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POPULATION CRISIS

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HEARINGS

DOCUMENTS

BEFORE THE
SUBCOMMITTEE ON

SEP 2 1986

FOREIGN AID EXPENDITURES

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OF THE

COMMITTEE ON

GOVERNMENT OPERATIONS

UNITED STATES SENATE

EIGHTY-NINTH CONGRESS

DOCUMENTS

SECOND SESSION

ON

SEP 3 1986

S. 1676

A BILL TO REORGANIZE THE DEPARTMENT OF STATE AND
THE DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

JUNE 15, 1986

PART 5-A

Printed for the use of the Committee on Government Operations



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AND THE

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POPULATION CRISIS

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BEFORE THE
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U.S. GOVERNMENT PRINTING OFFICE

WASHINGTON : 1966

67-785

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POPULATION CRISIS

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CONTENTS

(This is part 5-A of the second series of hearings on S. 1676, entitled "Population Crisis," held during the 2d session of the 89th Congress. The initial hearings, held in 1965, were printed as part 1; parts 2-A and 2-B; parts 3-A and 3-B; part 4, the appendix; and an index.)

Opening statement of the Chairman	Page 1073
---	--------------

WITNESSES

JUNE 15, 1966

William A. Albrecht, Columbia, Mo., emeritus professor of soils, and former chairman of the Department of Soils, University of Missouri College of Agriculture; technical consultant to Vital Earth Products, Inc., Ortonville, Minn.	1076
Mary Anne Rennolds, of the Virginia League for Planned Parenthood....	1143
Mrs. James Robinson, mother and churchworker	1145
Dr. Otto Hakon Ravenholt, Chief Health Officer, Clark County District Health Officer, Las Vegas, Nev.	1198

EXHIBITS

JUNE 15, 1966

No.		
150.	Photograph of witnesses who testified on S. 1676 before the Subcommittee on Foreign Aid Expenditures	vi
151.	Remarks of Congressman Harold D. Cooley, of North Carolina, chairman, Committee on Agriculture, U.S. House of Representatives, Wednesday, March 9, 1966, at a luncheon sponsored by the International Minerals & Chemical Corp., Continental Plaza Hotel, Chicago, Ill., entitled "Industry's Role in the World War on Hunger"	1095
152.	Address by Secretary of Agriculture Orville L. Freeman before the Planned Parenthood Federation at a luncheon meeting at the Shoreham Hotel in Washington, D.C., May 6, 1966	1099
153.	Statement before the House Committee on Agriculture, by James MacCracken, executive director of Church World Service in the Division of Overseas Ministries, National Council of the Churches of Christ in the U.S.A., March 10, 1966	1103
154.	"Food With Dignity," a survey presentation of major U.S. Protestant efforts to combat world hunger, by Katherine P. Riddle and R. D. Gatewood, published for the Committee on Agriculture and Rural Life, in cooperation with Church World Service, Division of Overseas Ministries, National Council of the Churches of Christ in the U.S.A., 475 Riverside Drive, New York, N.Y., February 1966	1105
155.	Press Release From Population Crisis Committee, Washington, D.C., May 2, 1966, and text of remarks, entitled "Draper Recommends Five-Point Program To Meet World Food and Population Crisis"	1136
156.	"Population Explosion," by Rafael Herrera, editor, <i>Listin Diario</i> , Santo Domingo, Dominican Republic, December 10, 1964; translated by Elizabeth Hannunian, Legislative Reference Service, Library of Congress	1149
157.	"The Negro Response to Birth Control," by Hannah Lees, the Reporter, May 19, 1966, pages 46-48	1151
158.	Unplanned Children: Whose Burden? Whose Care?" by H. Curtis Wood, Jr., M.D., Medical Opinion and Review, March 1966, pages 28-35	1153

No.	Page
159. "Issues, Problems of Birth Control Confront Alaska," by Kay Field, Daily News staff writer, Anchorage Daily News, Anchorage, Alaska, May 22 to 28, 1966.....	1159
160. Excerpts from "Measuring Poverty," by Mollie Orshansky, Division of Research and Statistics, Social Security Administration, U.S. Department of Health, Education, and Welfare, published for the National Conference on Social Welfare, Columbia University Press, New York and London, 1965, pages 211-212, 218-219.....	1171
161. "National Conference on Family Planning: Partners for Progress," by Mollie Orshansky, Panel on Domestic Programs, May 5, 1966, Office of Research and Statistics, Social Security Administration.....	1172
162. Testimony prepared for presentation to the Subcommittee on Foreign Aid Expenditures, by Bishop John Wesley Lord, April 15, 1966.....	1175
163. Letter in support of Senate bill S. 1676, by Dr. John C. Scott, chairman of the Social Action Committee, Cedar Lane Unitarian Church, Bethesda, Md., May 9, 1966.....	1177
164. Statement of the Virginia League for Planned Parenthood.....	1177
165. "Maternal and Child Health Clinic Manual," Richmond, Va., April 29, 1966.....	1177
166. "The Barrier of Silence," by Katherine Brownell Oettinger, chief, Children's Bureau, U.S. Department of Health, Education, and Welfare, Welfare Administration, Washington, D.C., remarks before the Planned Parenthood Conference, Shoreham Hotel, Washington, D.C., May 5, 1966.....	1186
167. "Freedom To Choose," by Wilbur J. Cohen, Under Secretary of Health, Education, and Welfare, a speech presented at the National Conference on Planned Parenthood-World Population, Shoreham Hotel, Washington, D.C., May 5, 1966.....	1189
168. Publications of Dr. Otto H. Ravenholt.....	1197
169. "Ceylon in Lifeband Perspective," by Dr. O. H. Ravenholt.....	1209
170. Statement of some problems resulting from the phenomenal growth of the Dade County, Fla., public school system, by Mrs. Lyle Roberts, chairman, Dade County Board of Public Instruction, and Dr. Joe Hall, superintendent, Dade County public schools, April 5, 1966.....	1216
171. "The Population Explosion," volume VI, No. 1, issued by the Chase Manhattan Bank, for members of the staff, 1 Chase Manhattan Plaza, New York, N.Y., February 18, 1966.....	1221
172. "Needed Research for Population Policy," by Robert Lamson, sociologist and research analyst in the Postattack Research Division of the Office of Civil Defense; reprinted from the American Behavioral Scientist, February 1966, volume IX, No. 6, pages 23-25.....	1226
173. The Margaret Sanger Award in Human Rights to the Reverend Martin Luther King, Jr., presented at the 50th anniversary banquet of Planned Parenthood-World Population and Planned Parenthood of Metropolitan Washington, May 5, 1966, Shoreham Hotel, Washington, D.C.....	1229
174. "Population and Family Planning Programs: U.S. Government Activities and Attitudes," by Thomas C. Lyons, Jr., analyst in world demography, Foreign Affairs Division, the Library of Congress Legislative Reference Service.....	1231
175. "Maternity Benefits, Family Allowances, and Birth Grants Paid in Various Countries of the World," by Thomas C. Lyons, Jr., analyst in world demography, Foreign Affairs Division, April 18, 1966, the Library of Congress Legislative Reference Service, Washington, D.C.....	1240
176. "Latin American Population Problems: A Case Study of Northeast Brazil," by Julie Hawkins, Foreign Affairs Division, the Library of Congress Legislative Reference Service, March 29, 1966.....	1244
177. Letter sent to each Member of Congress by Senator Gruening regarding Report of Intercollegiate Assembly on the Population Dilemma, June 23, 1966.....	1248
178. "A Report on the Findings of the Phelps-Stokes Intercollegiate Assembly on the Population Dilemma"; a joint effort of the American Assembly of Columbia University, Tuskegee Institute, the Phelps-Stokes Fund; published by the Phelps-Stokes Fund, 297 Park Avenue South, New York, N.Y., November 12-14, 1965.....	1249

CONTENTS

v

No.		Page
179.	"I Have My Own Doves and Hawks," cartoon by Corky, © 1966, the Philippines Herald, reprinted with permission of the Los Angeles Times Syndicate.....	1257
180.	"The Birth Control Revolution," by Steven M. Spencer, the Saturday Evening Post, volume 239, January 15, 1966, pages 21-25, 64, 67-90.....	1258
181.	"Give Women Data, Aid Advisers Vote," by Henry M. Hanson, Springfield Bureau, Chicago Daily News, September 14, 1962.....	1272
182.	"The Tug of War on Birth Control: What It's About," by Lois Wille, Chicago Daily News, September 13-18, 1962.....	1273
183.	Statement by James L. Goddard, M.D., Commissioner of Food and Drug Administration.....	1286
184.	"FDA Report on the Oral Contraceptives," by the Advisory Committee on Obstetrics and Gynecology, Food and Drug Administration, August 1, 1966.....	1287

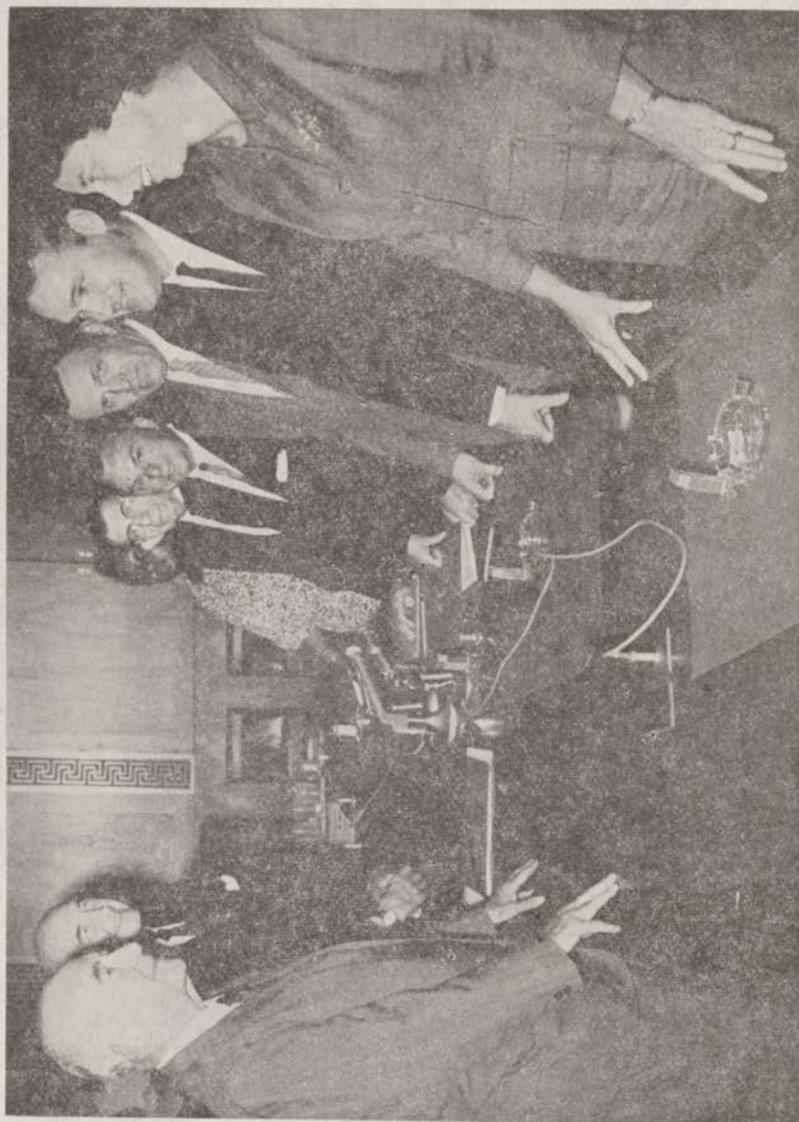


EXHIBIT 150

Witnesses who testified on S. 1676 before the Subcommittee on Foreign Aid Expenditures, June 15, 1966, were: Dr. William A. Albrecht, Mrs. Mary Anne Rennolds, Mrs. James Robinson, Dr. Otto Hakon Ravenholt, Dr. William A. Lynch, and Dr. Frank J. Ayd, Jr. (Pictured, left to right: Senator Ernest Gruening, Senator Milward L. Simpson, Mrs. James Robinson, Dr. William A. Albrecht, Dr. Frank J. Ayd, Jr., Dr. William A. Lynch, Dr. Otto Hakon Ravenholt, and Mrs. Mary Anne Rennolds.)

POPULATION CRISIS

WEDNESDAY, JUNE 15, 1966

U.S. SENATE,
SUBCOMMITTEE ON FOREIGN AID EXPENDITURES,
COMMITTEE ON GOVERNMENT OPERATIONS,
Washington, D.C.

The subcommittee met, pursuant to recess, at 10 a.m., in room 3302, New Senate Office Building, Senator Ernest Gruening (chairman of the subcommittee) presiding.

Present: Senators Gruening, Simpson, and Curtis.

Also present: Laura Olson, special consultant on population problems; Harriet Eklund, editor, and Mary A. Miller, clerk.

OPENING STATEMENT OF THE CHAIRMAN

Senator GRUENING. The hearing will please come to order.

I now direct that the photograph taken today of our distinguished guests be placed in the record of this hearing.

Before we begin today's hearings I am pleased to report that the subcommittee has been informed that the Secretary of State has designated Mr. Philander P. Claxton, Jr., Special Assistant to the Secretary, to act also as Special Assistant for Population Matters.

CLAXTON TO COORDINATE POPULATION MATTERS FOR STATE DEPARTMENT

Special Assistant Claxton in his new capacity will serve as the focal point for policy and coordination on population matters of concern to the Department of State. He assumes the responsibilities in this important area which were held briefly by the late Mr. Robert Adams and briefly by Mr. James Johnston, both of whom had been members of the staff of former Under Secretary of State for Economic Affairs, the Honorable Thomas Mann. Mr. Adams was named to the new State Department post on April 11, 1966, when Under Secretary Mann testified on S. 1676.

Mr. Claxton is a career Foreign Service Reserve officer who has been with the Department of State since leaving the Navy in 1946. He has a diversity of experience, including 13 years in congressional relations for the Department. He worked most recently on the water for peace program. Special Assistant Claxton is married and the father of six children. He is the son of a distinguished former Commissioner of Education.

Mr. Claxton is here, and we are certainly very happy to welcome him and congratulate him on his new appointment, which bears a heavy responsibility and great opportunity.

SIX WITNESSES TO TESTIFY AT 28TH HEARING

I would like to welcome you all to the 28th public hearing on the population crisis and on S. 1676, my bill to coordinate and disseminate birth control information upon request at home and overseas. These hearings got under way nearly 1 year ago—on June 22, 1965. Thus far the Government Operations Subcommittee on Foreign Aid Expenditures has held 27 public hearings and received oral testimony from 92 distinguished witnesses. This morning six more men and women will contribute to the population dialog.

These hearings will continue as long as they are necessary to help develop constructive and informative programs which will help solve the population dilemma and bring to the men and women who desire it, the best available family planning information.

As new or untouched areas related to improving the quality of man's life on earth come to light, the subcommittee will focus its attention on these areas because, as Thomas Jefferson wrote 179 years ago, the giving of information to the people is the most certain, and the most legitimate engine of government. Two centuries later we know he was correct.

INTEREST IN POPULATION CONTROL HEIGHTENS

I want to review a few events of the past year that are related to birth control and the people's right to this information, starting with the Department of State.

The Department of State has named a Special Assistant for Population Matters to the Under Secretary of State for Economic Affairs. When Under Secretary Thomas C. Mann testified on April 11, he announced the appointment of Mr. Robert Adams as his special assistant. This was a positive step forward. Regrettably, the untimely death of Mr. Adams and Mr. Mann's voluntary retirement curtailed the efforts of the Department of State, at the request of the subcommittee, to gather information from our American embassies.

But now we have Mr. Claxton who will fill this post.

HEW RELUCTANT . . .

Domestically, we have seen some revision of the Department of Health, Education, and Welfare's statement of policy before this subcommittee on April 7. At that time Secretary John Gardner saw no real need to name an Assistant Secretary for Population nor to explore the possibilities of a White House Conference on Population. To the subcommittee's regret, the Secretary, an able and dedicated man with notable achievements to his credit, in describing the work of his Department did not indicate that his Department was taking any new steps to make birth control information more available than was the case in previous years when, to be sure, an entirely different public attitude prevailed.

At that time, the subcommittee stressed the need for new and bold ideas as President Johnson has repeatedly requested.

. . . THEN SHIFTS STAND

On May 5, 1966, Under Secretary of Health, Education, and Welfare Wilbur J. Cohen spoke to persons attending a family planning conference in Washington, D.C., sponsored by many organizations and individuals and coordinated by Planned Parenthood-World Population.

He announced that Secretary Gardner—

Had appointed a Deputy Assistant Secretary for Science and Population;

Had directed the organizing of a series of regional meetings to explain the Department's population policies;

Would establish a Secretary's Committee on Population and Family Planning; and

Would explore the desirability of a White House Conference.

POLICY CHANGE PLEASES SUBCOMMITTEE

The subcommittee welcomed these moves which demonstrate that the Department is budging slightly from its previous position and sidetracking, hopefully for all time, its policy of timidity and its heretofore unwillingness to state publicly what it will do to help States and communities solve their population problems.

The subcommittee intends to watch closely the extent of change and meaningful activity in this area by the pertinent Executive agencies. The subcommittee will look hopefully for signs of such increasing activity and will be more than happy to accord the Departments full credit when such signs become increasingly visible and the results tangible.

CONGRESSIONAL CONCERN INCREASES

And here in the Congress, since our last hearing, the House of Representatives by a vote of 333 to 20 approved H.R. 14929, the Food for Freedom Act of 1966, which contains proposed language establishing, for the first time, congressional policy dealing with family planning and its relation to the well-being of the family and society. The members of the House Committee on Agriculture, chaired by the able gentleman from North Carolina, Mr. Cooley, reported historic legislation in the population field which specifically said that nations could use counterpart funds received under Public Law 480 for family planning purposes, if the nations wish. The membership of the House resoundingly endorsed this principle. I am hopeful that the Senate will do likewise.

CONGRESSMAN J. ARTHUR YOUNGER IS FIRST REPUBLICAN HOUSE
MEMBER TO INTRODUCE COMPANION BILL TO S. 1676

This month the first Republican Member of the House introduced a bill identical to S. 1676. The subcommittee welcomes the positive support of Representative J. Arthur Younger of California.

CONTINUING DIALOG WELCOMED

Today the subcommittee will receive testimony from individuals experienced in motherhood, soils, health, psychiatry, and medicine.

We do not expect that they will all concur in their beliefs as to what can be done to resolve the population crisis, but the subcommittee welcomes their participation in this dialog to encourage further exploration of positive ways and means to help President Johnson solve the "multiplying problems of our multiplying populations."

BIOGRAPHIC STATEMENT: WILLIAM A. ALBRECHT

Our first witness today will be Dr. William A. Albrecht, of Columbia, Mo., emeritus professor of soils and former chairman of the Departments of Soils, University of Missouri College of Agriculture and technical consultant to Vital Earth Products, Inc., Ortonville, Minn.

He has been a member of the Missouri staff since 1916. He holds four degrees, A.B., B.S., M.S., and Ph. D. from the University of Illinois, and has traveled and studied soils in Great Britain, on the European Continent, and in Australia.

Dr. Albrecht presently is chairman of the Technical Advisers Committee of Vital Earth Products, Inc., of Ortonville, Minn.

Born on a farm in central Illinois, in an area of highly fertile soil typical of the Corn Belt, Dr. Albrecht grew up with an intense interest in the soil and agriculture. Dr. Albrecht's studies in soils have dealt with the functional viewpoint or the soil's service in nourishing microbes, plants, animals, and all life. Research in nitrogen fixation developed the technique of using colloidal clay as a nourishing medium for plants, and as a means of bringing plant-soil relations under more careful control and better understanding. This has been the basis for his interpretations of soils in their broader implications as nourishment source for animals and man.

Dr. Albrecht is the author of over 300 scientific and popular articles on soils and soil fertility. His contributions emphasize the fundamental necessity of feeding plants, animals, and humankind through ministrations to the soil itself, correcting the deficiencies of diet at their point of origin—in soils that have been assayed and found wanting.

Dr. Albrecht, we welcome your contribution to the population dialog.

Dr. Albrecht.

STATEMENT OF WILLIAM A. ALBRECHT, COLUMBIA, MO., EMERITUS PROFESSOR OF SOILS, AND FORMER CHAIRMAN OF THE DEPARTMENT OF SOILS, UNIVERSITY OF MISSOURI COLLEGE OF AGRICULTURE; TECHNICAL CONSULTANT TO VITAL EARTH PRODUCTS, INC.; ORTONVILLE, MINN.

Dr. ALBRECHT. Mr. Chairman, Senator Simpson, distinguished guests, at the outset I should like to pay my respects, Senator, for the privilege of discussing with these folks a subject in which I have been very much interested.

It would be presumptuous for me to suggest to you officials what procedures you ought to take in order to solve the problem. Therefore, I shall list my considerations for this problem—not to be solved from the top down by remedying the population, but rather to call attention from the bottom up—the soil as the basic force of creation, and how man can fit into those forces which have been at work long before man came here.

FOOD QUALITY, NOT QUANTITY, COUNTS

So I should like to say at the outset that we can produce more food, but we need to be certain we guard against food as a satiation or bulk, and give concern to food of quality as nutrition, because nature establishes health, and a healthy life had to be here on the earth—by its own self-protection and struggles to survive—before man came along.

