for selected foreign participants to attend the joint meetings of the International Union for the Scientific Study of Population and the International Statistical Institute in Stockholm, Sweden, August 6-12, 1957.	
<i>London School of Economics and Political Science, Population Investigation Committee</i>	14,840.00
In support of a three-year extension of its participation in the continuing British National Survey of children born during 1946 and their families.	
<i>Long Island Biological Association</i>	5,000.00
Toward costs of holding the Twenty-second Symposium on Quantitative Biology at Cold Spring Harbor, June 3-12, 1957.	
<i>University of Michigan</i>	27,390.00
For the development of a program of research in population and human ecology in the Department of Sociology over a three-year period beginning in 1957.	

<i>National Committee on Maternal Health, Inc.</i>	53,750.00
To assist in carrying out its program of studying and reporting on the effectiveness, acceptability, safety and cost of various methods and materials of fertility control.	
<i>National Taiwan University, Taipei, Taiwan</i>	2,000.00
For studies of population change and social change in Taiwan by Professor Shao-hsing Chen in the Department of Archaeology and Anthropology.	
<i>Population Reference Bureau</i>	5,000.00
For its general corporate purposes during 1957.	
<i>United Nations</i>	50,000.00
For assisting in establishing and maintaining a regional demographic training and research center in Bombay, India, during the years 1957 and 1958.	
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	\$188,491.80
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GRANTS IN THE FIELD OF MEDICAL RESEARCH

1957

GRANTS PAYABLE TO:	<i>Amount of Grant</i>
<i>University of Buenos Aires, Argentina</i>	
For support of a study on effects of estrogen on male fertility, for one year beginning January 1, 1957.	\$ 2,000.00
For support of studies on the testis by histochemical methods, radioisotopes and electron microscopy, for one year beginning July 1, 1957.	3,000.00
<i>University of California</i>	8,910.00
For support of studies on the chemical and biological characterization of the antagonistic factor in the anterior pituitary, for one year beginning July 1, 1957.	
<i>Carnegie Institution of Washington, Baltimore</i>	8,500.00
For support of studies on the site of production of an antispermatogenic factor and the mechanism of induction of aspermatogenesis in the guinea pig, for one year beginning October 1, 1957.	
<i>University of Chicago</i>	1,836.00
For support of studies on primordial germ cells in normal and mutant mice, for one year beginning April 15, 1957.	
<i>University of Copenhagen, Denmark</i>	8,000.00
For support of continuation of studies on the role of connective tissue in fertilization, for one year beginning January 1, 1957.	
<i>University of Hamburg, Germany</i>	2,500.00
For support of studies on the weaver finch test and its significance in gonadotrophin assay, for one year beginning January 1, 1958.	
<i>University of Illinois, Urbana</i>	5,000.00
For support of basic studies on the role of progesterone in the physiology of reproduction, for one year beginning February 1, 1957.	
<i>University of Illinois, Chicago</i>	6,940.00
For support of studies on the suppression of ovarian cyclic function in monkeys, for one year beginning July 1, 1957.	

<i>University of Innsbruck, Austria</i>	4,150.00
For support of studies on the effects of abnormal environmental factors on gametogenesis, for one year beginning May 1, 1957.	
<i>Keio University, Tokyo</i>	5,000.00
For support of studies on the physiology of reproduction, for one year beginning November 1, 1957.	
<i>McGill University, Montreal</i>	5,400.00
For support of studies on the cycle of the seminiferous epithelium in man and primates, for one year beginning October 1, 1957.	
<i>Medical Research Foundation of Oregon, Inc.</i>	15,120.00
For support of studies on the effect of steroids upon spermatogenesis and gonadotrophin excretion in the human male, for one year beginning October 1, 1957.	
<i>National Committee on Maternal Health, Inc.</i>	53,750.00
To assist in carrying out its program of studying and reporting on the effectiveness, acceptability, safety and cost of various methods and materials of fertility control.	
<i>Planned Parenthood Center of Los Angeles</i>	6,100.00
For support of studies on the effects of progestational steroids on fertility, for one year beginning November 1, 1957.	
<i>University of Reading, England</i>	9,300.00
To supplement previous grant for support of chemical and physical studies on cervical mucus, for three years beginning January 1, 1957 to December 31, 1959.	
<i>Rockefeller Institute for Medical Research</i>	100,000.00
For the development at the Rockefeller Institute of laboratory facilities for research in the physiology of reproduction.	
<i>University of San Marcos, Lima, Peru</i>	1,930.00
For support of studies on the effects of high altitude on reproduction, for one year beginning May 1, 1957.	
<i>University of Uppsala, Sweden</i>	5,900.00
For support of studies on the agglutinin-antagglutinin relationship in fertilization, for one year beginning May 1, 1957.	