So this problem of food is a matter of whether we can realize that we must grow food of quality. And we have capability of extending the quantity of food we produce, but we must also concern ourselves with the quality.

“ . . . INDIVIDUAL BODY CARRIES THE LOAD OF SURVIVAL . . . ”

I am concerned because we have been doing research which shows that while we have been increasing bulk food production, we have been having a decline in quality as nutrition in the materials produced. And therefore we must link soil and nutrition, soil and health, soil and survival in the sense that the individual body carries the load of survival even though in some other things we intend to encourage that.

While that population has been increasing, we have been abandoning acreages, and the production of quality has been going down.

The earth was old, the soil was old, before man arrived. As the last million years in the universe's history of 3 billion, 4 billion, 5 billion years, man has a very short period, and his late arrival handicaps him in competition with the other species that require less than he does.

So more tonnage is not always more food.

MAN ROBS SOIL

I would like to call your attention to a distinguished gentleman long gone, Dr. Hilgard, from Mississippi, and the geology of Mississippi has given us much to think about.

I would like to read three paragraphs from Dr. Hilgard. The first of those concerns our “robbery of the soil.” He says:

*** we cannot, under any circumstances, or under any system of rotation whatsoever, continue to raise useful crops on any land for a length of time, unless we return to it in the shape of manure (by “manure” he meant principally natural minerals) a part at least of the ingredients which the crops have abstracted from it. This is a truth so anciently, and apparently so well known, that it would seem superfluous to reiterate. Yet in my travels through the State, I have found many, and otherwise very intelligent persons, in whom the extraordinary fertility of their soil had induced the conviction that some soils, at least, were inexhaustible.

Under the heading of “Imminence of Exhaustion,” Dr. Hilgard continued:

EXHAUSTED SOILS HOLD NO NUTRIENTS

*** even the present generation is rife with complaints about the exhaustion of soils—in a region which, 30 years ago, had but just received the first scratch of the plowshare. In some parts of the State, the deserted homesteads and fields of broomsedge *** might well remind the traveler of the descriptions given of the aspect of Europe after the 30 Years War. And true enough *** there has been melancholy waste of precious resources; the soil has been effectually stripped of all that was readily accessible; its hidden treasures, which a little judicious management would readily have coaxed out of it, have been allowed to run to waste. Even now, the rich prairies, the garden-spots of Mississippi, are giving out under the operation of the same pernicious system.

Senator GRUENING. May I suggest in view of the fact we have six witnesses, that your entire statement will be printed in the record as written, and that you summarize it for us briefly, touch on the high spots, because at the rate we are now going, we will not be able to hear many other witnesses, because your paper, while very excellent, is voluminous. So touch on the high spots, and your entire statement will be published in full in the record.

Dr. ALBRECHT. I merely wanted to use Dr. Hilgard, as one of the great minds back early, to point out just exactly what we are talking about today—about that time the experimentation was started.

“ . . . SOIL IS THE BASIS OF ALL LIFE FORMS . . . ”

But now we have moved forward to put soil science in there to point out that soil is the basis of all the life forms which we call the pyramid—microbes, plants, insects, and so on, up to man. Those forms of life are interrelated. We cannot destroy one without danger to the other forms of life.

Soil has a good number of inorganic elements of which calcium, magnesium, and potassium, are positively charged; they cling to the clay even after they are broken out of the rock. The negative ones, phosphorus, nitrogen, and sulfur, are connected with the organic matter.

So we need to look at the soil as the breakdown of inorganic matter to release its mineral contents about which we have learned much.

But the other negative elements, like phosphorus, nitrogen, sulfur, and some of the trace elements, do not hold to the clay. They are concerned with the organic matter.

We have also kept ourselves concerned largely in returning to the soil the inorganic elements. We have lost sight of organic matter. And in that we still lose sight of the availability in the soil of nitrogen, phosphorus, and sulfur.

We have also disregarded the life in the soil, the microbes.

So nature, as a manager of the soil, was doing just a few things. She was either having a reserve of rocks releasing inorganic essentials in the soil, or she was replacing them by windblown materials and by inwash, and the midcontinent is an example of that at best, even though we complain about the dust storms.

Our research at Missouri, studying it for 15 years, told us that we get a deposit of 1,000 pounds of essential raw mineral elements on the State of Missouri, at least some major parts of it, per year, but erosion has been taking more off than that.

So nature uses raw rock material weathering in the soil. She returns organic matter, and she preserves the microbes.

MAN CLASHES WITH NATURE

Now, it is in conflict with that management that man finds his trouble. He is concerned with intense amounts of yields, and he hasn't time or hasn't the possibility of putting that back. And therefore the soils have lost their life, or they have become dead.

The failure to maintain the upper portion of that soil's surface, the surface soils, as a living, biological performance, was the cause of erosion, because below the surface soils we have a dead one.

Now, we are trying to replace under present man's management, but

we fall far short. We are replacing elements of which we have quantities available for use, and we are not appreciating those very often which should be replaced even though they are cheap and might not have a big profit margin on it.

And then only recently have we begun to think about the elements that we call the trace elements.

We have gotten bold about those, but it is a bold chemistry, but not a humble approach to fit into nature. So sometimes we run into poisons, and we are now suffering with excesses of nitrogen in the form of nitrate which is very dangerous to livestock, including even to some of the babies that we speak of as blue babies—when the milk is in the artificial formula.

Senator GRUENING. Dr. Albrecht, you make three very excellent recommendations starting on page 1094. Your first recommendation—

Dr. ALBRECHT. Of this manuscript?

BUDGET CUTS IMPEDE NEEDED RESEARCH

Senator GRUENING. Your first recommendation is to increase research. And you point out that research is necessary. But you also point out that at the same time, while this research is necessary, \$600,000 was cut from the research budget of the Department of Agriculture for fertilizer research.

This came up in a hearing before this committee when Secretary of Agriculture Orville Freeman testified, and he testified, just as you have, in favor of the need for more research—at which point one of our colleagues, the junior Senator from Montana, Mr. Metcalf, asked how the Secretary of Agriculture could reconcile his request for more research with the fact that they had cut the research funds in the State of Montana by 25 percent. And, of course, in some States, they have been cutting more drastically.

In Alaska, for instance, the funds for research have been eliminated entirely—which is an indication that there seems to be some conflict between desire and expressed policy and action in the administration at this time.

I wish you would comment on this recommendation of yours.

Dr. ALBRECHT. Senator, I may not have heard all your question—but would you like to have me take up the recommendations as to what we can do—that is your problem?

Senator GRUENING. Well, you have them here. I think I can read them.

THE FOOD NEEDS OF THE WORLD ARE TOO GREAT, TOO URGENT, AND TOO IMPORTANT TO GAMBLE ON IGNORANCE

Your first recommendation urges increased research.

“We need to know much more about balanced soil fertility, the kinds of soil fertility best suited to specific crops, methods of soil replenishment, including the different requirements for poor soils and for better soils, the methods of adopting alien crops to new soils and conditions, soil microbiology, and soil biochemistry, to mention but a few of the many areas of needed research. Especially do we need a careful study of the whole field of nutrition of all life-forms.

"Such a program quite possibly involves a reversal of our governmental policy. Last year, for example, \$500,000 was cut from the research budget of the Department of Agriculture for fertilizer research. In the budget for fiscal 1967, a request for \$497,000 for soil fertility and irrigation research was depleted somewhere. Fortunately this item was restored by House action and I sincerely hope the Senator will concur in this restoration. The food needs of the world are too great, too urgent, and too important to gamble on ignorance."

I don't know what action the Senate will take. I am glad to know the House will restore this.

Have you any comments on this, Senator Curtis? You come from an agricultural State, and you are so familiar with this problem.

Senator CURTIS. I think the Congress will restore the Agricultural Act to its previous level. I believe that is a well established fact. I believe that was known when the budget was sent down.

HOW CAN FOOD STANDARDS BE CONTROLLED?

I do have a question or so. One of my questions relates to your second—to the second of your suggestions. I think that I understand the point on research. But your recommendation concerns food standards. How difficult is that? How much policing by Government would there have to be? How much could and would be done by the food industry itself?

QUALITY OF FOOD IS DEPENDENT ON ITS "HEALTHY ASSETS"

Dr. ALBRECHT. I do not believe food standards based on nutrition values would be more difficult to enforce than any other standards. This, however, is a question for experts in legislation. My point is that unless food standards are based on nutritive values they do not help the housewife when she goes to the store to make a purchase. Unfortunately, the human eye is not a measure of the hidden values inside of a mouth-watering exhibit. Humans are not gifted like the cow, for example, who by intuition or some other source is able to judge what she eats in terms of health and survival values. My point is that bulk and appearance so often have no real connection with nutrition value. Real values, and these are what the housewife really is looking for, depend on, among other things, the amount of complete protein as opposed to crude protein, the amount of the amino acids, the vitamins, and the mineral richness the product contains. What I think we should have are food standards based on the amount of these health assets the food contains.

How difficult this would be to administer I don't know, but I do know that such standards would give the customer a real basis to judge whether or not she wants a particular product. Of course, there would have to be some policing but I would think that once the food industry knew these standards were the ones their products would be judged by, most businessmen would adhere to them. Some, of course, as in every other sort of regulation would try to avoid compliance but this is not a new problem in law enforcement.

I cannot overemphasize the importance of the proper amount of minerals in food nutrition. Our studies of brucellosis in livestock showed that when the soil had a large number of the micronutrients

in it we got rid of brucellosis in cattle, and medical doctors, following the same approach, found that they got similar results in eliminating undulant fever in human patients.

WHO SHOULD GUARD FOOD QUALITY?

Senator CURTIS. Doctor, my question is this. I accept your premise. What I want to know is how big a program—what would be the responsibility of Government, how much could the food industry be expected to carry on its own, so that a consumer, buying a package of food, would have knowledge of quality, as you say, and not only just quantity?

Dr. ALBRECHT. I am not qualified to say how much of a problem such regulation would be. I do say, however, that regulation based on real food values would give the customer a chance to make a choice based on nutrition and that is what she wants. I hope that the Government's function would be to work out the standards and that once they were established the food industry, as a matter of competition generally, would observe them with a minimum of policing by the Government.

Senator CURTIS. But you recommend standards?

Dr. ALBRECHT. Yes.

Senator CURTIS. Who is going to establish those standards, and how big a job is it?

GOVERNMENT, UNDER ADVISEMENT OF NUTRITION EXPERTS, SHOULD ACT

Dr. ALBRECHT. I think the standards should be established by the Government, probably in consultation with the nutrition experts of the food industry. I am sure that there is much research needed before these standards would be shaped up. On the other hand, I wish to emphasize that until we have such standards the consumer will not know—as completely as she would like to know—how much nutrition she is buying. We must realize that there is a wide variation in nutrition values in the same product. Apples are one example. We have many tests that show that apples vary greatly in the amount of vitamin A they contain. We have run many tests on vegetables. We have found some to be full of nutrition and some actually of very little more food value than a good glass of water.

There is one place where a study has begun of the nutrition quality of food—many years ago, as I recall—during World War I. The originator was a man by the name of Schuphan. His studies have resulted in a book which he has published in German which recently was translated into English. He has gone a long way to show what nutritional qualities we should have in a particular kind of food. We must get away from bulk and appearance if we are concerned with the value food has to sustain healthy life.

“A COMPLETE FERTILIZER . . . REPLACES EVERY ELEMENT WHICH THE PLANT NEEDS”

Senator CURTIS. Getting back to the soil, sometimes we hear it said that complete fertilizer is nitrogen and phosphorus and potash. Is that so?

Dr. ALBRECHT. We have been accustomed to speak of the complete fertilizer as nitrogen, phosphate, and potash. There are at least 12 elements indispensable to plant growth that come from the soil. Many think there are several more. The best answer we can give today is that there are at least 12 and there are probably 3 or 4 others. A complete fertilizer is a fertilizer that replaces every element which the plant needs. A fertilizer that replaces only one, two, or three of them simply is not complete.

A complete fertilizer, moreover, must have proportion or balance. We know that there must be more of the macronutrients than there must be of the micronutrients, so we want small amounts of the latter and larger amounts of the former.

We know now something of the proportions which we need of the cation elements of calcium, magnesium, potassium, and sodium. The soil should have a base saturation of about 60 to 70 percent of calcium, 10 to 20 percent of magnesium, 2 to 5 percent of potassium, and 0.5 to 3 percent of sodium. We do not know too much about the proportions of the anion elements of nitrogen, sulfates, and phosphates. Our knowledge of the micronutrients has progressed far enough so that we know they are necessary and we do have a fair idea of how much the soil should contain to have good fertility.

SALT FERTILIZERS THREATEN THE SOIL.

Senator CURTIS. What are salt fertilizers?

Dr. ALBRECHT. The salt fertilizers are the ones we are selling.

Senator CURTIS. Which ones?

Dr. ALBRECHT. We are using ammonium sulfate, sodium nitrate, ammonium phosphate, potassium chloride, and others. Those are the salt fertilizers.

Senator CURTIS. What objection is there to them?

Dr. ALBRECHT. Well, because they are inimical to plant root nutrition. You cannot have very much in the solution for a plant to feed on. And you cannot put enough in the water at any time to grow that plant any length of time, because the plant roots are inimical to salts and so are the microbes.

Now, when you put salt fertilizers on the soil, the microbes have to grab for some carbon—and we have not emphasized carbon in our fertility. That microbe has to have carbon to use that nitrogen. You have the same thing when the cow drops urine on her straw bedding. The straw itself won't react, but when that straw gets the nitrogen and the potassium and the other elements in the urine, the microbes take to the straw and burn it so fast that they heat it.

We have the same thing in the soil.

So salt fertilizers are burning the carbon out of the soil, and without the organisms in the soil to be the buffer of this life pattern, then all other life is apt to be fed out of balance.

The microbes must eat first, and they are the preparers, the digesters of both the inorganic and the organic, because you cannot feed a plant very far on hydroponics. You have got to come back to some of the organic carbon in that soil to help that situation.

In nature, crops are grown where rainfall is high enough to have water going through the soil. We grow crops on soils from which the

sea has become salty. As you move to low rainfall areas like the desert—with evaporation greater than percolation—you have salts accumulating in the soil and only a small percentage of any soluble salt in the surface soil is injurious to the germination and sprouting of the seed in crop. One percent of a salt is dangerous.

A salt fertilizer is a compound in soluble form of positive ions combined with negative ones. They are inorganic materials. Put into the soil and remaining as salts, they are not favorable to plant growth. In the soil, parts of the salt compounds separate and are apt to unite with other elements in the soil and give compounds far different from those which we started with. For example, phosphorous in a soluble salt put into the soil may quickly unite with iron, aluminum, or even calcium to become so unavailable that the plant cannot take them as nutrition.

SALT FERTILIZERS DESTROY MICROBES NECESSARY FOR RICH SOIL

Another bad effect of the salt fertilizers is on the microbes. If a salt is to be used as food by the microbes, the microbes must use a large amount of carbon or organic matter in the use of the salt with the result that the organic content of the soil is reduced. Salt fertilizing consequently burns out the organic matter reserve of the soil. Consequently the microbes which depend for their future energy supply from the organic matter starve out and the soil becomes dead. One of the problems today is that so many of our great soils in the mid-western plains which started out with a fine supply of organic matter are steadily declining in the amount of such matter which is essential to fertile soil. In the last year I had occasion to look at some 70 tests of Colorado soil, virtually all of which had 2 percent of organic matter. We should have a minimum of not less than 4 percent organic matter in the plow-slice of any fertile soil. Two percent is right at the danger line if it is not already past it.

Senator CURTIS. What is required of a good soil test?

Dr. ALBRECHT. Beg pardon?

Senator CURTIS. What is required to make a good soil test?

SOIL TEST—A NECESSARY COMPLEXITY

Dr. ALBRECHT. Simply defined, a soil test is an attempt to make an inventory of the fertility stock or a diagnosis of what the plant's trouble might be in a particular soil. This diagnosis will vary, as in every other diagnosis, according to the doctor's ability and his knowledge of soils and crops.

An inventory of the soil's supply properly should show the pounds per acre among the 2 million pounds of soil in the plow-slice of each acre, of each of the elements which we have learned to test fairly accurately. That, however, says nothing about the availability or chances for plant use of some of those elements which may still be in the original rock form. A soil test, therefore, shows a list of the exchangeable or absorbed elements now available to the plants in pounds per acre. We do fairly well with the cation elements of calcium, magnesium, potassium, sodium, and the positive elements among the micronutrients. We are not so far advanced in our knowledge of the negative ions of phosphorous, nitrogen, and sulfur. Here is one of

the areas where what we know is far less than what we need to know.

PLANTS NEED BALANCED RATION OF ELEMENTS

Senator CURTIS. Well, is there any desirable proportion among these elements?

Dr. ALBRECHT. A green plant, like every other growing thing, needs a balanced ration. I have mentioned the balance of the cation elements which show we should have 65 to 75 percent calcium, 10 to 15 percent magnesium, 2 to 5 percent potassium and 0.5 to 3 percent of sodium. In testing for the other micronutrients we are not as far along but we do have some idea of how much many varieties of growing plants take from the soil if they are to thrive.

ALIEN CROPS CREATE MANIFOLD PROBLEMS

Senator CURTIS. What is an alien crop?

Dr. ALBRECHT. Alien crop? That is just a way of saying that we began our agriculture in the United States by bringing crops in from outside. And we have been doing that regularly—trying to bring in a foreign crop in the hope that a new crop would increase the yield. But we don't study the habits of nutrition or eating of that crop when we uproot it from its native pattern and move it anywhere without consideration of how it would be nourished. It is logical that a strange plant or a strange seed has to adapt itself to its new conditions and it seems obvious that it is important when we have this adaptive problem that we parallel as closely as we can the geoclimatic conditions of the place of origin of the seed or crop. These problems are manifold. Mr. Khrushchev faced them and failed in opening up to corn large areas of Russia. In a smaller way any housewife who tries to carry a tropical plant even indoors during our winter seasons knows these problems.

So now we have imported a great share of crops. And the worst offender we now have is fescue. Fescue is now being hailed as a great grazing crop. And the animals eating it turn up with a lameness in the hindleg which looks as much like the old-fashioned hoof disease as anything we have. And it is largely because this plant makes a tremendous growth late in the fall of the year, when the sunshine is weak, and it doesn't put enough of the vitamins in to even keep the animals going. They will feed on that bulk hay until the animal gets terribly irregular and is going down, and then usually the farmer dispatches the animal in order to relieve it of misery.

So we are using alien crops now with no attention to the geoclimatic questions—and it is in that viewpoint that I am concerned that we use bioassays by animals—and I think it won't be long before we will see the implications to the human.

PROTEIN IN WINTER WHEAT AND CORN DECLINING

Senator CURTIS. Well, now, winter wheat was an alien crop about 75, 80, 85 years ago, and it has been a very prized find for the Great Plains.

Dr. ALBRECHT. But the protein in the wheat has been declining substantially, just like that of the corn has. I have been watching the

surveys of Kansas, and would be happy to give you some of the maps of Kansas on that.

It has been going down, and it has been shifting in its quality—
Senator CURTIS. The protein?

Dr. ALBRECHT. Yes.

Senator CURTIS. What is the difference between crude protein and complete protein?

PROTEINS MUST CONTAIN AMINO ACIDS FOR NUTRITION

Dr. ALBRECHT. Crude protein is a term we used when we were satisfied with the fact that all proteins contain nitrogen and we knew roughly that an analyzed protein contained about 16 percent nitrogen. We then were satisfied to ignite or ash the organic matter in sulfuric acid which holds the nitrogen and lets us measure it, and then we multiplied the total nitrogen by $6\frac{1}{4}$ which roughly gave us the total protein. But we have since learned in nutrition tests that what we called protein by that method all too often resulted in malnutrition. We know now we have to know what the protein contains. There are at least 10 specific compounds called amino acids which must be supplied by a protein if it is to provide nutrition rather than malnutrition. Complete proteins include the amounts of these requisite amino acids which keep the body in nitrogen balance and aid in building its tissue up rather than tearing it down so as to excrete more nitrogen than it takes in.

MICRONUTRIENT SHORTAGE ACUTE

Senator CURTIS. Mr. Chairman, I just have one more question.

What information do you have on the actual shortage of micronutrients in the United States?

What information do you have as to the actual shortage?

Dr. ALBRECHT. Many areas of the United States have been marked out for shortages in most of the half dozen or more micronutrients that we list. But those areas are cataloged for the crops which are particularly sensitive in demonstrating deficiencies, usually of one particular element only. With our increasing yields per acre by means of increasing the supply of micronutrients, we should anticipate a much more rapid depletion of the micronutrient reserves. I have seen reports that there are boron deficiencies in perhaps as many as 40 States; iron and manganese deficiencies in as many as 25 States; copper deficiencies in 10 or a dozen States; zinc deficiencies in as many as 30 States; and molybdenum deficiencies in perhaps 20 States. I do not vouch for these figures and I should qualify them by saying that these were probably deficiencies noted for particular crops. I also should add that there is a substantial area in the North Central United States in which there is a manganese surplus, often a damaging one because it limits the availability of calcium.

Senator CURTIS. That is all, Mr. Chairman.

Senator GRUENING. Senator Simpson, have you any questions?

Senator SIMPSON. Mr. Chairman—Dr. Albrecht, I am familiar with your reputation over the country, and especially in our section.

Dr. ALBRECHT. May I come a little closer?

Senator SIMPSON. I say to you I am familiar with your great reputation nationally, and particularly in our section of the country where

your undulant fever campaign was participated in by my University of Wyoming when I was president of the board of trustees there.

I want to thank you for the statement. I have read it all.

Dr. ALBRECHT. I am happy to serve you.

Your State was one of the first that understood the nitrate program.

Senator GRUENING. Thank you very much, Dr. Albrecht, for a very comprehensive and important statement.

(The complete statement of Dr. Albrecht follows:)

STATEMENT OF DR. WILLIAM A. ALBRECHT SUBMITTED TO THE SUBCOMMITTEE ON FOREIGN AID EXPENDITURES OF THE COMMITTEE ON GOVERNMENT OPERATIONS

My name is William A. Albrecht. I am emeritus professor of soils and formerly chairman of the Department of Soils of the University of Missouri College of Agriculture. I was on the staff at the school of agriculture from 1916 until my retirement in 1959. I presently am chairman of the Technical Advisers Committee of Vital Earth Products, Inc., of Ortonville, Minn.

At the outset may I thank you for the privilege of appearing before you.

It would be presumptuous on my part to comment on the solutions your legislation proposes or should propose. Such comments involve moral, social, and political questions which are the province of specialists in other fields than soil science.

Therefore I shall limit myself to a discussion of the nutrition potential as it appears in light of American experience.

If we consider the present and future needs of the world solely from the viewpoint of the world's food-producing capability, I believe it can be safely said that the arable land is capable of providing food sufficient for proper nutrition not only for the present world population but also for a substantially larger number of people.

This view is supported by the progress of American agriculture since World War II. Better strains of crops, new techniques, better crop care, and so on, have resulted in remarkable increases in yields. This shows that the production potential of farmland is far greater than was formerly supposed. These advances in America can be duplicated elsewhere.

Unfortunately, however, there are some "red flags" which make it necessary to qualify this answer as only the answer of what could be.

Storage, transportation, distribution, poor agricultural techniques, inability to pay for what is needed, and even political determinations often result in food shortages where food is needed. If these are the causes for people's hunger, they are hungry because of reasons other than the lack of food-producing capability. In other words, if such circumstances necessitate population controls the causes will be distribution, social, economic, political, and the like rather than the lack of means to produce enough food.

The red flags which concern the soil scientist are those which relate to the food-producing capability.

It is a matter of concern that food-producing land is decreasing and that the nutrition-producing capability of the arable land remaining is declining. The United States is no exception to this condition.

A major cause of this situation lies in the care given the land. Our advances in the improvement of strains of crops and in better crop care have not been paralleled in our care of the soil.

Man has superseded nature as manager of the soil and instead of cooperating with nature as nature demands, too often he is in conflict with her. We are finding out much too slowly, that nature, out of her vast experience, has enacted laws which man can neither repeal nor amend—laws which have harsh and inescapable penalties.

Another red flag arises in the misconception that more tonnage necessarily means more food—that more bulk is synonymous with more nutrition.

Thus, at a time when there is a rapidly increasing number of mouths to feed, the food-producing acres are becoming less and the nutrition-producing capacity too often is going down. We are confronted with the danger that the equation of man and food will have to be written to say "too many people and too little food." The projected future increase in the number of human beings can only mean that this imbalance will become greater.

The pessimism I express over our soil management is not new.

In 1860, in his famous "Report on the Geology and Agriculture of Mississippi," Eugene Hilgard, who rightly can be called the father of American soil science, even then was alarmed.

Under the title "Robbing the Soil," Dr. Hilgard wrote: " * * * we cannot, under any circumstances, or under any system of rotation whatsoever, continue to raise useful crops on any land for a length of time, unless we return to it in the shape of manure (by "manure" he meant principally natural minerals) a part at least of the ingredients which the crops have abstracted from it. This is a truth so anciently, and apparently so well known, that it would seem superfluous to reiterate. Yet in my travels through the State, I have found many, and otherwise very intelligent persons, in whom the extraordinary fertility of their soil had induced the conviction, that some soils, at least, were inexhaustible."

Under the heading of "Imminence of Exhaustion," Dr. Hilgard continued: " * * * even the present generation is rife with complaints about the exhaustion of soils—in a region which, 30 years ago, had but just received the first scratch of the plowshare. In some parts of the State, the deserted homesteads and fields of broomsedge * * * might well remind the traveler of the descriptions given of the aspect of Europe after the 30 Years War. And true enough * * * there has been melancholy waste of precious resources; the soil has been effectually stripped of all that was readily accessible; its hidden treasures, which a little judicious management would readily have coaxed out of it, have been allowed to run to waste. Even now, the rich prairies, the garden spots of Mississippi, are giving out under the operation of the same pernicious system."

Under the title "Exhaustive Culture Irrational," Dr. Hilgard said: "When we see a capitalist expending every year, not only the interest on his money, but a part of the capital also, we can calculate with certainty how long it will be before that man becomes a beggar; and all unite in blaming him as foolish and improvident. Now, the capital of the agriculturist is the fertility of his soil, of which he ought to use the interest, but without seriously diminishing the principal * * * And the simile holds good even so far that, if we add or return to the soil, yearly, what we have drawn from it in the shape of crops, the amount available, interest-bearing capital increases.

* * * * *

"No land can be permanently fertile, unless we restore to it, regularly, the mineral ingredients which our crops have withdrawn."

It is a commentary both on the soundness of Dr. Hilgard's comments and of the unwillingness of the farmers in Mississippi to follow them, that today our Department of Agriculture maintains an experiment station in Mississippi in the very area about which Hilgard wrote, to study how to restore eroded soils.

One hundred years ago when a farm was "farmed out" there was new and virgin land to move to but that era is no longer with us.

The idea of the soil that "dirt is dirt and that's all there is to it" is the first misconception soil science corrects. The soil is not a simple substance. It is, on the contrary, an extremely complex one. Moreover, it is the base of an environmental structure in which microbial life in many forms—plant life, insects, birds, grass, and flesh-eating animals—are succeeding layers in a pyramid leading up to man at the apex. In this biotic, or life, pyramid the soil is the basic source of life maintenance, the microbes are the decomposers which transform the soil's resources into plant nutrition. The green plant is unique in that it is the only producer in this pyramid. It alone is able to create and store energy in the form of food from what it gets from the sun, air, water, and the soil. This is the food upon which all the other life forms above it depend. They, including man, are all consumers or predators.

The most striking fact about this environmental structure is the dependence of all. Each of these populations of life forms is interrelated and interdependent. Each survives when all others in the biotic pyramid live healthily and every one depends on the soil for the nutritional foundation of health.

Out of this relationship and dependence the ecologist finds that what may be called ecological balance is necessary if each of these many populations is to receive the needed benefits from the others.

As a practical science, soil science recognizes that proper soil management must take into account these environmental facts and must also have as a major purpose the maintenance of the ecological balance.

The complexities of proper soil management begin with the complexity of the soil.

The soil has three components. The first and largest component is rock, disintegrated and weathered enough to break it up but not enough to have produced a leaching out of its values. The disintegrated rock becomes clay, silt, and sand and contains a number of minerals.

These minerals are of vital importance because they are the source of nutrients indispensable to plant growth as well as the principal source of good nutrition for animal life. Under the law of the minimum, discovered by the great German scientist von Liebig in 1840, we know that a deficiency of any one of these indispensable elements is the controlling factor in crop production even if all the other elements are present in adequate amounts.

Six of these elements are called macronutrients because they are required by growing plants in quantity. These are calcium, magnesium, potassium, phosphorus, nitrogen, and sulfur. The other minerals, called the micronutrients because plants need them only in small amounts, are boron, copper, iron, molybdenum, manganese, and zinc. Many now believe that cobalt, sodium, and chlorine also should be included among the micronutrients.

The second component of the soil is organic matter made up of decaying animal and vegetable material which when sufficiently decomposed becomes humus. The humus is the center of complex chemical and biochemical processes which assist in turning the mineral elements of the soil into plant nutrients. It also serves as a home for the many microbial populations which are the third component of the soil.

The microbes live in the humus. They consist of populations in the billions of a variety of micro-organisms in the form of bacteria, fungi, algae, and the like. They are the workers that perform the vital function of completing the transformation of the mineral elements into nutrients which the green plant can use. These are the decomposers. At nature's table they eat at the first sitting.

When we have all three of these components—weathered rock still containing all the indispensable mineral elements, organic matter in the form of humus sufficient to carry on the necessary chemical processes, and, large, thriving, and active populations of the various micro-organisms—then, and only then, do we have soil which we can call fertile soil. It is not without reason that the soil scientist thinks of fertile soil as "living soil."

When nature is the soil manager—

1. She provides a continuing supply of organic matter. The green plant remains in place and at the end of its life cycle returns to the soil.

2. She conserves and reuses the soil's mineral nutrients. The decaying crop in place also returns the minerals it took from the soil in its growth.

3. She provides a continuing replenishment program. This occurs in the continued weathering which releases the mineral reserves in the soil and in the addition of minerals brought in by the water and the wind. The wind-borne accretion can be quite significant. Tests at the University of Missouri show that normally the prevailing westerly winds annually deposit 1,000 pounds of dust from the western plains on each acre of Missouri.

4. Her replenishment program consists of natural minerals.

5. She recognizes that soil varies in kind and degree of fertility. In soils of limited capability she is content with limited production which both avoids exhaustion and permits soil building. She encourages the growth of plants best suited to the environment and kind of soil fertility and so in some places she has trees and in others grasses.

The dominant feature of nature's soil management is its dual purpose. She provides for the needs of crops now, yet, she does not lose sight of the needs of the crops of the years to come.

Modern man in managing the soil is confronted with four conditions which nature does not face.

1. Usually, most, if not all of the crop is removed from the soil. Thus both the resupplying of organic matter, and the recycling of nutrients back to the soil, found in nature are absent.

2. There is a constant demand for high yields.

3. The high-yield demand extends to crops originating and developed in different soil and climatic environments.

4. Stationary agriculture has replaced nomadic agriculture. Crop rotation and occasional fallowing are the substitutes for lengthy periods of natural soil rebuilding.

These conditions each add new tasks to proper soil care.

Man generally operates under two theories or beliefs when he replaces nature as the manager of the soil. Both beliefs forget that regular removal of the entire crop and constantly high yields will soon exhaust the soil fertility.

The followers of the first belief or theory are the successors of the farmers who alarmed Dr. Hilgard in 1860. Their assumption is that the soil is an inexhaustible resource. Soil care practically is limited to plowing and cultivation. While the numbers of this group are in a steady decline, unfortunately they still are so many that we must say robbing the soil continues to characterize soil care on an important percentage of our farms. Only ignorance or indifference can support the idea that constant taking away from the soil without returning what has been taken away, will not lead to trouble. This sort of soil care we can only call soil abuse.

Farming of this type is a major cause of the increasing erosion problem and of the rising amount of poorly and nonproductive farmland in the United States.

The second theory of soil management recognizes the necessity of constant replenishment of the soil if high yields are to continue.

What man replaces, as well as by what he replaces, determine how well he cooperates with nature, and whether he maintains or upsets the ecological balance. While replacement practices vary widely and some farmers approach complete replenishment of what the crops take up, generally there is partial rather than total replacement.

It is common, for example, that too little attention is paid to the importance of regular additions of organic matter. This is particularly unfortunate because so often today the entire crop is removed from the land which makes the organic matter requirement more urgent and larger. Many farms today have already critical organic matter needs and even in many of the richer soil areas where organic matter is in plentiful supply, the percentages of it are in a declining trend.

Most soil managers think of replacement primarily as replacement of the mineral elements which provide plant nutrition from the soil. Even here, man's practices depart extensively from those of nature.

The principal departure is in the practice of partial replacement of these elements. The bulk of fertilizing is in fertilizers either composed of nitrogen or of nitrogen, phosphate and potash. The other three macronutrients, calcium, magnesium and sulfur, are seldom added to the soil even though they are needed by the plant in quantity. It is more exceptional to find replenishment of the micronutrients.

It would seem obvious, if we recognize the need to return to the soil what has been taken from it, that we should not be satisfied unless we replace all of what has been taken away.

As a practical matter, moreover, we can assume that the United States has little cropland, farmed intensively and continuously for 50 years or more without replenishment, that does not have deficiencies in many of the indispensable elements and that much of such land will be deficient in most of them.

Partial replenishment practices can be justified only if soil tests show there is a sufficiency in the elements not replaced. Otherwise partial replacement runs the risk of being incomplete replacement.

Incomplete replacement upsets the balance necessary to fertile soil, either by failing to correct a short supply of one or more of the elements, or, by adding an excess of others. With a short supply of the consequence is a soil lack of an essential component of soil fertility. Excess of one element, on the other hand, can accentuate the imbalance caused by the deficiencies in others and, in some instances result in toxicity.

Toxicity can be harmful to the consumers of the biotic pyramid, including man. It also can be harmful to the micro-organism populations. Today the excessive (that is, unbalanced) application of nitrogen fertilizer is perhaps the most common source of toxicity. In the last 3 or 4 years there have been several instances where the excessive use of nitrogen in abnormally dry areas has resulted in corn which is poisonous to cattle. Chemical Week of April 23 of this year reports on another phase of toxicity. It concerns studies being made to determine whether or not the excessive use of nitrogen fertilizers is the cause of rising nitrate accumulations in ground water from California to Texas and in Colorado, Minnesota, and Washington. Such studies are important because excessive nitrate concentrations can have harmful consequences to human beings, particularly to infants. Nitrate cyanosis can be fatal to children less than 6 months old. There is evidence that excessive nitrate in the water is one cause of "blue babies."

This is not a criticism of the use of nitrogen, phosphate or potash in soil replenishment. Each is an essential part of a fertile soil. The sole point is that these and all the other elements should be combined in a "balanced" replacement application so that the soil will receive a proportioned return of all the elements which the plant takes from the soil. A balanced program, increases the benefits from the materials applied and decreases both the dangers and the waste.

Another departure from nature in modern man's soil management is the extensive use of chemical pesticides and weed killers. The killing of life harmful to crops is, of course, desirable but many of us have been unimpressed by the claims that these chemicals confine their executions only to the bad. An important question is the effect of these chemicals on the microbes in the humus of the soil. Equally important questions concern the collateral and perhaps long-range effects of these chemicals, particularly the consequences of accumulations of them in the soil.

The difference between claim and fact is indicated by the increasing list of these chemical killers which have been banned from use in the growing of vegetables and fruit consumed by man. It is equally important that these chemicals be banned if they harm the lower life-form populations upon which man depends for food.

The limited experience we have so far indicates that all pesticides based on the chlorinated hydrocarbons are objectionable for either or both of these reasons.

Another characteristic of man's replenishment program of the soil is the use of concentrates. Nature, not being bothered by freight costs, uses minerals as they occur in nature. Such use by men is increasing in this country. Recently a German scientist visiting the United States reported that a similar trend is found in Germany. Some German farmers producing specialty crops, according to his report, after a trend toward high analysis fertilizer, now show decided preference for fertilizers with low percentages of nitrogen, phosphate, and potash. Thomas slag is preferred over superphosphate or treble phosphate formulations. Kainit (14 percent) (K_2O) is preferred over 40 to 60 percent K_2O concentrates. The reason for these preferences, the German farmers say, is that the low-percentage formulations work better. Apparently such materials have in their filler beneficial elements which we do not know about.

The ultimate test of any system, including a system of soil management, lies in the results from its use.

It has been found that loss in soil fertility follows the same "part life" pattern as the radiation decay in newly formed radioactive elements.

In a series of tests running over a period of more than 60 years this principle was used to determine the rate of soil fertility loss. The test factor was the change in the nitrogen content of the soil each year. In all the tests there was continuous cropping and removal of the crop.

In one series there was no replenishment. In another series, partial replenishment programs typical of the practices at the time the tests began, were used. In these latter tests one field received 25 units of nitrogen in the form of sodium nitrate each year. In another field the same number of nitrogen units were added in the form of ammonium sulfate.

The results of these tests were that the field with no replacement program, showed a loss of one-third of its fertility in 60 years. The two fields with partial replacement fertilizing programs using nitrogen only showed a fertility decline respectively of 45 percent and 44.1 percent at the end of 25 years.

The no-replacement-field had a decline of 40 percent in the bulk yield after 40 years of continuous corn cropping. Both the partial replacement fields in the last years of the test had crop failures every other year.

The startling and seemingly illogical results of these tests are that a program of no replenishment at all had a much smaller rate of decline (that is to say, a slower decline in soil fertility) than a program involving annual nitrogen replenishment in the form of a chemical salt.

Why was it that doing more resulted in less?

It seems that the answer lies in the fact that the nitrogen fixing microbes in the humus portion of the soil when undisturbed, are the means of acquiring and making available to the plant the nitrogen already in the soil or coming to it in other natural means. The addition of the fertilizer to the soil, however, because of its salt character, disrupts and reduces the production of these natural nitrogen fixing processes by destroying the soil bacteria. Also, the technology of chemical nitrogen fixation in fertilizer salts changes the basic chemistry by

turning the ammonia, a cation, into a nitrate or anion, which does well to get one-third of the nitrogen into the crop. The rest leaches out of the soil and escapes.

The partial lives of fertility of different soils, of course, will vary and the rates of deterioration under differing kinds of partial replacement will differ.

Whether, however, the "part lives" of soil depletion are 25 or 60 years in length they mean serious soil depletion too soon. The consequences to the nation as well as to the population problem need no elaboration.

The underlying purpose of soil science is to make sure that the green plant, the single basic source of food for all animal life, receives from the soil the nutrition it needs for the best growth and the best production.

With fertile soil the green plant is vigorous and flourishing. Without it, the plant is weak and decrepit. It is both axiomatic and through experience that the amount and kind of food the green plant produces depends upon how strong and how thriving the green plant is and that healthy plants produce the best nutrition.

Plant life had its origin in time long before human history. Its known toughness and resistance are the results of its struggle to survive during countless millenniums.

At some point in this struggle each plant species reaches its climax in development. This peak of vigor and health is noted by three characteristics. The plant is able—

1. To grow as a vigorous and healthy plant.

2. To defend itself against pests and diseases. One defense is its health. Another is the help it receives from the soil in the form of antibodies to protect it against its enemies.

3. To reproduce its kind in such vigor and strength that the species can maintain itself in the territory it occupies for extended periods.

The first sign that this climax period is past, is the increasing inability of the plant to reproduce itself. Substitute seeds become a necessity. But substitute seeds or substitute crops do not correct the cause of this deterioration, namely, declining soil fertility. Unless this problem is solved, lesser plant vigor and lesser nutrition values continue, the only difference being that they will occur in other crops.

Experience with hybrid corn is illustrative. In spite of the hybrid seeds, corn today generally has half the protein content of the Dent corn of 60 years ago. In recent years we have seen extreme cases in which the nutrition value of corn has sunk so low that cattle eating it lose weight. Different crops are not the answer either. Red clover, cow peas, and sweet clover were tried in succession as a substitute for fertility maintenance in experiments at Missouri. Each in its turn gave out. The ultimate was reached when the last crop, sweet clover, proved so low in nutrition that the grazing cattle shunned it in preference to the weeds along the pasture fence.

Substitute seeds and crops bring another problem which exists even when the soil is fertile. Either flourishes best only if the soil's fertility is as suitable to it as that of the area of its origin.

The second stage of plant deterioration and of increased soil infertility occurs when the plant is unable to withstand diseases and pests. Health helps to protect against disease in plants as well as man, but it is not an absolute defense. We know, however, that in a living and fertile soil some antibodies exist which are further defenses against encroachments upon health. A common example of these defenses is penicillin. Plant frailty and disease susceptibility are certain signs that the seasonal interactions of the inorganic elements and the organic compounds are not those of a fertile soil.

Pesticides, no more than new seeds solve the basic problem which must be solved, namely a change of soil exhaustion into soil rebuilding.

In the deterioration of a plant species the decline of quality begins much earlier than that of quantity. The latter often does not occur until the soil nears complete exhaustion. The same is true of the appearance of both the plant and its product. In the case of the animal consumers this is unimportant as the cow, the pig, and the sheep uniformly confirm the accuracy of the laboratory tests showing the downgrade in nutrition. Human consumers, however, lack this ability with the result that if appearance is good it is assumed that a product is nutritious. Countless tests over the years in vegetables, fruits, and cereals confirm that often the appearance of highly nutritious, and, from the point of food value, practically worthless, vegetables, fruits, or cereals is identical.

There are two sequences. Soil health—that is, soil fertility, plant health, and healthy food—that is good nutrition, is one of these sequences. The other is poor soil, poor plants, poor food.

Which of these sequences we follow in the final analysis depends on what we do at the starting point. Do we manage the soil so that it is a fertile soil or do we mismanage it into infertility—do we maintain the fertility of our soil or do we exploit it? The point cannot be overemphasized that no matter what the pedigree of the plant may be, no matter how much we improve the quality of seed, no matter how advanced our techniques of crop care, the crop outcome ultimately depends on the continuing fertility of the soil. Without the nutrition which a fertile soil provides, the aristocrats as well as the plebeians in the plant world cannot produce.