<i>University of Washington, Seattle</i>	
For support of investigating the effect of antimetabolites on the rat in utero, for one year beginning January 1, 1957.	10,000.00
For support of studies on the secretory activity of the tubal epithelium in the rabbit and in other mammals, for one year beginning January 1, 1957.	7,052.00
<i>The Weizmann Institute of Science, Rehovoth, Israel</i>	
For support of studies on the physiology and biochemistry of mammalian implantation, for one year beginning May 1, 1957.	6,800.00
<i>Worcester Foundation for Experimental Biology, Shrewsbury, Massachusetts</i>	
For support of studies on the growth and development of mammalian eggs, for two years beginning May 1, 1957 to April 30, 1959.	11,600.00
For support of the continuation of study on the physiology of spermatozoa in the female genital tract, for one year beginning November 1, 1956.	12,200.00
For continuation of the above study, for one year beginning November 1, 1957.	13,000.00
	<u><u>\$313,988.00</u></u>

GRANTS IN THE FIELD OF MEDICAL GENETICS

1957

GRANTS PAYABLE TO:	<i>Amount of Grant</i>
<i>Genetics Society of America</i>	\$ 500.00
Toward expenses for the Tenth International Congress of Genetics.	
<i>University of Virginia</i>	1,500.00
Toward support of a medical geneticist.	
	\$ 2,000.00

DEMOGRAPHIC FELLOWSHIPS

For pre-doctoral, post-doctoral and traveling fellowships for American and foreign students.

1957

Demographic Fellowships	\$ 72,870.49
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MEDICAL FELLOWSHIPS

For fellowships or grants-in-aid to graduate students, members of the medical profession or scientists, for study and research on the physiology of reproduction.

1957

Medical Fellowships	\$ 16,481.60
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MISCELLANEOUS GRANTS

1957

<i>Purpose</i>	<i>Amount of Grant</i>
Miscellaneous, Travel and other grants:	
In the field of Demography	\$ 13,993.25
In the field of Medical Research	1,350.00
In the field of Medical Genetics	700.00
	\$ 16,043.25

FELLOWSHIPS AWARDED IN 1957

DEMOGRAPHIC FELLOWSHIPS

- Esdras Borges-Costa*: Brazil; Assistant Professor of Sociology, School of Sociology and Politics, Sao Paulo; fellowship for study in demography toward Ph.D. in sociology at University of California; one year beginning September 1957.
- Mercedes B. Concepcion*: Philippines; Instructor, Statistical Center, University of the Philippines; fellowship for advanced study in sociology with emphasis on demography at University of Chicago; one year beginning April 1958.
- Kumudini Dandekar*: India; Head of Demographic Section, Gokhale Institute of Politics and Economics; fellowship for advanced study in demography at Princeton University; one year beginning September 1957.
- Paul Demeny*: Hungary; fellowship for advanced study in demography at Princeton University; one year beginning September 1957.
- Saad Gadalla*: Egypt; High Council of Land Reform; renewal of fellowship for study in rural sociology with emphasis on demography toward Ph.D. at University of Missouri; one year beginning July 1957.
- Dr. Pum Suk Han*: Korea; Associate Professor of Public Health, Seoul National University; fellowship for study in demography at Princeton University; ten months beginning September 1957.
- Ismail Maung Khin Maung*: Burma; Instructor, Department of Economics and Statistics, University of Rangoon; fellowship for advanced study in demography at University of Chicago; one year beginning September 1957.
- Mahmud Salim Jillani*: Pakistan; Lecturer in Economics, Panjab University; fellowship for study in sociology with emphasis on demography toward Ph.D. at University of Chicago; one year beginning September 1957.
- Murarimohan Majumdar*: India; Indian Statistical Institute, Calcutta; fellowship for study in demography at Princeton University; one year beginning September 1957.
- Aleksander Matejko*: Poland; Housing Institute, Warsaw; fellowship in sociology with emphasis on demography at University of Michigan; one year beginning September 1957.
- John S. McDonald*: Australia; fellowship for study in demography at University of Pennsylvania; one year beginning September 1957.
- Dr. J. N. Sinha*: India; Lecturer in Economics, Lucknow University; fellowship for advanced study in economics with emphasis on demography at Princeton University; one year beginning September 1957.

Yuzuru Takeshita: United States; fellowship for study toward Ph.D. in sociology with emphasis on demography at University of Michigan; one year beginning September 1957.

Raul Vargas: Peru; Public health statistician, Institute of Inter-American Affairs, Lima; fellowship for study in demography at University of Chicago; one year beginning September 1957.

Wang Nai Chi: Taiwan; Department of Economics, National Taiwan University; renewal of fellowship for study in demography at Princeton University; one year beginning September 1957.

Walter B. Watson: United States; renewal of fellowship for study in sociology with emphasis on demography toward Ph.D. at University of Wisconsin; one year beginning September 1957.

Renewal and supplementary awards for periods of less than one year were also made to: S. N. Agarwala (India); Roy Chung (Jamaica, BWI); Shigemi Kono (Japan); P. C. Mathur (India); Krishna S. Nayampalli (India).

MEDICAL FELLOWSHIPS

Dr. Sheikh Irshad Ahmed: India; Research Fellow, University of Cambridge, England; fellowship to study the effects of quinone and related compounds on reproduction; at University of Rochester School of Medicine and Dentistry; one year. Starting date as yet uncertain.

Dr. Robert Geoffrey Edwards: Scotland; Research Fellow, Institute of Animal Genetics, Edinburgh, Scotland; fellowship for genetic studies on the reproductive physiology of mammals; at California Institute of Technology, Pasadena; one year beginning October 1, 1957.

Dr. Hindenobu Mashima: Japan; Professor, Juntendo University, Tokyo; second fellowship for study of excitation-contraction coupling in muscle and its endocrine regulation; at The Rockefeller Institute; eight months beginning February 1, 1958.

Dr. Prabhaker N. Shah: India; Research Fellow, Indian Cancer Research Centre, Bombay, India; fellowship to study histochemical reactions in the endometrium following administration of progesterone antagonists or its substitutes; at Columbia University, College of Physicians and Surgeons, New York; nine months beginning January 1, 1957.