Soil fertility involves a proportioned sufficiency of all the macronutrients and micronutrients. In the words of science, each of these is "indispensable to plant growth." The lack of even one of these elements needed only in minute quantity, has the same effect as the lack of an element needed in large amounts. Thus, in Australia it was found on land with no molybdenum, that the addition of a few ounces of molybdenum on each acre was the difference between no crop and crop.

A deficiency in any one of these elements is the cause of plant debility and lower crop values in nutrition. A nitrogen deficiency, for example, means stunted plants.

A *disproportion* resulting from an excess of one of these elements, such as nitrogen, can result in lower nutrition values in the crop. In the southeastern United States it has been found that it takes 2 tons of a nitrogen-fertilized, supposedly quality pasture grass to put the same weight on cattle as that by 1 ton of local pasture grass grown on nearby untreated fields.

The solution to the problem of continuing soil fertility is *full and balanced* replacement of what we take from the soil. The demand for high yields means that full replacement requires more material. One hundred and fifty bushels an acre of corn take from each acre over 600 pounds of macronutrients and micronutrients. Soil fertility cannot be *maintained* unless we put at least that much back. If soil fertility has to be *restored*, much more is necessary.

The lengthy years of continuous crop production of our farmland with our high yield requirements, necessitate a drastic change in our fertilizer practices if our farmland is to continue productive. The change necessary is to *total fertilization*. Total fertilization means not only replacement of each indispensable element which the crop takes up, but also replacement of each of these elements in adequate amounts. This is the only way to stop the seemingly inexorable operation of soil fertility deterioration.

The connection between fertile soil and the health of man lies in the difference between the products of the healthy plant and those of the poor plant. In the former the protein content is high in relation to the carbohydrates. The proteins are complete proteins, high in amino acids, and the food is rich in vitamins and minerals. In the latter there is a disproportionate amount of carbohydrates, the protein is crude, and the food is low in requisite minerals.

The statistics show that we in the United States have little reason to be complacent about health.

In 1964, the national average of draft rejections for physical and for physical and mental reasons combined, add up to 23.7 percent (Supplement to Health of the Army, 1964, Office of the Surgeon General of the U.S. Army, May 1965, page 15). This means that virtually one out of four of our young men is either physically or both physically and mentally unable to pass an examination which actually requires only moderate fitness, at a time when the general health of an individual should be at its lifetime peak.

Degenerative "diseases" as causes of death in the United States are rapidly rising. Such diseases in the decade of 1920-29 caused 39 percent of the deaths. In 1948 they had risen to 60 percent (91st Annual Report (1948) Northwestern Life Insurance Co.).

While the marvelous accomplishments of medical science have substantially abrogated the harsh rule of survival of the fittest, we seemingly have not yet been able to make the unfit healthy.

I suggest these facts show that altogether too many Americans do not receive good nourishment.

That the quality of nutrition and, therefore, ultimately the fertility of the soil, play an important role in the health of human beings is pointed out in significant studies.

In one, the draft rejection statistics for Missouri were superimposed on a map showing varying soil classifications running from the best soil to the poorest soil in Missouri. The draft rejection rate for physical reasons for inductees living in the regions of the best (most fertile) soil type was 158 out of each thousand young men examined. In the second best soil area this rejection rate was 176 per thousand; in the third, 203 per thousand; and in the fourth, 214 per thousand.

That good nutrition affects not only health but also contributes to mental ability is indicated by another phase of this study. When we recall that good nutrition is simply good stored energy and health, these results are not surprising.

On the same soils map we superimposed the honor student record for the University of Missouri School of Agriculture during the years 1949 through 1957. In the first and most fertile soil zone there was one honor student for each 307 square miles; in the second, one for each 376 square miles; in the third, one for each 431 square miles; and in the fourth and poorest soil fertility zone, there was one honor student for each 617 square miles.

In terms of population, in the first zone there was 1 honor student for each 7,455 people while in the fourth zone there was only 1 honor student for each 15,774 people.

A similar study in Kansas confirms the connection between good soil and good health, both of people and animals. Soilwise and climatically the State of Kansas can be divided into three approximately equal zones, running from the west to the east. The western third has the richest soil and good weathering conditions. The central zone has less favorable, and the eastern zone has the least favorable, conditions.

Measured in plant food quality the western zone in 1949 had wheat with a protein content of approximately 15 percent; the central zone, approximately 13 percent; and the eastern zone 11 percent.

In this study, 3,600 students who were lifetime residents in the respective zones, and cattle in each, were tested for histoplasmosis reaction, a fungus infection with symptoms somewhat similar to tuberculosis.

In the western zone with its higher protein quality wheat, 6.7 percent of the students showed positive reaction to the test; in the central zone 23.1 percent reacted positively; while in the eastern zone with the lowest content protein wheat, 65.5 percent of the students showed a positive reaction.

In the animal tests there were no cattle reactors in the western zone; 1.5 percent in the middle zone; and 4.2 percent reactors in the eastern zone.

The connection between good soil and good health is also demonstrated in studies of the teeth. The tooth, after all, is but an exposed part of the skeleton—composed mainly of calcium and phosphate. This research was a study of some 60,000 naval inductees during the year 1942. It was found that those inductees coming from homes in the better soil lands of the Great Plains area had fewer total caries than the inductees of the other four general soil areas of the United States. The Great Plains inductees averaged approximately 35 percent less total caries than the inductees from the Atlantic coastal area and 25 percent less than those from the Pacific coastal area.

In our studies of the connection between food and health it has become apparent that the macronutrients and micronutrients which are indispensable to the plant are also indispensable to health in animal and human life. An important characteristic of the food produced in these areas of high soil fertility is the richness of the plant and the plant product in these minerals.

We are also learning that a deficiency in any one of these elements, in many cases, marks the difference between health and sickness and this is true even with the micronutrients. Even the minute quantities of the micronutrients which are necessary in the nutrition of the green plant, seem to have a parallel indispensability in the food of animals and men if they are to be healthy. We are learning that there are many "diseases," so called, which occur when one or more of these macronutrients or micronutrients are deficient and we are also learning that a prevention or a cure occurs when these deficiencies are corrected.

It has been discovered that manganese, copper, cobalt, magnesium, and zinc shortages are phenomena in brucellosis, a fungus infection in cattle, which is similar to undulant fever in human beings. Cures have been effected by correcting the deficiencies with additions of the missing elements. These cures had the effect of immunizing the cattle to such infections even when they were subsequently exposed to infected herds.

Some medical friends of mine used the same basic treatment which we used in our experiments with brucella, on patients suffering from undulant fever with the same good results.

Similarly, boron has been effective as a cure for animals affected with mange. It is believed that it plays an important part in remedies for many types of dermatitis.

It has been found that a few ounces of selenium on an acre of land in some areas substantially eliminates multiple sclerosis in lambs.

Pink eye, sometimes called "cancer of the eye" in cattle, has been reduced and in many cases cured, by replenishment of copper and cobalt deficiencies.

Lumpy jaw has been cured by remedying an iodine deficiency.

Disease prevention is better than disease cure for every reason, including that of economics. Disease prevention obviously is provided by nutrition which is rich in all these elements.

I hope I have made the point that nature from her countless ages of experience before the time of man, as well as what man has learned in his far fewer years, combine to tell us that high food value depends on fertile soil and that high food value is synonymous with nutrition that makes for health.

Continued fertility depends upon soil management which has full regard for ecological balance and from our time on, also depends on total fertilization.

I hope the point is clear that the total fertilization for healthy nutrition in poorer soils must be much more extensive than in the soils of greater native fertility.

With such soil management our soil has the capability to produce good food for many more mouths than we have now. Without it, we can expect the harsh penalties of nature's laws when there are too many people and too little food.

In conclusion, I should like to make three recommendations which, if adopted, I believe will improve the nutritional contributions of American agriculture, and will be an example for other nations to follow.

The first recommendation urges increased research. We need to know much more about balanced soil fertility, the kinds of soil fertility best suited to specific crops, methods of soil replenishment, including the different requirements for poor soils and for better soils, the methods of adopting alien crops to new soils and conditions, soil microbiology, and soil biochemistry, to mention but a few of the many areas of needed research. Especially do we need a careful study of the whole field of nutrition of all life forms.

Such a program quite possibly involves a reversal of our governmental policy. Last year, for example, \$600,000 was cut from the research budget of the Department of Agriculture for fertilizer research. In the budget for fiscal 1967, a request for \$497,000 for soil fertility and irrigation research was deleted somewhere. Fortunately this item was restored by House action and I sincerely hope the Senate will concur in this restoration. The food needs of the world are too great, too urgent, and too important to gamble on ignorance.

The second recommendation concerns food standards. The important test of good food is the amount and quality of nutrition it contains. Too often today we rely on bulk and appearance, either of which may have no relation whatever to quality or nutrition. Proper standards, I suggest, should place a premium on the amount of complete protein as opposed to "crude" protein, the amount of the amino acids, vitamins, and mineral richness, a product contains. They would then more nearly reflect real food value.

Such standards would enable the customer to make her choices on the basis of real value. She would then be able to ask for and get, for example, the flour grown as wheat in western Kansas or the produce of northwestern Missouri, if she felt her family should have food with a better health-producing record.

Such standards would quickly result in a general uplift in food quality. Farm practices would soon change so that quality would accompany quantity because it would be profitable to do so.

The third recommendation concerns incentives. We in America are blessed with some of the finest and largest growing areas of the world but they are not inexhaustible resources. The new fact of agriculture is the continuing need for both more, and more complete, soil replenishment.

The protection of our soil is a matter of public as well as private concern and responsibility. The substance of such an incentive program should center on a recognition of the depletion which does occur in the agricultural use of land and the need for continuing and complete replacement of what man takes from the soil through his crops.

Senator GRUENING. The able chairman of the House Committee on Agriculture, Representative Harold Cooley, delivered on March 9 this year a spirited address about the urgency of meeting the world's food crisis. I shall direct that the speech appear in the hearing record at this time.

(The above-mentioned address follows:)

EXHIBIT 151

INDUSTRY'S ROLE IN THE WORLD WAR ON HUNGER

(Remarks of Congressman Harold D. Cooley of North Carolina, chairman, Committee on Agriculture, U.S. House of Representatives, Wednesday, Mar. 9, 1966, at the luncheon concluding the ninth annual fertilizer industry advisory panel sponsored by the International Minerals & Chemical Corp., Continental Plaza Hotel, Chicago, Ill.)

It is a thrill for me to come to Chicago, for this city always has been to me a symbol of the frontier, a city of hustle and bustle and ambition, one of the old and sacred battlegrounds where a young and underdeveloped nation took hold of its destiny to become the greatest power on this globe—with freemen carrying the banner of free enterprise.

Agriculture built this town. Chicago first came into being to service the needs and wants and the dreams of pioneer farmers and their families. I am especially pleased to stand today before so many people who are now so directly associated with agriculture.

As a farmer, I feel at home.

I am here on a serious mission. I am here to talk about hunger, and war, and peace. I think, too, I am here to call forth the spirit that built Chicago and this great Nation, and to urge the export of this spirit into the far corners of this suffering and dangerous world.

This country of ours, I am convinced, confronts today its most challenging, its most dramatic, its most exciting, circumstance of all our history.

The United States of America, for the third time within the years of the lives of many of us gathered here, is thrown the torch of the liberator, to fetch this world away from agony and from despair.

Our Nation first became the power to be reckoned with in this world when in 1917 the marching bands—the brass, the reeds, the drums—proclaimed and shouted to the world: "Over there, over there, the Yanks are coming." The freedoms of mankind then were in doubt on the ramparts of Europe. Fighting with other freemen, we became the liberator.

Again, in 1941, freedom was perishing on the battlefields of Europe, in the air over Britain, and in Asia. The bands struck up again: "The White Cliffs of Dover," "The Last Time I Saw Paris," "On a Wing and a Prayer." Our boys set out into the storm, by sea and air. Again by the side of other freemen, we became the liberator.

We fought in Korea and our boys are fighting today in Vietnam, to protect for mankind the freedoms won on many battlefields down through the centuries.

Now, for the third time in less than half a century, we are the power the world turns to in time of crisis.

There is another world war to be fought. It is a war that in the years ahead may be heralded as the greatest of all wars. It is a world war on hunger—to liberate mankind from the bondage and agony of privation, of starvation, and near starvation. This will be a war to end war. On the outcome may rest the peace of this world we live in.

I am very serious in this. I want to talk to you today particularly about the role of industry—the role of people like you who are gathered here—in this war on hunger.

On January 19 I introduced legislation (H.R. 12152) to declare a world war on hunger, through a vast expansion of America's food-for-peace program under Public Law 480. Subsequently, the President delivered to the Congress his own proposal. I introduced his bill as H.R. 12785. The objectives of H.R. 12152 and H.R. 12785 are the same. Both proposed (1) deliberate use of the agricultural potential of the United States to relieve hunger and malnutrition throughout the free world—such relief no longer being limited to the distribution of U.S. "surplus" food and fiber, and (2) deliberate employment of the agricultural

commodities exported under this program to assist and encourage other countries in solving their own food problems.

For 4 weeks now our House Committee on Agriculture has been holding public hearings on the world food crisis. We have heard experts in the fields of populations, of nutrition, of agriculture, of economics. They have come from Princeton University, from Harvard, from Massachusetts Institute of Technology, Columbia University, State University of New York, University of Chicago, Purdue, from the Rockefeller Foundation, the Ford Foundation, and other centers of study.

We have learned that the increase of the world's population is so awesome as to seem unreal.

We were told that the future of mankind is now being ground out in India, that continuation of present trends in India will mean a population increase there from 432 million in 1960 to 1,233 million by the year 2000, that if there is no solution all the world will live as India does now.

We were told that in 1980, some 15 years from now, world population will probably increase by 1.2 billion, from 3.4 to 4.6 billion, and by the year 2030, world population will reach 14 billion, if present trends continue, and mass starvation will inevitably result on a scale never before experienced—

We were told that even now two-thirds of the world goes hungry while one-third is overfed—

We were told that a livable world cannot exist in these conditions—

We were told that unless family planning is accorded a priority, populations controlled, there is little if any hope for a solution—

We were told that a gigantic effort must be made to improve agricultural production in the underdeveloped areas of the world, with American "know-how" and "show-how"—

We were told that America must share its abundance of food, while the agriculture of other nations is developing—and this may be a matter of years to come.

I was interested in one reassuring observation by Dr. Irene Taeuber, Princeton University, who reminded the committee that in early history 1 million Indians lived marginally on the land embraced in the continental United States, while today 194 million Americans eat well.

The world outlook is black indeed but I, for one, am convinced the problem is not insuperable or insoluble.

The solution, assuming reasonable accomplishments in population planning, education, and health measures, is in one word—a magic word—export—American export.

1. Export of food and fiber.
2. Export of the science of agriculture—the "know-how"—the "show-how."
3. Export of the management of agriculture.
4. Export of the materials for food production—fertilizers, chemicals, tractors, motor vehicles, a thousand and one things.
5. And the greatest export of all—the profit incentive—export of the American free enterprise system, for only through free enterprise, with liberty guaranteed for the individual man and woman, will the underdeveloped nations ever achieve dignity in self-sufficiency to stand on their own feet.

Where is American industry in all this? Where is your challenge?

The answer is obvious, opportunities and challenges are unlimited.

Of course, our farmers and our agricultural establishment, our land-grant colleges, our farflung experimentations in the sciences of agriculture, are in the forefront.

But the war on hunger cannot be won without you people in industry.

I am one who has always felt that industry never has been given the credit deserved in America's mastery of the art of abundance in the production of food and fiber.

Free enterprise, in your laboratories, in your blueprint rooms, in your production plants, on your assembly lines, in your financial institutions, in salesmanship, and in the fierce competition among you for the farmers' business—all the elements of our incentive and creative system also have been keys unlocking the miracles of abundance.

Certainly, the war on hunger will be the most unique of all wars. All who participate—recipients and donors as well—will profit. There should be no losers in this war.

I have had a few things to say in recent weeks about the unleashing of the abundance of our agriculture, as a means to a peaceful world. I have said that

I feel it is the destiny of this country to attack starvation around the world. I feel that this mission is so urgent that nobody can head it off.

We now have 60 million acres of fertile farmland in retirement, bedded down under the various farm programs. These programs came into being as the means of preventing our agriculture from suffocating under an avalanche of surplus food and fiber.

In an all-out war on hunger we could bring 50 million of the 60 million acres out of retirement, back into production, at a net cost of less than \$1 billion above what we now are spending to hold this acreage in idleness. This 50 million acres could produce enough food, if it could be delivered to the underdeveloped countries, to drive hunger and starvation out of the free world while the underdeveloped countries are building up their own agricultural production.

However, we are told that because of shortages of ships, poor unloading facilities in the ports of these underdeveloped countries, lack of storage and inland transportation, and the customs of people, we cannot reach with our food and fiber many millions who are hungry and naked, that we must move slowly. I know these difficulties are real. But I am convinced that we must move into this situation on a very large and grand scale.

For 13 years under Public Law 480—the food-for-peace program—we have been selling our surplus food and fiber to other nations, principally for their local currencies. We have amassed great heaps of these currencies for which we have little use. These currencies could be employed to build in the underdeveloped nations the docking, storage, and distribution facilities essential to the delivery of food in these countries. Free enterprise, with proper financing arrangements and cooperation of governments involved, ultimately would provide adequate facilities.

The problem is not insoluble. However, I am not proposing that we remove forthwith all restraints upon farm production now operating through the various farm programs. If we did this, we might again find ourselves buried in surpluses before we could find a way to deliver the food to people who so desperately need it.

Moreover, we must make food available only in those countries where the governments and people are trying to achieve self-sufficiency in food production.

This policy might in itself slow down deliveries. But I feel we would do a disservice to nations and to peoples if we encouraged them to believe that America can supply limitless food in all the years ahead, without any effort on their part. The only ultimate answer to the world food crisis is, of course, for nations themselves to move in the direction of food self-sufficiency, although such sufficiency might not be achieved in one or two decades.

The world war on hunger appeals to the great heart of America. Moreover, I am certain it would be to our own self-interest, beyond our humanitarian instincts, to feed hungry and starving people.

Our farmers are eager to produce the food. They would rather produce than to draw Government checks for keeping their land in idleness.

As to the comparative cost of holding land in idleness against letting the land produce to feed hungry people, an economist at Purdue University testified before the House Committee on Agriculture:

"To produce and ship abroad a bushel of grain under Public Law 480 (the Food for Peace Act) is not much more costly than to persuade the farmer, by payments, to refrain from producing that bushel. We have just completed a research project at Purdue University which shows that, all things considered, it costs about \$1.03 to prevent the production of a bushel of corn in the Corn Belt. The farm price of corn in Indiana in January was \$1.10 per bushel."

This is a dramatic illustration of how cheaply we can place many idle acres back into production and produce food for the war on hunger, when we weigh costs against our money outlays in holding this land in idleness.

How many of the 60 million sleeping acres will be brought back into production, and how fast, must rest, as I have noted, primarily upon the ability of the hungry nations to develop the means of distribution of the food this land will produce, and upon their willingness to develop their own programs looking toward self-sufficiency in agriculture.

However, it is my expectation that this new emphasis—this world war on hunger—will bring millions of acres back into production. This will employ on our farms many thousands of people who would be dislocated and crowded into our cities if we proceed with further restrictions upon agricultural output.

I see a bright future for American *agriculture* in these prospects.

I see a bright future for American *industry* in these prospects.

I see a tremendous boost to our total economy, from prosperity in rural America, and from the developing economies of other nations.

Today, only about 6 percent of our people live on farms, and yet agriculture is our greatest single industry. All told, farmers spend around \$45 billion annually, of which more than \$30 billion goes for production costs. More workers are employed in farming, about 6 million, than in the transportation, public utility, steel and automobile industries combined. Total agricultural assets are valued at around \$230 billion, about two-thirds the value of the current assets of all corporations in the United States.

If total farm exports were to rise by, say 50 percent, in this war on hunger, think what this would mean to you people in industry—the great additional inputs of fertilizer, of machinery, of all the materials that go into the production of crops and livestock. And this would be only the beginning.

The war on hunger, as we have emphasized here, will not be won until the nations of Asia, South America, and Africa, where the great population explosions are occurring, build up their food-producing capacity and develop transportation and distribution systems capable of getting the food to their people.

Think of the potential for American industry.

How fast can you proceed?

Witnesses before our Committee on Agriculture have testified that it is technically possible to double or even triple agricultural production in all of Asia, Africa, and Latin America through the use of more fertilizers, more irrigation, better seed varieties, more pesticides, and other improved agricultural practices.

But witness after witness cautioned that improved agricultural methods represent a basic social and cultural change, and that social change is slow. It was pointed out to us that most of the farmers in Asia, Africa, and Latin America are totally illiterate. Dr. Raymond Ewell of the State University of New York at Buffalo has said that the social, cultural, and educational factors, not the technical factors, are the real bottlenecks in improving agriculture in these countries.

We are undertaking parallel programs in health and education to meet these problems.

The fertilizer industry of America especially will play a great role in the world war on hunger. Our Government financed about \$65 million of U.S. fertilizer exports in fiscal year 1965 and that amount is rising this year. We also are helping to build fertilizer plants abroad. We are encouraging these efforts directly through surveys, through the possibility of joint financing, and through investment guarantees. The Agency for International Development currently has before it applications for guarantees covering \$250 million in planned American private investment in fertilizer production overseas. In fiscal 1965, AID guaranteed about \$12 million in fertilizer plant investments in Korea, India, and Nicaragua, and lent \$48.8 million to two new plants in Korea.

I was interested in a bit of information given our Committee on Agriculture by Secretary Freeman, just returned from Vietnam. He visited a fishing village, and found that some fishermen had acquired motors for their boats. Their catch was 600 percent more than by the traditional fishermen who paddled their boats. "We're going to send them some more motors for boats," he said. This illustrates the extent and variety of markets for American industry, as other nations build up their economies.

The agricultural development of underdeveloped nations affords this country its best opportunity in all history to expand the foreign markets for our own products, of farm and factory. In the 1945-65 period, we gave away and sold for soft currencies billions of dollars worth of farm products. Yet, commercial sales for dollars rose in that time from \$2 billion to around \$5 billion.

All the figures and statistics show that the faster another nation improves its agriculture, the stronger its economy becomes, and greater becomes the volume of our commercial markets in that country.

The world war on hunger, as proposed, would—

1. Expand America's food shipments to countries where food needs are growing and self-help efforts are underway.
2. Increase capital and technical assistance, to build up farm production in the developing nations.
3. Eliminate the "surplus" concept in food aid, gearing farm production in our own country to a volume that can be used constructively to feed hungry people.
4. Expand commercial markets for American agricultural products, and the products of our industry, with hundreds of millions of consumers in

the developing countries using their increased purchasing power to become good customers of the American farmer, and of American industry.

Secretary Freeman has said that victory in the war on hunger will save more lives than have been lost in all the wars of history.

The President has said: "There can only be victors in this war."

I have said and I repeat:

The challenge and the opportunities are limitless.

I can see millions of acres of our fertile lands coming out of retirement back into production.

I can see rural America flourishing again.

I can see billions of dollars in goods crossing the seas.

I can see the greatest surge in commercial trade the world ever has known.

I see our industry booming along with our agriculture, and such growth in our own economy that every man who has the will to work may prosper for himself and his family, in productive and rewarding employment.

Most of all I see hunger obliterated from this world for every man willing to sweat for his daily bread—where only those starve who are able but unwilling to work—and in all this I see the promise of a world finally at peace.

I mentioned at the outset that Chicago symbolizes to me the old frontier, one of the great battlegrounds where a young, underdeveloped nation—the United States of America—took hold of its destiny. With freemen working and striving and sweating, under the banner of free enterprise, we emerged from an underdeveloped land to become the greatest nation on earth.

Now I leave with you a message, and I hope the whole world will listen:

We are planning a new war, a new kind of war, a war on hunger, a war to end wars, a war where there should be only victors, no vanquished.

My message is this:

We shall win this war only if we export the gospel with the goods—the gospel of the American spirit—the gospel of free enterprise.

Socialism cannot feed the people it enslaves. Communism can offer the underdeveloped world only starvation. Free enterprise by freemen is the magic key to abundance and to the end of agony and suffering on this globe.

Therefore, I urge the business and industrial community of this Nation: While you deliver your goods, go forth and preach the gospel of free enterprise in the far corners of the earth. Such freedom and such enterprise is the only path to ultimate victory for mankind.

Senator GRUENING. It was not possible for me to hear Secretary of Agriculture Orville L. Freeman when he spoke before nearly 1,000 persons attending a 50th anniversary luncheon of Planned Parenthood here in Washington, D.C., last month, but I have read his speech and am placing it in the hearing record so that it may be shared by others who seek ways for mankind to, as the Secretary says, keep food production apace with human reproduction.

(The speech referred to above follows:)

EXHIBIT 152

ADDRESS BY SECRETARY OF AGRICULTURE ORVILLE L. FREEMAN

(Presented before the Planned Parenthood Federation at a luncheon meeting at the Shoreham Hotel in Washington, D.C., May 6, 1966)

Ladies and gentlemen, I am sure this group does not have to be told that the population explosion may push the world to the precipice of crisis within our time.

Somehow, some way, mankind must find the means to keep food production apace with human reproduction.

I am here today to tell you what I believe must be done.

Our world must prepare to feed a billion more people who will be added to the population over the next 15 years. Between now and the end of this century, the number of people presently on earth will double.

These figures are awesome. But even more awesome is the fact that fully four-fifths of this total will be added to the developing countries least able to feed themselves.

We are all familiar with the phrase: "two-thirds of the world's people go to bed hungry every night of the year."

This is true. But the full dimensions of that truth are even more distressing.

There is more to hunger than an empty stomach. Nutritional hunger can be just as debilitating, and, in time, just as fatal.

In the developing nations some 171 million children under 6 years of age, and some 98 million between 6 and 14, suffer seriously from malnutrition.

Millions die because malnutrition has sapped their resistance to childhood diseases. Millions who survive are permanently handicapped.

Progress in education and in the national economies are seriously retarded by the degree of malnutrition that prevails in so many parts of the world.

Against this dark background, mankind faces its greatest challenge.

Already the specter of food shortages, chronic hunger, malnutrition, and imminent starvation threaten the lives of many in South America, in Africa, and in Asia.

And this threat is a threat to the building of free societies around the world and, ultimately, to our own national security.

What real security could we have in a world gone mad with hunger?

What is the answer? Two things must be done.

The population trend must be altered downward and the food production trend must be altered upward.

An all-out simultaneous effort must be launched to achieve both objectives. It cannot be done by birth control alone. We must pursue a combination of realistic programs to brake the population acceleration and to accelerate food production. Hope lies only in this combination of efforts.

As the Secretary of Agriculture, today I would like to concentrate by observations on the food side of the population-food coin.

Long before American newspapers and magazines publicized growing world food needs in black headlines with even blacker forecasts, your Department of Agriculture was seriously concerned.

For more than 10 years, the Department has been involved in helping to meet the food needs of some 70 countries under the food-for-peace program. The \$15 billion we have spent in providing food and fiber to developing nations have done more than any other program in history to avert hunger, malnutrition, and famine.

Much of what we have sent abroad has been in the form of bulk products, principally food grains, but we have not overlooked the high protein foods so important to the growth and development of children.

Under this food-for-peace program, we have shared with the less fortunate some truly staggering amounts of dairy products:

- 6 billion 117 million pounds of nonfat dry milk;
- 290 million pounds of evaporated and condensed milk;
- 23 million pounds of dry whole milk;
- 715 million pounds of cheese; and
- 342 million pounds of butter oil.

And we expect to make available this year nearly half a billion pounds of nonfat dry milk for overseas programs.

These dairy products have been used mainly in school lunches and child feeding programs. For millions of children, they have provided that extra spark of nutrition that means better bodies, better minds, and better citizens.

We must remember, too, that the developing nations will have a longtime need for our dairy products, for increasing dairy production is a luxury those nations will not be able to afford until their food grain production increases and their general economies are strengthened. Most of their resources must be initially used to boost grain production, the diet base in those nations.

And there are small, higher income segments in the societies of most developing nations which want and can afford to buy dairy products.

This means, in turn, that our low-cost dairy manufacturing States, Wisconsin, Minnesota, Iowa, will have a continuing opportunity to meet that demand for their products.

A word should be said, too, about the technological improvements being developed for dairy product shipment and use overseas. A spray dry butter has been developed, for instance, and a dry milk which can be easily converted to fluid milk in a can of water in some far-off jungle is being perfected.

An enriching process for dry milk is meeting with much success, and our Foreign Agricultural Service, in cooperation with U.S. commercial interests, has stimulated sample shipments of concentrated whole milk overseas.

We are also providing some oilseed meal products on a trial basis in a number of foreign countries. We are working with private industry to advise and assist them in developing foods with high protein content for commercial sale abroad. And we have proposals before the Congress which will, if enacted into law, make possible the use of still more high protein foods. Some very exciting things are taking place in our protein enrichment development program.

During my 5 years as Secretary of Agriculture, my major concern has been to insure that the unparalleled productivity of our American farms be used not only to provide a fair reward to the American farmer and abundant supplies to the American consumer but also to alleviate hunger and want in the less fortunate countries of the world.

The productive genius of the American farmer has more than met our domestic needs, and for the past decade or more has provided that critical balance in food supplies overseas which meant the difference between survival and death for millions of people.

Our farmers have given us a diet of variety, abundance, and nutrition unmatched in history and at lower and lower net costs to us.

An hour's takehome pay today buys more food than it did 6 years ago and double the food it bought 30 years ago.

Americans spend a smaller percentage of their incomes for food than any other people on earth.

Farm prices today are lower than they were in 1952 yet some unthinking people blame the farmer for creating the threat of inflation.

The truth is that the American farmer has subsidized the consumer for had his prices gone up in proportion to the increase in virtually all other wholesale prices, full-blown inflation could be upon us now.

But I digress. The point at hand is American agricultural production in relation to the threat of world famine.

The challenge to produce for the hungry of the world has given American agriculture new stature, new dignity, new importance. The magnificent response by our farmers has provided the United States with an instrument for world peace of enormous potential, yet once again, some Americans fail to appreciate it.

Basking in our abundance, we are inclined to overlook the fact that millions of people in many other lands depend for their very existence on the fickle whims of weather and harvest or on American beneficence.

The ignominious failure of the Communist world to feed itself has not gone unnoticed by the uncommitted nations nor has our abundance and our willingness to share that abundance with others.

In recent months we have seen how one poor crop year has threatened the vast nation of India with famine, and we have seen how only a massive food commitment by our Nation has averted widespread tragedy.

The food aid we are giving India is big, very big indeed.

Today we are shipping aid wheat to India at a faster rate than we did to all countries during the reconstruction period after World War II.

This year we expect to ship about 300 million bushels of wheat. This is about one and a half times the crop of our biggest wheat State, Kansas, and if made into bread it would make about 100 loaves for every man, woman and child in the United States.

The importance of dairy products in the aid to India program was emphasized by the President in his aid message late in March, for he called for more shipments of nonfat dry milk to that troubled nation.

Under the food-for-peace program, we have shipped well over 100 million pounds of dairy products to India in the past decade. These products, nonfat dry milk, dry whole milk, evaporated milk and cheese, have been of great nutritional importance to the Indians, particularly to the children in the big cities where poverty discourages balanced diets and malnutrition is a continuing threat. Substantial additional shipments are in prospect for this year.

The new breadbasket of the world is North America—the United States and Canada. This new breadbasket exports more than 60 million tons of grain a year, with the United States providing three-quarters of that total.

We could increase that volume to more than 100 million tons a year, and the day may soon come when we must if the immediate threat of global famine is to be met.

But direct food aid to the less fortunate countries is not nearly enough. Even with all-out production and more massive food donation programs, we can only postpone world hunger for a few years.

Disaster can be averted on only one way—by greatly accelerating the expansion of food production with the hungry nations themselves.

The hungry nations are faced with a tremendous task in increasing their agricultural productivity. Those most densely populated will have to do it the hard way by increasing yields per acre, for they are already cultivating most of their available land.

Serious roadblocks stand in the way of agricultural progress in these countries. Some lack sufficient government stability for the establishment of effective policies.

Most lack incentives adequate to make it worth the while of the farmers to make all-out efforts to produce more.

Low rates of literacy, lack of know-how, and the absence of programs to help farmers to use new and better farming methods are serious.

Essential production inputs like fertilizers, improved seeds, modern equipment are scarce and the developing countries lack the foreign exchange to buy them.

All of these handicaps exist against the background of lack of roads, marketing facilities, farmers' cooperatives, and sources of credit.

Yet with all these handicaps, some hungry nations are increasing their agricultural productivity at a rate higher even than that ever achieved by the agriculturally advanced countries like the United States.

A recent USDA study of the changes in agriculture in 26 developing nations showed that between 1948 and 1963, 12 of these countries had compounded rates of increase in crop output of more than 4 percent per year.

These rates surpassed those ever achieved by the now economically advanced nations during comparable periods of time. The success of these 12 nations encourages confidence that underdeveloped countries can increase their per capita production of food and fiber.

I believe the task of these nations to raise their agricultural productivity is possible. Clearly it is a task which cannot—must not—be delayed.

The United States can and definitely will provide technical and capital assistance to help those countries which undertake effective programs to increase their own ability to provide food for their people. Unless our assistance to them is directed toward that goal, few battles in the war on hunger can be won—and the war itself will be lost.

I mentioned before the 12 countries which achieved such phenomenal increases in agricultural production. The 12 differ widely in climate, literacy rates, land resources, culture, and governmental systems. But they had one factor in common—a national determination to carry out self-help policies to improve their food production.

Self-help is the key to victory over hunger.

This concept is the foundation for the food-for-freedom program currently before the Congress.

It expands food shipments to countries where food needs are growing and self-help efforts are underway.

It increases our commitment to lend capital and technical assistance.

It eliminates the "surplus" concept in food aid by encouraging domestic production of those commodities which can be used constructively in fighting world hunger.

It fosters the continued expansion of markets for American agricultural commodities by helping to increase the purchasing power among the hundreds of millions of consumers in developing countries.

And it encourages private industry, in cooperation with the Government, to produce and distribute foods to combat malnutrition.

The new food-for-freedom program can truly be an instrument through which millions of lives that are now threatened by famine under present trends can be saved.

But this will result only if it proves effective in changing those trends by stimulating, encouraging, and—if necessary—insisting on effective self-help measures.

Self-help is also the key to population control. The same factor common to the 12 developing countries—that national determination to carry out self-help agricultural policies—is the key to closing the gap between the urgent need for voluntary family planning services and the meager realities of actual birth control programs in developing areas of the world.

I want to close by sharing with you my own observation of the course of this new war against hunger—my own view of the potential outcome of the frightening race between population and food supply.

I make this observation in the light of another explosion that has taken place in our generation—one that can hold far greater meaning, and that certainly holds far greater hope than the population explosion.

I refer to the explosion of knowledge that characterizes our times.

Science and technology have progressed so far that it is now theoretically possible to produce enough for abundance for all.

But science and technology have likewise progressed so fast in the physical and material fields that our knowledge about the social, economic, and political relationships necessary to realize that abundance has not caught up.

The race is not so much one between population and food supply, but a race between what could be done and what will be done.

What could be done has already been determined by scientific and technological progress, not only in food production but in birth control methods.

I ask you, and you can very well ask me, what will be done?

President Johnson has already made a firm commitment of what will be done.

He proposed this year in his international education and health message to Congress that the United States stand full square behind methods to fit population growth to food supply.

President Johnson proposed programs which would "expand research in human reproduction and population dynamics; enlarge the training of American and foreign specialists in the population field; and assist family planning programs in nations which request such help."

And, as I've already outlined for you, the President has staked out a comparable field of action to assure that expanding food supplies in the developing nations will accompany a downward adjustment in population thus hastening the day when the people of those nations have enough to feed themselves and are no longer dependent on us.

So we see that the fight against hunger will be waged on two fronts—that of population control and increasing food production.

President Johnson in his war against hunger message to Congress summed up the critical relationship between the two fronts in these words:

"A balance between agricultural productivity and population is necessary to prevent the shadow of hunger from becoming a nightmare of famine."

And so it is.

Senator GRUENING. I now direct that the statement, before the House Committee on Agriculture, of James MacCracken, executive director of Church World Service in the Division of Overseas Ministries, National Council of the Churches of Christ in the United States, be included in the record of this hearing. I also direct that an excerpt be included from "Food with Dignity," the recent publication of this responsible church group. Mr. MacCracken expressed his concern about the population explosion and its affect on the world food supply when he testified before this subcommittee on February 7, 1966.

(The statement and publication referred to above follow:)

EXHIBIT 153

STATEMENT BEFORE THE HOUSE COMMITTEE ON AGRICULTURE

(By James MacCracken, executive director of Church World Service in the Division of Overseas Ministries, National Council of the Churches of Christ in the United States, March 10, 1966)

Mr. Chairman, my name is James MacCracken, and I am executive director of Church World Service in the Division of Overseas Ministries, National Council of the Churches of Christ in the United States of America. I am accompanied by Mr. Melvin B. Myers, CWS director of material resources program. I would call attention to the statement of my colleague, Dr. Henry McCanna, as it supplements our statement. Church World Service, in representing the humanitarian and social concerns of the 30 constituent denominations of the National Council of Churches, conducted during the past year programs of relief, disaster response, rehabilitation, and self-help development in 37 countries of Asia, the Middle East, Europe, Latin America, and Africa. These programs express the concern of American Protestants who speak through us to refugees, victims of

disaster and the hungry and homeless without regard to race, creed, or geographical location. We are in close fraternal relationship with and support the Division of Inter-Church Aid, Refugees and World Service of the World Council of Churches, whose headquarters are in Geneva, Switzerland.

During the year just past Church World Service has touched upon the lives of some 7 million of the world's needy with food, clothing, medicines, and developmental projects. While we might feel a certain pride in that accomplishment, we confront another fact: in that same year, in those same countries, the population grew by 28 million persons.

Last June the policymaking general board of the National Council of Churches adopted a resolution on world hunger. Population was a major emphasis in the body of that resolution:

"We see a tremendous urgency in matters of hunger and food, in relation to our Christian faith, to our concern with human values, to prospects for the world's food demand and supply during the next several years, and to basic economic and social development. * * * The explosive population growth, in contrast with generally slow increases in agricultural production, points toward more widespread human suffering from hunger in the years ahead."

In calendar year 1965, CWS shipped or distributed 215 million pounds of titles II and III commodities under Public Law 480 to 26 countries. The distribution is largely through institutions—schools, orphanages, hospitals, and clinics—and in self-help and developmental projects using food as work incentive. We have been participating partners in the Public Law 480 program from its very inception. We are currently sending overseas the 4,000,000,000th pound of CWS relief supplies, which include food, clothing, medicines, and agricultural machinery.

This National Council resolution speaks with firm conviction and in sweeping statements of famine in today and tomorrow's world. Although it recognizes that the role of the churches is quantitatively small by comparison with the size of commercial and governmental activities and that primary responsibility for the hungry man is that of governments, the churches' role is of special significance. It is a multiplier by many times its actual size, of the efforts of both this and other governments. The voluntary agencies have pioneered for more than 100 years in programs which only within the last decades have been formally recognized and adopted by governments and inter-governmental bodies. These church efforts represent, in our judgment, the essence of the democratic process at work, and the humanitarian interests of the American people.

Voluntary agencies such as Church World Service respond to hunger, disaster and acute human need in a different manner than government-to-government aid programming. For example, title I commodities purchased by an overseas government are normally made available in the marketplace in that country to those who can afford to buy. The purchasing government in many instances do not, or are not ready to utilize this food in broad programs of social welfare for those unable to purchase. It is to these needy—the landless unemployed, the orphaned, the aged, the sick, the malnourished preschool child, the expectant mother—that the voluntary agencies must speak in ever increasing measure.

The general board of the National Council also asked our Government to change its agricultural policy from that of restriction to one of full production. If the hunger needs of the world are to be met this is imperative. We recognize that we cannot fill the needs of the world but our agricultural products will stimulate agriculture in the developing areas.

We are sure that American farmers and other agricultural technicians will be glad to help mount a program of economic development. Mission personnel of the churches are ready to be utilized increasingly in this new program.

As stated in the national council resolution, we urge that a consultation be called as soon as possible by the President and the Congress of all groups in this country interested in the production and distribution of agricultural products.

Church World Service has recently cooperated in making a survey of Protestant church-related endeavors attacking the root causes of hunger. The findings are conclusive evidence of the relevance of the churches. Exclusive of the value of shipments of either Public Law 480 foods or other materials, this survey shows an annual expenditure of at least \$14 million, largely for project grants and the fielding of specialized personnel in 83 countries directed to

feeding and attacking root causes of hunger. In 1965 these Protestant mission boards and related agencies shipped or purchased overseas more than \$2 million in food, exclusive of Public Law 480 commodities.

It is evident that with or without the notable and valuable partnership of this Government under present or future legislation, the National Council and Church World Service in particular will continue to act on the disaster of humans engulfed by hunger.

For many years Church World Service has been dedicated to helping people to help themselves in programs of self-help and community development. We are gratified and appreciative of President Johnson's strong challenge in this regard. We pledge our best efforts to use our resources responsibly to this end as we strengthen our commitment to combat famine in our time.

Mr. Chairman, the National Council resolution summarizes eloquently:

"People now dimly realize that, for the first time in history, the capabilities and techniques exist to prevent the warping of lives and the deaths caused by hunger. * * * Only a coordinated program, recognizing the interrelationships of aid and trade and development and attacking the causes of hunger and enlisting the knowledge, will, and resources of every nation and of all the relevant agencies of government, commerce, industry, the universities, the press, the churches—indeed every major human activity—will suffice * * * thankfully recognizing all that has been done, it is our conviction as Christians and as citizens of the United States that responsibility now lies on the people of this country to take every step we can, in partnership with all others who will join, to mount a massive, unified attack on this enemy of human decency, of life itself. The universal human conscience will not permit us to be silent nor fail to offer every skill and strength we have. Here lies the opportunity for humanitarian statesmanship * * *."

The best interests of everyone concerned in Government, private industry, voluntary agencies, and those who will themselves be helped, will be served by a new, strong, comprehensive, and imaginative American Government program. The drama of stark hunger demands an integrated attack encompassing all of the complex and varied efforts now taking place in food production, utilization of resources, population problems, literacy training, public health work, and agricultural training.

Any thing less than a full-scale attack, involving the best and cooperative efforts of governments, intergovernmental agencies, private industry and the voluntary agencies will fall short of adequate response to the needs of man in our time.

Thank you, Mr. Chairman.

EXHIBIT 154

FOOD WITH DIGNITY

A SURVEY PRESENTATION OF MAJOR U.S. PROTESTANT EFFORTS TO COMBAT WORLD HUNGER

(By Katharine P. Riddle and R. D. Gatewood, published for the Committee on Agriculture and Rural Life, in cooperation with Church World Service, Division of Overseas Ministries, National Council of the Churches of Christ in the U.S.A., 475 Riverside Drive, New York, N.Y., February 1966)

PREFACE

This report, published by the National Council of the Churches of Christ in the U.S.A., is one of several books appearing in 1966 in witness to the Christian concern for the hungry people of the world.

A companion volume, "Crusade Against Hunger," by I. W. Moomaw, published by Harper & Row, New York, gives the history of the agricultural missions. Orville L. Freeman, U.S. Secretary of Agriculture, hails the latter as an " * * * account of the beginnings of the war against hunger long before the crisis of too little food for too many people became apparent."

A second companion volume is "Cooperation and Compassion" by Harold E. Fey, published by Friendship Press, New York, giving the story of Church World Service dating from World War II when certain crusading church leaders set out to help heal the wounds of the war and to provide large-scale relief over and above what the local churches and mission boards could assume.

The present book is the result of a 5-month survey aimed at measuring the present dimensions of major Protestant efforts to combat world hunger. The

authors are Mrs. Katharine P. Riddle, nutritionist and home economist, who was born in India and who has served as a missionary in both China and India, and Richard D. Gatewood, former Foreign Service officer of the State Department whose principal assignments have been in Latin America, Asia, Africa, and the Middle East. Mrs. Riddle is currently associate director of the National Council's Committee on Agriculture and Rural Life and Agricultural Missions, Inc.

The actual programs recorded here combine the efforts of hundreds of church workers abroad and millions of church supporters in the United States who have joined the poor and landless of the world in their struggle for food with dignity.

J. BENTON RHOADES,

*Director, Committee on Agriculture and Rural Life DOM/NCC, and
Executive Secretary, Agricultural Missions, Inc.*

I. INTRODUCTION

Hunger and the Christian conscience

The year 1965 may be remembered as the year when the American Protestant churches, almost with one voice, declared intolerable the fact that more than half the people of the world live in perpetual hunger. But what remains to be revealed is what the Christians will do about it.

After more than 20 years of U.S. technical assistance, after two decades of U.N. technical cooperation, after nearly 20 years of Church World Service and Catholic Relief Services, and after 35 years of organized agricultural missions, hunger is still on the increase.

Meanwhile, the North Atlantic countries, predominantly Christian, enjoy a standard of living and a level of economic affluence unprecedented in history. The brutal disparity between the "haves" and "have-nots" is an offense to the Christian conscience. This widening gap threatens to destroy both rich and poor.

Hunger is made yet more intolerable by the knowledge that man, now, has the technical capacity to eliminate its hold over the world. Should the population stop increasing and should man use good will and commonsense, the battle against hunger could be won. But, with every tick of the clock three more mouths are to be fed—two in areas where food already does not suffice. At the present rate of growth, the population will reach 4 billion by 1980, and 7.4 billion by the year 2000.

United Nations estimates reveal that over 85 percent of the increase will be in the high birth-rate "developing" countries of Asia, Africa, and Latin America, which are precisely the areas of most serious food deficits.

Recent actions by U.S. Protestant churches

What has brought the U.S. churches to a renewed concern about world hunger, as voiced in the resolution (annex I) adopted by the National Council of Churches (NCC) on June 3, 1965, is the central and continuing Christian teaching of compassion for the human being in need. Over the centuries this concern has become a common concern of many faiths and of Eastern as well as Western governments. Thus it is today that governments have accepted the primary responsibility for marshaling cooperative action to meet the growing complexity and intensity of world food needs. Accordingly, it is on this macro-level that the resolution urges initiative by governments to launch a new international undertaking to meet world food needs—both for the short run, through increased relief, and for the long run, by increased food production and parallel emphasis on family planning. The capabilities and techniques now exist, if there is concerted international action, to prevent the warping of lives and the deaths caused by hunger.

Meanwhile, on the micro-level, and as an integral part of the larger undertaking, the churches themselves resolved to "review their overseas activities to the end of increasing * * * efforts to help meet world hunger" (resolution, art. III 2-b). The first step toward making U.S. church programs abroad more effective and more ecumenical (resolution, art. III 2-e) is an intelligible inventory of just what is now being done by the churches in both relief and agricultural programs. Some suggestions for change and reemphasis will flow naturally from the facts of present expenditure of resources and deployment of personnel.

The Division of Overseas Ministries (DOM) has hereby made an analysis of the extent and nature of U.S. church programs abroad in alleviating hunger. The task of carrying out this analysis was accepted by the Committee on Agriculture

and Rural Life (CARL) in cooperation with Church World Service (CWS). Though this committee is new in the DOM, it has an honored history through its close relationship with Agricultural Missions, Inc., and is involved, as consultant, in many of the projects which are reported in the study. It is in a position both to grasp the significance of the findings of such a study and to see them implemented. Both CARL and CWS serve church agencies working overseas and are in a position to promote deeper understanding of the urgent need for action on the part of congregations and denominations in the United States.

II. SCOPE OF THIS STUDY

Kinds of questions asked

As the urgency of the problem of world hunger seemed to require a prompt gathering of information, it was decided to obtain quickly the data readily available in church offices in the United States, rather than pursue the more lengthy process of field study. Categories of work were listed in the fields of agricultural and urban development, education and training, and preventive medicine—particularly projects related to maternal and child welfare and nutrition. Information was sought by country as to whether and where such work existed, how many expatriate (i.e. nonlocal) personnel were involved (and their training), budget emphasis and capital grants made to such projects, and the relationship of these projects to the indigenous church bodies. By going directly to the U.S. Government and Church World Service, records were obtained on the feeding programs being carried out by the Protestant churches using both Government and non-Government foodstuffs. A brief summation of the self-evaluations of programs, obtained by both written statements and by interviews, has been made of the relative effectiveness of the various approaches in alleviating hunger and its root causes. A facsimile of the questionnaire is included in this report as annex II.

Limitations imposed

It is admitted that by limiting the sources of information to the home base offices of the denominations, the scope of the survey is thereby narrowed. There has been no attempt to determine how much money, personnel, effort, and equipment local oversea church groups or local community groups or even local governments are putting into the attack on hunger. Similarly, no inquiry was made to measure the effect that special rural training for oversea pastors has had upon meeting the needs of the hungry. These and many other intangibles contribute significantly to the Christian attack on world hunger.

It is also recognized that while trying to use measurable criteria, such as the number of persons involved or the amounts of money expended, for comparison and study, it is still very difficult to isolate funds and personnel which are serving a number of different purposes simultaneously. Though arbitrary categories of work have been set, their interrelatedness is also recognized.

It should also be noted that all statistics in this report refer to programs outside the United States and Puerto Rico and represent only information received during the period of the survey.

Sources of information

A survey questionnaire in two parts was sent out to 96 different mission boards and agencies, either directly associated with the DOM or known to be engaged in work which came within the purview of this study. The process of selecting the 96 agencies to be questioned had 2 stages. Those mission and service agencies most likely to be engaged in work covered by this study were ascertained by consulting North American Protestant Mission Agencies, 6th Edition, Missionary Research Library, New York, 1964, and U.S. non-profit organizations participating in technical assistance abroad, Technical Assistance Information Clearing House (TAICH), American Council of Voluntary Agencies for Foreign Service, Inc., 1964-65. Where there was a question, it was decided to give the boards and agencies a chance to say whether or not they would like to participate in such a study. To 194 of the 350 agencies listed in the Missionary Research Library Directory a letter was sent with reply postcard enclosed, asking that they indicate their interest. It was gratifying to receive 102 replies to this preliminary mailing, though many replied that they either had no work in this field or were not in a position to participate. Questionnaires, in sufficient quantity to cover the number of countries in which work was listed, were then mailed to 96 agencies. A listing of these agencies appears in annex III.

Where there were known to be joint ventures in mission work or in higher education, the questionnaire was sent to the joint agency. Cooperating denominations were asked not to report their contributions either to these interdenominational educational institutions or to the interboard work in Santo Domingo, Hong Kong, Japan, Okinawa, or Nepal. Care has been taken to avoid duplication in reporting in so far as possible.

Information on programed shipments of Public Law 480 foodstuffs for distribution by the churches was obtained directly from AID in Washington, D.C.

Other agencies in this field

In taking the measure of the U.S. Protestant efforts to alleviate world hunger, it is recognized that they are but a small portion of the total effort being carried on by many agencies, both religious and secular, private and government. The U.N. Food and Agriculture Organization (FAO) and the American Freedom from Hunger Foundation in Washington, D.C., are keenly interested in studies of this kind and are hoping that eventually a total picture of the work of all voluntary agencies will be completed. A recent communication from the Catholic Mission Secretariat indicates they are already launched on a similar study. In order that the global nature of the Protestant commitment to fighting hunger may be outlined, it is also hoped that the Canadian churches and the World Council of Churches will endeavor to assess the extent of their respective involvements.

It is also recognized that the extensive and fine work of many secular agencies is receiving considerable support from the membership of Protestant congregations through direct contributions. No attempt has been made to measure these, though the denominational boards and agencies approached in this study have been asked to record their own contributions to these organizations. Co-partners with all of the efforts referred to in this study are such agencies as World Neighbors Inc., CARE Inc., Self-Help Inc., Meals for Millions Inc., International Voluntary Services Inc., Agricultural Aids Foundation, Agricultural and Technical Assistance Foundation, Near East Foundation and others. In every case, the organizations mentioned above were born out of Christian motivation and have attracted considerable support of Protestant congregations while being nonsectarian in their operation.

Hopes for the use of this study

The results of this study as presented here will, it is hoped, be the basis for consultations as to their implications for further recommendations and planning. It can be a resource for self-evaluation on the part of the individual agencies who are reconsidering programs and looking for new avenues of effective approach. It will give guidelines for ecumenical followthrough in constructive, not merely palliative, answers to the problem. It will be of direct help to those who administer these programs from the United States or give program counsel in the field. It is also hoped that it will encourage fuller participation of American church bodies with better directed and more effective efforts to upgrade and escalate the programs which contribute to eliminating hunger and to eradicating its root causes.

In anticipation of such favorable developments, and in line with work by other agencies mentioned above, copies of the questionnaire were sent, for information, to a number of colleagues in the NCC, including DOM staff, all DOM/CWS representatives abroad, the World Council of Churches (WCC), the Evangelical Foreign Missions Association, the Interdenominational Foreign Mission Association, the Roman Catholic Mission Secretariat in Washington, the Catholic Relief Services (CRS) of the National Catholic Welfare Conference, the joint Catholic-secular research project at The Hague (known as ISS-FERES), the American Freedom From Hunger Foundation, the American Council of Voluntary Agencies, and officials of the United Nations Food and Agriculture Organization (FAO), the U.S. Department of Agriculture (USDA) and the U.S. Agency for International Development (AID).

In determining the scope for the survey, it was recognized that the alleviation of hunger is accomplished in many ways. The person who is hungry often suffers not only from malnutrition which cuts short his ability to work and produce, but also from a lack of basic skills which are necessary in coping with the vast complex of problems which surround him. He may also be ill and illiterate. And he is probably contributing to the world's population without any sense of responsibility for the consequences. In recognizing this complexity, it is also evident that Protestant groups overseas have directed their individual work toward many or all of these problems.

III. ECUMENICAL EFFORTS TO COMBAT WORLD HUNGER

Though Protestant ecumenicity may progress slowly in doctrinal matters, the opposite has been true in the so-called practical oversea programs of the churches. Relief and reconstruction have, by and large, been considered and acted upon jointly by the major Protestant denominations. Some degree of joint planning and support has also characterized Protestant work in education and health. This seems now to be on the increase under the impetus of the World Council's "Joint Action for Mission" concept, encouraging international ecumenical efforts.

The Church World Service program

When World War II ended in 1945, the U.S. churches immediately undertook to finance jointly extensive relief and reconstruction programs in Europe and Asia. Church World Service was established in 1946. This creative interdenominational program was organized out of the elements of church relief agencies which go back as far as 1920, when urgent needs following severe drought in China prompted the churches to act. Food through CROP (Christian Rural Oversea Program) was purchased with gifts from the churches and from every sort of Christian group to be used to meet the overwhelming needs of war-devastated Europe and famine-racked Asia.

In 1950 supplies of Government-owned foodstuffs first became available for gratis distribution to the churches and other voluntary agencies, but substantial quantities of these commodities were not allocated to them until the Agricultural Trade Development and Assistance Act (Public Law 480) was passed by Congress on July 14, 1954. Since then CWS, among these agencies, has distributed abroad billions of pounds of such commodities under two provisions of the law: Title III (sec. 302) for "needy persons overseas" entitled to relief from famine, and title II (sec. 202) for the encouragement of economic development. In fiscal year 1965, for instance, over 68 million people received title III aid from the voluntary agencies, regardless of nationality, race, or religious or political beliefs. Over 75 percent of all foreign recipients of Public Law 480 foods (totaling 100 million in calendar year 1964) have been and are non-Christians and 70 percent are children. Title II programs, among other purposes, are designed to provide a supplementary wage to recipients in the form of food as payments for participation in local self-help projects, a procedure often referred to as "food for work."

The present study records the most recent and readily available data concerning the volume, value, and recipients of Public Law 480 food-stuffs programmed by Protestant agencies during fiscal year 1965 and covers both regular and disaster relief projects.

As Protestant agencies participated in only three modest title II programs in fiscal year 1965, the period for which most of the data are available, the following statements based on table 10 refer to their operations under title III.

Dimensions of food aid.—CWS is the largest of the Protestant exporters, accounting for 70 percent of their totals. About 60 percent of 1964 CWS resources were devoted to both feeding and rural development programs in which 85 percent of CWS oversea personnel were directly involved. Catholic Relief Services (CRS) and CARE handle over 85 percent of the value of title III commodities shipped abroad by voluntary agencies. Accordingly, as shown in tables 10 and 11, Protestant agencies utilize less than one-eighth of the annual volume and value of these U.S. food shipments (totaling 203,000 metric tons valued at over \$32 million). Protestant distributions reach 7.5 percent, or over 5 million of the people receiving this kind of assistance.

On the basis of the value of shipments, Protestant groups were most active in Asia and the Pacific (45 percent of the total), followed by Latin America (31 percent), the Near East and Europe (17 percent), and Africa (7 percent). Their Public Law 480 shipments were supplemented by a relatively small quantity of non-Government foods (including high protein food supplements and some dollar remittances for food purchases); these totaled \$2,176,000 (see table 11), almost all of which was sent by three agencies: the Christian Children's Fund, MCC, and CWS (with CROP contributing the greatest part of this). It is conservatively estimated that an additional \$4 million worth of vitamins was collected through church-related medical relief agencies for export to some 60 countries.

Where expenditures for programs are estimated, these do not include either freight expenses reimbursable by the U.S. Government, involving no cost to the Protestant agencies, or the administrative expenses of agency headquarters in

the United States. They also do not cover the costs of consultant services such as those of the CWS Advisory Committee on Nutrition. However, the entire cost of field operations, including staff for oversea feeding programs, is recorded in this study under "Distribution of Foodstuffs and Nutritional Supplements." Adding that total to items above indicates a total of \$7,212,400 expended by the Protestant churches during fiscal year 1964-65.

CROP.—This is the name for the communitywide food appeal of CWS and State councils of churches in the United States. Representatives from farm, civic, and church groups on CROP committees provide a broad base for voluntary support. Contributions through CROP were larger in 1964 than in any year since 1948. Shipments and transmittals to 31 countries reached a total value of \$685,354. An additional \$155,000 helped handle and distribute food donated to CWS under the U.S. food-for-peace program.

The shipments and transmittals were allocated by the material resources program and the oversea area directors to: Africa, \$135,597; Asia, \$358,987; Europe and the Middle East, \$99,709; and Latin America, \$91,063. A total of \$407,171 consisted of seeds, tools, equipment, and "food for wages" in support of a variety of self-help and agricultural development projects in harmony with the FAO's "Freedom from Hunger" campaign. The balance was used for foods and nutritional additives for emergency and supplementary feeding programs.

Planned parenthood.—The Church World Service Planned Parenthood Office in April 1965, began sending full professional information and introductory supplies for intrauterine contraceptive work by interested, church-related doctors. More than 200 doctors in 35 countries have received this help. Ten shipments of EMKO, an aerosol contraceptive foam, have been made to seven countries.

This office provides information on intrauterine contraception and other methods, information or developments in other countries, and samples of educational materials appropriate to the needs in a given country. Samples of literature being used in Asia, Africa, and Latin America have been sent to Christian workers in 66 countries. These materials range from doctrinal statements on responsible parenthood, to simple treatments of the physiology of reproduction, to elementary literature on the values of family planning, to explanations of the various methods of contraception.

Projects have been undertaken in Hong Kong and Brazil. Hong Kong CWS has developed an intensive, 5-year family planning project in a resettlement area. A grant has been made to the Family Orientation Service in São Paulo, Brazil, a Protestant-led organization which provides the first family planning services available in Brazil. During visits in the Caribbean this past summer, talks on population and family planning were given at the family life seminars held in Jamaica, Barbados, and Trinidad and new impulse given to the efforts in family planning of the churches in Haiti.

It should be noted that the present study includes only those aspects of the Church World Service program aimed directly at combating world hunger and its causes.

The DOM specialized ministries

Protestant mission boards have, through the years, looked to certain specialized centers of service for guidance in the technical aspects of their work. This has been especially true in the case of agricultural, medical, and literacy programs. These centers of service, though having various degrees of autonomy, were closely allied to the division of foreign missions and before that to the Foreign Mission Conference of North America. Under the current organization of the National Council of Churches, all of these, as also Church World Service, are integral parts of the Division of Oversea Ministries. Much of their work bears directly or indirectly on the problem of world hunger.

Committee on Agriculture and Rural Life (CARL).—This unit is in close partnership with Agricultural Missions, Inc., which, since 1930, has given consultative help and training opportunities to overseas workers and organizations which carry significant work in agriculture. In India, the Philippines, Mexico, and Nigeria there are local Christian rural fellowship organizations which provide the opportunity for Christian rural workers to keep in touch with each other and with new technical developments. Also, through these organizations and through the rural life departments of theological seminaries and Christian councils in many countries, there is continued concern expressed for rural development as an integral part of the work of the church. The rural pastor who is not only well-grounded in the meaning of the Christian religion, but also oriented to the

situation of his people and able to lead in continuing agrarian reform, is a key person in the Christian attack on world hunger.

The successes and disappointments of the agricultural missionaries have helped identify certain key factors in the development process. Foremost is that the development of people is the most crucial task in any effective war on root causes of hunger. By this is meant the development of a people's ability to handle the means of production: land, capital, water, technology, and labor. It also means developing a people's ability to relate to each other in such ways as to facilitate credit, marketing, transportation, and processing of what is produced.

The lack of hope among the people is one of the most serious single factors holding back development in the areas of endemic hunger. Hope must be restored and with it the will to plan, to save, and to consume wisely.

The proven importance of the human factors, along with their own spiritual motivation, has led agricultural missionaries into the fields of leadership training at all levels, of guidance for cooperatives and credit unions, and aid to agrarian reform. It has led to a focus on tasks that are basically educational as well as technical. The approach is usually to work in close collaboration with Government and other technical agencies engaged in rural development: "filling in" where these are lacking at the grassroots level and "filling out" those large development programs which tend to overlook important moral and spiritual factors. The goal is not food alone, but food with dignity.

The churches cannot, of course, work everywhere, nor presume to do everything. In attacking world hunger, they are limited by the lack of men, money, and large enough vision for the task. Yet, with all these limitations, there are some encouraging signs among the church-related programs of agriculture and rural life in Latin America, Asia, and Africa.

Churches in Latin America, both Catholic and Protestant, are contributing significantly to successful agrarian reform. In certain countries the churches have established agencies for breaking up their own lands and helping families to establish themselves on these lands as farm owners and operators. This, of course, is requiring the church to employ technicians who not only know the people but can help them learn the technical and management skills often missing in the early stages of land reform. It has also led to establishing several church-sponsored research centers studying factors that make for development in Latin America.

In certain areas of Latin America, religious missions have been contracted by Government agencies to provide certain services necessary to the settlers on new lands being opened by the government for colonization. The services provided by the churches have ranged from the supervision of rural schools to the guidance of new cooperatives to the formation of 4-H Clubs to the distribution of livestock, seeds, and tools. This closer collaboration with government has required the churches to take government planning more seriously and to see their own contribution "lost" within the total effort of a given country. The significance of the churches' contribution in this field seems to be in direct relation to the technical competence of churchworkers for the specific development tasks entrusted to them and to the commitment of national church leaders to the development goals of their country.

In Asia, the focus of the more successful church programs in agriculture and rural development has been on the training of leaders for various development tasks. This includes the operation of three church-related full-fledged colleges of agriculture and one Christian college of dairy science. It includes the maintenance of several vocational high schools under church auspices and rural life departments in several seminaries. It also includes church operation of centers of training for young farmers and their wives for service to their own villages. In each of these cases, the aim of the churches is to help develop a kind of leader who will put knowledge to work by living close to the people and by performing the many unspectacular tasks which make for development. In Asia, where education has tended to separate the educated from the plight of their own people, efficient knowledge utilization is hard to come by. Not too much success can be reported. Yet there are encouraging signs in certain church programs of leadership training.

In Africa, the survey's tables only generally indicate the programs and projects involved and cannot attempt to show the results being obtained. In some areas rural action has been sparked and indigenous productive movements inspired. Successful programs in poultry and vegetable growing and cooperative work are slowly emerging. There are rays of hope in the difficult rural problems of the tropics, but also many unsolved problems of a technical nature. The

important role of village women is now beginning to loom large among the human factors of developing rural Africa. The recent addition of a specialist in home economics and nutrition to the staff of CARL has strengthened the services of that office to Protestant agencies engaged in the improvement of agriculture and rural life. The number of missionaries and other overseas workers related to CARL is indicated in table 6 of this study, under "General Agriculture," "Extension Work," "Rural Sociology," "Home Economics and Nutrition," and "Cooperatives."

Christian Medical Council (CMC).—The CMC staff reports: "While few Christian medical institutions have undertaken a major emphasis in combating hunger, they have, nevertheless, played a significant role in a therapeutic relationship to this problem. Since malnutrition and undernutrition are particularly significant in the 88 countries in which we have Christian medical institutions, a good deal is being done to alleviate this problem in terms of the limited clientele which a hospital normally reaches.

"Many food distribution centers operate on hospital premises, primarily because there one finds a fairly regular clientele for from 1 to 3 weeks or more. Moreover, many hospitals now employ dieticians who can explain the reason for food supplements and palatable ways in which they can be taken. This points up the most significant contribution which Christian medical institutions make; namely, that they deal with hunger from a therapeutic point of view and they provide excellent facilities for experimentation into the most satisfactory ways of combining food supplements with the natural diets of the people concerned.

"At the Christian Medical College hospital in Vellore, south India, they are conducting some first-rate research into pediatric nutritional problems. The Seventh-day Adventist Church can be singled out as being the one which has made the most significant contributions of all. Because of its particular interest in diet, it does a good deal of teaching and research in all Adventists hospitals overseas."

Committee on World Literacy and Christian Literature (Lit-Lit).—The director says: "Literacy and literature is the fence at the top of the cliff to keep people from having to be treated by a hospital at the bottom.

"Aimed at eradicating root causes of hunger, through literacy education and the preparation of literature for new literates, this program undergirds the rehabilitation of life. People who are hungry because they are using outmoded methods of food production can only be helped through a total program of education aimed at improving skills and changing attitudes.

"The Committee on World Literacy and Christian Literature of the DOM sees its job as helping churches in other countries become more competently involved in attacking the ignorance which perpetuates poverty and hunger. By workshops for training literacy teachers, writers, and artists for the preparation of materials for new readers; by providing professional and technical help and leadership where needed; by sparking interest and causing exchange of ideas from country to country, this office lends assistance to local committees in each country.

"The areas of the world which are known as less developed, where hunger and disease are highest, are also the areas of lowest literacy. Literacy is the essential skill opening doors for other skills which means improved participation in community development. The committee is recognized by UNESCO as one of the nongovernmental organization participants.

"The contribution of literacy programs and the result of the efforts of new literates cannot be measured in statistical terms, nor can the share of the program directed toward combating hunger. Publications for new literates are issued by overseas groups through the financial aid of the U.S. churches in many languages in Africa, Asia, and Latin America. Topics range from animal and poultry care, beekeeping, better seeds, use of fertilizer, irrigation, village cooperatives, * * * to hygiene, nursing and health, nutrition, cottage industries, food processing and marketing * * *.

"The Committee on World Literacy and Christian Literature works in large measure with underprivileged people. Of the annual budget in Africa, Asia, and Latin America amounting to \$469,930, an undetermined share is devoted to the long-term alleviation of hunger, along with other humanitarian concerns. The Committee supports few persons full time overseas, but does supply the consultative assistance of its staff where requested."

Radio, Visual Education, and Mass Communication Committee (RAVE-MCCO).—This agency aids broadcasting and audiovisual committees of national

Christian councils in 25 countries of Asia, Africa, and Latin America. Total contributions of mission boards through RAVEMCCO in 1965 amounted to \$669,925. It is estimated that about 15 percent of this amount is spent in attacking the root causes of hunger.

Radio station DYSR in the Philippines has been a leader in presenting farm and home life improvement programs. For many years DYSR has broadcast a 30-minute weekly program designed to aid rural people in raising better crops, improving animal breeds, and attacking pests. Another weekly program for women gives hints on cooking methods, recipes, and encouragement to try new foods which will provide better nutrition. In addition, the station has helped to explain and popularize programs designed to provide better living conditions and incentives for community development in the barrios.

The transistor radio has become a tool with which farmers can break out of the age-old isolation they have had to contend with for generations.

In Brazil and India, audiovisual production centers have produced and distributed filmstrips, flash cards, and flannelgraph materials which teach nutrition and good health practices as well as such subjects as the founding of a day nursery for children of poor families in order that the mother may seek gainful employment.

The film programs of the various centers of Asia and Africa invariably include, along with evangelistic films, others which deal with health, agriculture, formation of cooperatives, and similar subjects related to the root causes of hunger.

The transistor radio, now common to village life, is a powerful instrument for change.

Ecumenical exchange and scholarship program.—This unit of the DOM makes it possible, in cooperation with various mission boards, for young men and women from countries overseas to take professional training either in the United States or in other countries. This has included subjects such as agriculture and home economics.

IV. INFORMATION GAINED FROM INITIAL RETURNS

Percentage of returns

Of the 96 boards and agencies to which questionnaires were sent, 76 had sent replies by January 4, 1966. The information reported here is taken from these replies which comprise a 79-percent return, with a total of 336 usable questionnaires completed, by country. Information from questionnaires received after this date will be kept on file for future use. Four of the seventy-six did not fill in questionnaires but reports on their work will be summarized below. Ten of them indicated by letter or by blank questionnaire that they found that they either had no work in these areas, or work of such small proportion that it was hardly worth reporting. On the other hand, three boards, known to be engaged in significant antihunger programs on several continents, expressed regrets at being unable to report the details of their activities in time to meet the printing deadline. It is safe to say, however, that though these tabulations represent the work of only 59 boards and agencies, the total report covers an estimated 80 percent of these types of work being done by Protestant agencies in 83 countries abroad.

Objections to the questionnaire

Along with the returns of the questionnaires came significant comments by letter or conversation. Many found it difficult to isolate this type of work from the total program being carried on. For example, the staff of the Friends United Meeting writes:

"We find it very difficult, indeed, to complete these questionnaires with any real sense of adequacy or accuracy and I therefore hesitated a good deal before completing the questionnaire. The main reason for hesitancy is that it is so difficult for us to lift out of our total program as a mission board that which applies solely to the matter of food and relief of hunger. But we have filled in where we could approximately accurate statements and I hope these will be of some use to you."

The staff of the International Committee of the YMCA writes:

"* * * we have been trying to identify the relationship of the International Committee to the world problem of finding food for the human population * * *. That some relevant program is conducted by some of these countries can be substantiated but the list is probably not complete. * * * It should, therefore, be understood that this list is not necessarily inclusive. Again, it is not possible for us to specify dollar amounts or even percentages of man's time which would

reflect direct support from the International Committee for the world problem of feeding the hungry."

Others, while feeling that their present work was not significant enough to report, indicated that they were already projecting new work such as agricultural demonstration projects or farm schools. Some denominations sent replies for only part of the countries in which they have work, leaving it uncertain as to whether this kind of work was lacking in the countries omitted. And, in many of the questionnaires, the data was only sketchily filled in. Perhaps the most serious difficulty faced by some groups was inability to know how to report undesignated funds to interchurch bodies such as WCC and national Christian councils which in turn carry on work in several countries.

V. INFORMATION ON PROJECTS ATTACKING ROOT CAUSES OF HUNGER

Frequency and location of projects

The denominational boards and agencies responding to the questionnaire indicated that there are 1,115 different projects of the types cited as dealing with world hunger. These are carried on in 1,748 separate locations in 83 countries. These figures must be understood in the light of the facts that a single location may combine several of the projects. The frequency of any given type of project can only be estimated by looking at the distribution.

Those countries with the heaviest occurrence and greatest variety of such projects are the Congo (Léopoldville), Liberia, Nigeria, India, Korea, the Philippines, Brazil, Guatemala, and Mexico. These same countries (with the exception of the Philippines) have high complements of personnel. But in dollar contributions there is larger variation, Nigeria and the Philippines both ranking seventh and Guatemala fifth for their respective areas.

"Maternal and child clinics" and "distribution of foodstuffs and nutritional supplements" appear most frequently. "Nursing or nursing aid courses" is a close third, with "rural service centers and extension work" not far behind. On the other hand, "manufacture or improvement of productive equipment" appears only eight times and "degree courses" (including training of teachers) in these fields appear only a few times, though both of these programs stand out as being highly rated in their effectiveness in alleviating hunger.

Dollar contributions and capital grants

A total of slightly over \$8 million is being spent per year in budget support of these projects, including salaries of expatriate personnel supplied to them by U.S. church agencies. In addition, over the past 5 years, 268 (23 percent) of these projects received capital grants amounting to \$5,294,000 as reported.

In the graphic presentation giving percentages of personnel and funds by areas, several points stand out. Asia is receiving 53.2 percent of the funds but has fewer personnel. Africa is receiving only 19.8 percent of the funds but a greater bulk of the personnel. More detailed information can be found as follows: From the 336 questionnaires received for work of 59 agencies in 83 countries, 87 of these replies covered 23 African countries indicating a total annual contribution of \$1,589,000 in operating budgets (including expatriate personnel).

The same agencies reported making 74 capital grants to antihunger programs during the past 5 years. Of 114 returns on 17 countries in Asia are reported annual program budgets totaling \$4,275,000 and 126 capital grants in the past 5 years. In 95 returns on 25 countries in Latin America we find annual operating budgets of \$1,479,000 and 50 capital grants over the past 5 years. In 40 returns on 18 countries of Europe and the Middle East are reported \$687,000 in annual budgets and 18 capital grants over the past 5 years. Of the dollar contributions listed for Near East and Europe, over half of it goes to three countries: Greece, Jordan, and Lebanon.

To consider the countries of Asia, it is perhaps not surprising to find that India is receiving nearly 25 percent of all the funds and capital grants contributed. Korea and Hong Kong rank second and third. If the funds for Hong Kong and Taiwan were combined, they would compare in amount with those for India. The money sent to Japan is considerable though Japan is not considered to be a hunger area. This is explained by the secretary of the Japan Interboard Committee:

"* * * Japan is a country that has solved its problem of hunger * * * Japan is also a country that has solved its population explosion problem to the extent that she can feed her people if they increase at the present rate. * * * Our contributions have been in the area of improving on a situation already far better than in most mission countries * * * most of the courses (in agriculture and

home economics) are now taught by Japanese, more ably than missionaries could. * * * It is the numbers of these projects (multiplied by the small amounts contributed) which makes the somewhat impressive total. One must realize however that the U.S. contribution is a very minor supplement to the main effort (for development in Japan)."

First of all it should be restated that the number of areas or countries listed for each of the categories of projects aimed at root causes of hunger does not give the whole picture. In most countries there is more than one location for each type of project.

It should be noted that \$1,036,400 total expenditure for the "Distribution of Foodstuffs and Nutritional Supplements" really applies to the feeding programs. This leaves approximately \$7 million expended annually in projects attacking root causes of hunger. Of this amount, 33 percent is spent on maternal and child clinics alone, whereas another 33 percent goes into agricultural projects. Educational projects (including nursing training) receive about 22 percent and other projects which could be either rural or urban receive only 12 percent of the total amount.

Likewise with numbers of capital grants, maternal and child clinics received the greatest proportion (20 percent) with nursing and nursing aid courses (15 percent) and rural service centers (10 percent). For manufacture of or improvement of productive equipment, only one capital grant is reported.

Personnel totals

From the replies it was learned that 1,624 expatriate personnel supported by American funds are engaged in the kind of work defined by the questionnaire as combating world hunger. Of these, 151, or nearly 10 percent, are involved in distribution of foodstuffs and the rest in projects which attack the root causes of hunger.

It should be noted that practically all those engaged in the rural development work of the churches perform a variety of duties. Even the 151 singled out above as being involved in feeding programs do not devote full time to this one kind of work. Also, it is remembered that many thousands of salaried and volunteer local national workers are copartners with all of these efforts and it is on their shoulders that much of the work falls.

Personnel complements by projects

The 1,624 expatriate personnel referred to above work in different kinds of situations as far as staffing and administrative responsibility is concerned. Of these 356 work singly (that is, being the only foreign personnel involved). There are 314 instances involving 2 to 3 persons and 145 where 4 or more are engaged. The many indigenous personnel who cooperate in this work are not numbered.

A quick look at the staffing patterns by country indicates several things. The individual countries having the greatest number of expatriates in this kind of work are: Congo (Léopoldville), Liberia, Tanzania, Hong Kong, India, Korea, the Philippines, Brazil, and Mexico. The same countries rank high in one-man and two- to three-man projects, except for the Philippines where the one-man project is the rule. The countries reporting a substantial number of projects with multiple staffs are: Congo (Léopoldville), Ethiopia, Nigeria, India, Korea, Brazil, and Mexico.

The types of projects occupying the greatest number of expatriate personnel, in order are: Nursing or nursing aid courses, maternal and child clinics, distribution of foodstuffs and nutritional supplements, improved methods of cultivation and animal husbandry, rural centers and extension services, and academic work in agriculture and home economics. When the last three types are combined, it is clear that these major agricultural activities together occupy more personnel than any other single anti-hunger activity, and an equal number to that occupied in nursing education and maternal child welfare together.

Agricultural schools, probably the earliest form of church aid to food production, still occupy a prominent place in the claims on personnel though it is now equaled by the claims on workers in urban welfare and development. The teaching of technical degree courses occupies very few expatriate churchworkers today. Only the manufacture of productive equipment occupies less.

Patterns of administration

Not all of those who returned the questionnaires checked the item of administrative relationship with local church or council, but of those that did, 50 percent indicated that the work was administered locally by responsible church bodies or

committees or councils. The U.S. supporting agency administers 20 percent of the projects, and 30 percent have worked out a joint arrangement whereby both the supporting agency and the local body cooperate in directing the work.

From the figures it can be said that where there are single person projects; that is, one missionary probably working with a number of national workers—the work is more likely to be locally administered. The largest numbers of expatriate personnel are listed as being Korea and India and in the latter, the largest amount of the work is administered by local church or council. The countries in which the pattern tends toward U.S. administered work are: Liberia, Somali Republic, Laos, British Honduras, El Salvador, Honduras, Surinam, Greece, Iran, Poland, and Turkey.

From the project approach it can also be seen that single-person projects tend more generally to be administered by local church bodies. Improved roads, transport, and marketing is the one example of a type of work generally administered by the supporting agency in the United States. On the other side, maternal and child clinics and youth projects (4-H Clubs) are most frequently administered locally. The information is useful for program analysis and program counsel with individual agencies.

Training of personnel to combat hunger

It will be fairly obvious to persons familiar with the professional training of missionaries that the figures for expatriate personnel are not complete for each type of training listed. Even though there are gaps in the reporting, it is clear that the trained medical personnel exceeds the agricultural. If the personnel in the first 5 (or agricultural) classifications is totaled, the figure of 401 for both men and women is larger than Dr. L. W. Moomaw's 1963 estimate of 345 agricultural missionaries around the world.¹ This may indicate a true rise in the number of such workers, considering that CWS had added overseas staff with training in these fields in recent years.

There are a hundred more men (543) than women (434) with professional training or competence in these fields. However, even though there are 115 prepared to work in home economics and nutrition, it is only in the past 6 months that the NCC/USA has had a professional staff person giving guidance in this field.

When one looks at the number of nationals trained abroad with the use of American funds, it is obvious that training in the medical professions has far exceeded that in areas related to agriculture. Very few nationals have been trained or are being trained in the fields of extension work, rural sociology, or cooperatives—none from Latin America or the Near East. Ten extension workers and eleven agriculturists are in training for Africa, and most of them are from Ethiopia. Twelve women are being trained in home economics or nutrition.

The number of persons presently studying abroad under church sponsorship in all rural sciences is reported to be only 42 as compared to 650 being trained in medicine. Comparing the annual expenditures for overseas training of foreign nationals (\$157,420) with the total expenditure of the churches (\$8,030,000) in fighting hunger, one sees that less than 2 percent of the total is going for such training.

Effectiveness of projects in alleviating hunger

Two attempts at evaluative statements were made in the questionnaire, both listed as optional and both omitted in many of the responses. It was asked that each project be checked as to whether it was very effective, normally effective, or of little effect in alleviating hunger. Ninety-eight percent of the replies fell into either very effective or normally effective groups, with 30 percent being marked as "very effective."

Since the number of responses were few and scattered, a tabular presentation of the reporting by country has not been given. However, the "little effective" responses were considerably greater in Latin America than in any other area. Latin America also registered less projects as "very effective."

Using the questionnaires which were checked, the way in which each project was evaluated was totaled for the three variations of effectiveness and percentages calculated for each variation. By arranging the projects according to the percentages of the "normally effective" column with the smaller percentages at

¹ Moomaw, I. W., "To Hunger No More," Friendship Press, 1963.

the top of the list and the larger percentages at the bottom, it was possible to arrive at an index of the effectiveness.

Of significance to the validity of the evaluative ratings is the number of returns for each project category. Outstanding in the number of times mentioned in the evaluation are "Maternal and Child Clinics." About equal numbers of responses came in for "Distribution of Foodstuffs and Nutritional Supplements," "Rural Service Centers and Extension Work," and "Improved Methods of Cultivation and Animal Husbandry." However, there seems to be great variation among these as to relative effectiveness, with "Distribution of Foodstuffs and Nutritional Supplements" receiving the lowest rating in effectiveness.

The items "Degree Courses (including teacher training) in these fields" and "Manufacture or Improvement of Productive Equipment" were few in number and the latter did not rate much attention with respect to personnel, funds, or capital grants, though the projects in operation were highly evaluated as to their effectiveness.

Projects in "Informal, Noncurricular Courses in Education in Foods and Nutrition" and "Health or Nutrition Education as Part of Feeding Program" appear in only a few places and were rated as only normally effective. Of course, there would be a fair amount of nutrition education in the "Nursing or Nursing Aid Courses," which come fifth on the list of frequency in projects. The question still remains as to how or whether the education given to these workers gets transmitted to the mother and child who need it.

The fact that maternal and child clinics are so highly rated gives hope that nutritional information, so badly needed, is imparted through these avenues. It is encouraging to see how widespread, well supported, well manned, and appreciated is the work of maternal and child clinics, especially in the light of recent concern over the vulnerability of the preschool child to permanent damage from malnutrition. In the December 1965 State Department Newsletter, John F. Wood, Public Affairs Adviser, Food for Peace, says:

"Every year malnutrition literally kills almost half the children born in many developing countries—before they reach the age of 6. They die not of starvation but of ordinary childhood diseases which they are too weak to resist.

"Recent research has also found that malnutrition can permanently retard physical and mental growth among those fortunate enough to survive. Thus, malnutrition has suddenly been recognized in a context which goes far beyond moral and humanitarian considerations. It is a basic obstacle to the entire economic and social development process."

Opinions submitted on success and failure

Opinions were solicited on an "Optional" sheet (see annex II) as to reasons for the success of the projects which were considered most effective in combating hunger. From the 25 who took time to reply, the reasons given can be grouped as follows (the numbers following each comment indicate the number of people who said this):

(1) Its success depends on the kind of project undertaken. It is more likely to be successful if it—

(a) Ministers to recognized needs at grassroots level (3).

(b) Encourages self-help or financial independence (3).

(c) Involves local people in practical everyday work they can understand and after some help can carry on by themselves (2).

(d) Is a pilot project, demonstrating improved methods and "gain" to the family (2).

(e) Involves direct rehabilitation of those incapable of self-support, such as widows, orphans (1).

(f) Is changing attitudes toward caring for animals and raising food (1).

(2) It depends on the kind of management or personnel involved; the desirable qualities being—

(a) Well trained indigenous leadership (2).

(b) Dedicated personnel (3) working out of love for Christ (1).

(c) Witness of Christian treatment and caring (1).

(d) Leadership which can inspire cooperation of local people (1).

(e) Proper foreign leadership (1).

(3) It depends on the climate of the situation—some factors for success being—

(a) Local government endorsement and assistance (2).

(b) Extent of the need—some projects succeed simply because need is so great (1).

(c) Maturation of the project (1).

(d) Changes in policy; for example, improvement was noted when kinds of Public Law 480 foods were changed to those more acceptable to local people (1).

General comments on success were:

Social and preventive medicine helps make people aware of nutrition's blight on man's productive capacity.

A basic difficulty is to finance the changes and improved practices a farmer would now want to introduce.

Baby clinics with short courses for mothers have given excellent results.

The least effective projects were reported as those which—

(a) Are unrelated to the daily experience of the average national and in which, because of his low economic standing, he cannot have a part (1).

(b) Lack planning or clear objectives (2), or cooperation or involvement of local churches (4).

(c) Lack funds (1), or trained personnel (3).

(d) Are "giveaway" programs (especially "family feeding" under title III of Public Law 480) (3).

Projects seen as offering future opportunity

Projects not now being carried on which seem to offer greatest opportunity for doing effective work on the basic causes of hunger can be grouped as follows:

(1) Proper and well-controlled training in family planning (3).

(2) Programs with small livestock: bees, chicks, rabbits (1); fishponds or fishing industry (2); veterinary medicine (1) leading to introduction of larger livestock (1).

(3) Agricultural extension (3) especially if supplementing that done by the Government (1).

(4) Land reclamation or irrigation (1); access roads (1); financing or agricultural credit without corruption (2); warehousing (1); modern farm machinery with adequate instruction (2).

(5) Improved agricultural methods with special emphasis on improvement of nutritious crops such as soya and peanuts (2); fertilizers (3); pesticides (2); oil processing and utilization of peanut cakes (1).

(6) Expansion of cottage industries and handicrafts, especially for off seasons in rural areas (1); vocational training (1).

(7) Preventive medical care and training through rural health clinics (3); teaching nutrition to rural women (1).

(8) More "food for work" projects using title III Public Law 480 foods (2).

Some opinions on feeding programs

The few replies received to that part of the questionnaire requesting the views of agencies engaged in feeding programs were remarkably consistent. The main reasons for successful operations were identified as the close cooperation received from foreign church groups and the relative efficiency of distributing food to institutions, as compared to "family feeding" which is susceptible to many abuses and diversions from needy recipients. The opposite situations were deemed principally accountable for failures, though some mention was also made of the uncontrollable impediments to shipments, owing to political and economic events. "Food for work" projects under title II and (since the end of 1963) title III were singled out as those offering the greatest promise of combining the alleviation of immediate need with self-help programs to reduce the basic causes of hunger—a view which is shared by U.S. Government departments.

No opinions were expressed as to the optimum percentage of service resources that should be obtained from the U.S. Government, to insure that the churches do not become unduly dependent on such support. It may be noted, however, that in 1963 and 1964 the percentages of total CWS program expenditures represented by Government resources were 59 percent and 61 percent, respectively. This is lower than the 66 percent maximum ratio recommended by the NCC general board resolution of December 1964.

Some respondents pointed out that the existence of feeding programs provided an administrative base to assist foreign churches and, in some cases, foreign governments to engage in various projects of rural development that would otherwise be beyond their means. One respondent commented that "programs much larger in scale, with Government funds, are imperative if the problems are to be solved on a national or international basis."

VI. AGENCIES REPORTING GENERAL WORK IN THE FIELD

The following agencies and institutions responded with general information, but without measurable data in terms of the questionnaire:

Japan International Christian University Foundation, Inc.—The foundation reported courses in agriculture and rural and urban sociology coming under the purview of the survey, but could not separate out the amount of budget or personnel devoted exclusively to this work.

DATA International.—The reply states: "We do not originate projects, but rather supply technical assistance to Americans residing at the village level to help others help themselves. We estimate roughly an average cost of \$300 per project and we currently process 1,000 projects per year. Principal users of the service are missionaries and Peace Corps volunteers."

Young Women's Christian Association.—It is indicated that while money from the YWCA of the United States does go into supporting the work of the YWCA in other countries, there is no way of sorting out the emphasis for which it is used in any particular country. Their reporting letter says: "All national YWCA's are autonomous * * * many of the categories * * * would not be applicable * * * though there is some agricultural work done and a great deal of nutrition work done by YWCA's around the world. There is a great interest in health education, in child care, and there are some child clinics."

United Church Women.—The staff reports that "during 1964-65 (United Church Women) has not had direct involvement in overseas projects related to eradicating root causes of hunger." The report says, however, "Our 1965 World Community Day project is putting \$30,000 into a project which will place a woman staff member on the Church World Service mobile team for community development in rural southern Chile and Haiti. While the men work in cooperatives on reforestation and community management, our staff person will work with the women of the villages in nutrition, child care, hygiene, and family planning. United Church Women chooses a similar project some place in the world related to the development and training of women each year. We do not administer these ourselves, but work through some other agency already on the field. Our 1966 theme will focus on world poverty and we are using Roger's Poverty on a Small Planet as our study book."

United Board for Christian Higher Education in Asia.—Is, as the name implies, primarily concerned with education, so that its direct contribution in the field of world hunger is limited. "Projects (receiving grants) in the Philippines have to do with a community development program which takes in a number of areas related to improvement of crops, animal husbandry, and the like. It would be difficult however to break down our contribution into the various units, so it is listed under agricultural. Under education are listed approximate contributions to the departments of agriculture and home economics carried on in the university's curriculum. These courses appear to be primarily related to improved production of food.

"While there are various courses in other institutions (economics, social work, medicine, and nursing, for example) which may make some contribution toward eradicating root causes of hunger, it is impossible to arrive at significant figures on the contributions to these."

VII. SUMMARY AND CONCLUSIONS*

Some of the following observations come directly out of the present survey of major Protestant efforts to combat world hunger. Others come from additional data which has come to light in the course of the study, but which is not included in the original scope of the inquiry. Conclusions must be tentative pending further analysis of the data with the agencies whose programs were studied. The division of overseas ministries of the National Council of Churches stands ready to assist any Protestant group in further review and planning of its own effort in the light of the information gathered and presented in this survey. It is believed that the problem of world hunger and the churches' response to it deserves much more support and scrutiny by Christians now.

Early in the study, it became evident that it is impossible to get a complete and clear picture of the Protestant effort to combat world hunger. Even after considerable pretesting of the survey questionnaire, agencies found difficulty in drawing from their own records the information needed in order to measure such efforts. This probably indicates that the all-of-life approach to people overseas

*In the interest of brevity, tables 1-11 (pp. 24-54) have been omitted.

has caused Protestant church agencies to merge a variety of efforts into a single, comprehensive push toward abundance in the broadest material and spiritual terms. Thus, the combating of world hunger, as such, is not seen as a clear and identifiable program by most Protestant agencies. The exception would seem to be the case of Church World Service and allied denominational service agencies whose mandates have tended to keep the feeding component of their programs clear and dominant. This more limited program focus makes measurement and evaluation easier.

When the value of food and food supplements purchased and donated by the churches is added to the operational costs of all feeding programs, it seems clear that the Protestant churches studied spent approximately \$7 million last year in feeding programs. A similar amount, just under \$7 million, was spent annually in Protestant programs aimed at attacking root causes of hunger. Both are necessary. Under certain circumstances, one approach is probably more appropriate than the other. The questions of when to feed and when to help people produce, how much to spend on distribution and how much on nutrition education, are urgent questions. It seems important to find more ways to use food as a tool for development and to devise more rapid and efficient means for helping people to improve their own production and use of food. Recent U.S. Government actions and future plans recognize the importance of both food programs and rural development in attacking the problem of world hunger.

The emphasis in Protestant church feeding programs has shifted notably toward institutional feeding, especially school lunches. A shift seems to be coming in medical programs now toward more emphasis on maternal and child care and on family planning. This is in keeping with the most recent priority objectives established by several Government agencies. The question is whether either the voluntary agencies (including the churches) or the Government will be able to shift program emphases fast enough to keep pace with research findings about the permanent mental, physical, and emotional disabilities caused by malnourishment in children.

It is clear that the value of food donated and purchased by the Protestant churches equals only one-sixteenth of the value of supplies received by the same churches from the U.S. Government for distribution. The dollar outlay for conducting feeding programs is only one thirty-second of the value of Government food distributed in fiscal year 1965. These facts raise at least two questions: Could the churches effectively handle much larger amounts of Government resources when American farmers begin to produce in abundance for the needs of the world? Or, on the other hand, in case Government food supplies should be drastically reduced or found to be more of a deterrent than an aid to voluntary efforts in international development, then how and with what resources would the churches be able to keep faith with the hungry? This question becomes more serious in view of the fact that relatively few church resources, except for Government-donated foods, are presently devoted to fighting hunger.

The survey reveals that, apart from feeding programs, two-thirds of the work reported is being carried out unilaterally by denominational boards and agencies, while only one-third is done in cooperation with other U.S. Protestant bodies. The administration and decisionmaking power in church antihunger programs is shifting from U.S. agencies (20 percent) to overseas church bodies (50 percent) or to some kind of partnership between the two (30 percent). This seems both important and urgent if "food with dignity" is the goal. However, it seems strange, in view of this shifting responsibility, that not more than one-tenth of the church resources spent in fighting hunger is going into activities clearly designed to train national leadership. It may be significant for the war on hunger that, of the thousands of overseas students, only 42 are reported as currently receiving church scholarships in agriculture and related fields.

The survey has tended to bring into the open a kind of hesitance which Protestant Christians feel when focusing attention on man's material existence. This may stem from an earlier idea that the spiritual and physical can exist separately. It may be sheer fright at the enormity of the need for food, in order to keep whole sectors of the world's people from slipping into subhuman existence. Every day, new and more disturbing facts about world hunger appear as they affect the march of current events. It is very difficult for the people of well-fed nations to understand hunger in terms of persons much like themselves and their neighbors.

It is also difficult, even impossible, for the present survey to picture the hope which is engendered in people by well-conceived and sympathetic efforts to combat world hunger. It is hoped that learning about these efforts will help convince

Christians that food with dignity is both possible and necessary within God's plan for all men; also, that the Protestant churches, working with many others, can help to make it a reality.

ANNEX I

NATIONAL COUNCIL OF THE CHURCHES OF CHRIST IN THE UNITED STATES OF AMERICA
RESOLUTION ON WORLD HUNGER ADOPTED BY THE GENERAL BOARD ON JUNE 3, 1965*I. The broad context of economic and social development*

1. We see a tremendous urgency in matters of hunger and food, in relation to our Christian faith, to our concern with human values, to prospects for the world's food demand and supply during the next several years, and to basic economic and social development. Food is and will continue to be a key issue, and even more so if the United States continues a policy of relatively decreasing production in agriculture. Unless the United States, with its outstanding capacities and world responsibilities, develops new concepts of larger production for programs related to world needs, the predicted widespread, acute famine in some areas of the world in the next few years will become more grim. Even more important is U.S. cooperation in helping other nations to develop their own food production and supplies. Both in the sharing of food and in concerted efforts to improve food production, it is imperative that the United States work closely with other countries in building up the already existing international programs and agencies. We must address ourselves as churches and as a nation to these and to larger related concepts and programs, even as we take first steps such as embodied in the resolution on world hunger.

2. While specialized emphases can be useful in the various sectors of development, the largest need, in our judgment, is better integration of the interrelated sectors in an overall strategy of development, particularly in view of the new international focus through the United Nations on trade and development.

3. Manifold human needs confront the whole human family. These needs can be met basically and soundly only through fundamental world economic and social development. Such development comprises a highly complex set of interrelated factors involving all dimensions of life such as the economic, social, political, demographic, cultural, even the military, and most profoundly the moral and spiritual. This process must also be internationally conceived with all nations willing to participate taking upon themselves both corporately and individually the fullest possible cooperative initiative and responsibility. Further, these problems are so vast that no limited campaign or crusade can be expected to resolve them, although such efforts can call attention to some issues and to the fact that they demand basic, long-term, substantial commitment for the foreseeable future. Some of the more optimistic leaders in this field predict that, if we substantially increase what is now being done in economic and social development, and deal adequately with vast population problems, we may possibly look forward to a world relatively free from hunger, poverty, illiteracy and obviously conquerable diseases by the end of the 20th century. But such a goal will demand considerably more commitment by all the nations of the world than is presently even in prospect, both in time concept and in magnitude.

4. All the above considerations urgently demand a strategy of world economic and social development. From the past 20 years of experience it is becoming clear that the vast complex of interrelated international realities demand a concerted, strategic approach by the international community and by each nation in cooperation. The World Council of Churches through its Commission of the Churches on International Affairs has called for such strategic thinking and has set forth some major elements of it. We feel that the time has come for the National Council of Churches to devote study in depth and in breadth to further strategic thinking in this vast field of world economic and social development. We further hold that such undertaking must be done in fullest possible cooperation with responsible leadership of other religious groups. We have begun this process. Meanwhile, as one of the first steps, we adopt a resolution for education and action on world hunger.

II. The situation with respect to world hunger

1. Two billion persons (two-thirds of the world's population) live in areas of nutritional deficiency. An estimated half of these, 1 billion human beings, suffer daily or recurrent crippling hunger. The explosive population growth, in contrast with generally slow increases in agricultural production, points toward

more widespread human suffering from hunger in the years ahead. Other unfavorable factors are the prejudice of cultural patterns, the pressures of trade and finance, political instability in Asia, Africa, and Latin America, natural disasters, and the sheer complexity of concerted international action on a problem where no nation acting singly can find a solution. Time is running out.

2. Initial but limited steps are underway to meet the problem. The United Nations Food and Agriculture Organization has been sponsoring a freedom from hunger campaign to awaken the conscience of mankind. It publishes World Food Survey and has started a small experimental world food program. A first World Food Congress has been held and a second planned for 1967 or 1968. The U.N. Population Commission reports the explosive population pressures and prospects which show the desperate need for international and cooperative national programs of assistance on population problems.

3. In this country the U.S. Government has made substantial contributions in recent years toward the world food supply through various mutual aid measures, sales for national currencies, and donations to the needy. In addition, the U.S. Government through its foreign aid program has been spending considerable sums in rural and agricultural technical assistance; and it has supported modestly the various related U.N. programs. The United States still confronts the problem, however, of shifting the emphasis in domestic agricultural policy from restriction of acreage and production and from surplus disposal toward full utilization of agricultural productive capacity for world food needs. In the business sector production of fertilizers, seeds, and farm machinery has been expanding along with steady growth in the food processing and service industry.

4. The churches and voluntary agencies (the World Council of Churches, the Roman Catholic Church, the National Council of the Churches of Christ in the United States of America, the members of the American Council of Voluntary Agencies for Foreign Service, and many other groups) have been expressing their mounting concern for the hungry and conducting sizable relief and related self-help programs.

5. All these steps, however—intergovernmental, governmental, business, and voluntary agency—are fragmented and inadequate. Great though the advance has been in technical skills and productive capacity, the growth in population and in need races ahead. This tragic paradox is the heart of the problem, for, despite all that is being done, it seems that our very ability to conserve and enlarge life itself only causes more misery in the end. The situation is threatening to get out of hand. On this our gaze is fixed; and to this the attention of the nations of the world and their determined will must be turned.

6. People now dimly realize that, for the first time in history, the capabilities and techniques exist to prevent the warping of lives and the deaths caused by hunger. The freedom from hunger campaign started a framework which, if expanded and developed, would enable the whole world to join in turning the tide. Only a coordinated program, recognizing the interrelationships of aid and trade and development and attacking the causes of hunger and enlisting the knowledge, will, and resources of every nation and of all the relevant agencies of government, commerce, industry, the universities, the press, the churches—indeed every major human activity—will suffice. We do not pretend to suggest that U.S. resources alone can meet more than a fraction of the need. Nevertheless, thankfully recognizing all that has been done, it is our conviction as Christians and citizens of the United States that responsibility now lies on the people of this country to take every step we can, in partnership with all others who will join, to mount a massive, unified attack on this enemy of human decency, of life itself. The universal human conscience will not permit us to be silent nor fail to offer every skill and strength we have. Here lies the opportunity for humanitarian statesmanship, so to join forces as to reverse this drift toward disaster and do together what none can do separately. Men and women everywhere in all their varied pursuits, oppressed by the bleak prospects of the cold war, should embrace with relief and joy the affirmative purpose of moving toward the elimination of hunger from the world in a new cooperative enterprise.

7. For Christians the issue is clear and final. For us the issue is sharpened by the fact that for the most part the world's resources lie in areas where Christians predominate, and the world's needs in areas where Christians are fewest. For Christians the holy gifts of knowledge and scientific skill and the needs of our neighbors lay a mandate on our conscience to which only one answer is possible. Yet we know that we are not alone either in pity or in anger at this misery. The time has fully come when the peoples and governments of the world must, together, take sides for man against the pain and death caused by our failure to

use our knowledge aright, and to order our affairs so that human need and resources can go hand in hand.

8. From a material point of view, the role of the churches is small by comparison with the size of commercial and governmental activities in food and agriculture. In fact, the weight of decision clearly lies with government. Initiative by governments is essential in the marshaling of cooperative action.

III. The resolution

1. The National Council of the Churches of Christ in the U.S.A. therefore calls on the U.S. Government, acting through the President and the Congress, to take the initiative promptly in cooperation with other governments and international agencies for international action which will move toward making freedom from hunger a reality, along the lines of the following proposals:

(a) Declare as a matter of high policy that the United States is prepared to make the elimination of world hunger a major objective of our Nation working with other governments and intends to work with other governments and organizations to this end. Include as the principal components of this policy (1) that peoples everywhere should be urged to produce abundantly the basic staples of life, with appropriate regard for nutritional needs; (2) that such staples should be accessible to all without regard to race, color, creed, or politics, or to cold war considerations; (3) that family planning must be emphasized as of equal importance with food production; (4) that the dominant framework of action should be international and/or regional, since no single nation can be truly self-sufficient; (5) that special additional measures must be taken to meet the food needs of the hungry until such time as world agricultural production is greatly increased and the balance is in sight between population growth and food supply; and (6) that along with expansion of agricultural production, industrial and economic growth must take place if the world is to be fed.

(b) Seek, in concert with other nations, to have a comprehensive and effective international undertaking to determine, on a country-by-country and regional basis what can and should be done to meet world food needs both for the short run and the long run. This undertaking might focus upon a specially designed international conference of governmental and nongovernmental representatives and it should, in any case, include the fullest possible use of FAO, its responsible bodies, the continuing freedom from hunger campaign, and the next World Food Congress. Qualified representatives from all sectors of human activity with interests in food, agriculture, fisheries, and population problems should be included: public and private; business and voluntary agency; production, processing, transportation, industry, commerce; education; finance; and the mass media.

(c) Shift the present emphasis in U.S. domestic farm policy from one of restriction and surplus disposal, to one of utilization of agriculture productive capacity, increasingly directed towards world nutritional needs.

(d) In recognition of the necessity of family planning as an integral part of the present paradoxical situation, increase support of governmental and private programs in this field, utilizing new means that now exist, which from the point of view of technology and cost, may provide the opportunity of checking the population growth.

(e) Expand international programs in agricultural production, extension services, food processing and distribution, as well as in general education. There is need to expand training facilities at home and abroad, and to adapt more of our courses in higher institutions to the needs abroad, not only for the training of the experts, but for young people of the United States interested in service abroad, both in governmental programs like the Peace Corps, and also under nongovernmental auspices including religious agencies.

(f) Strengthen U.S. support of the U.N. Food and Agriculture Organization, the U.N. Population Commission and other related international agencies in fulfillment of the objectives of the currently proclaimed International Cooperation Year, the World Food Congress of 1963, and other related efforts. Support in a much more substantial and significant way the renewed campaign for Freedom From Hunger being carried out through FAO through 1970. The world food program, started in 1963 for a 3-year trial, should be continued and expanded very greatly if it is to make a major contribution toward meeting world hunger needs. We urge that UNFAO develop further its role as a central clearing house of information as to world nutritional needs and plans and progress toward meeting them.

(g) Revise basic legislation, including Public Law 480, to authorize the provision of more food of more varied character for an adequate diet for those who

do not have enough now, to stimulate agricultural production, including the conservation and development of fisheries, everywhere for the longer run and to relate these objectives to the broad considerations of economic development and trade policy. Provisions should be made to enable trained personnel in Government service to serve abroad under national and international auspices for prolonged periods of time, without losing their seniority pension rights or other benefits.

(h) As the first step toward U.S. participation in such integrated action on a world scale, convoke a preliminary consultation in Washington, also of governmental and nongovernmental representatives from as many related fields as possible, to prepare for consideration at the international conference, outlines of requirements and resources, with particular reference to U.S. capabilities, U.S. agricultural policy in relation to world needs, and consideration of Public Law 480.

(i) Should international agreement lag unduly, proceed with whatever action may be feasible on these matters, in the conviction that the needs of the hungry are so urgent as not to permit delay, and that others will come to a similar conviction as the situation deteriorates.

2. With respect to the churches, the council:

(a) Authorizes its president, in company with other council and church leaders, to present these proposals to the President and the Congress.

(b) Calls upon its member churches and their full constituency, lay and clerical, to support these proposals by letters to the President and the Congress, and by other means, and to review their overseas activities to the end of increasing, to the greatest extent practicable, efforts to help meet world hunger.

(c) Urges the members of the churches to volunteer and give of themselves in preparation and service for the manifold tasks involved in eliminating hunger with a sense of Christian commitment in fulfilling one of the moral obligations laid upon the Christian community today.

(d) Requests the World Council of Churches similarly to call upon its member churches to urge their governments to participate in this initiative, and to take all practicable actions in their own church programs to share in the enterprise.

(e) Urges the Division of Overseas Ministries to press on with its analysis of U.S. church programs abroad with the view of making recommendations as to how the churches may, more effectively and more ecumenically, play their proper role in meeting the needs of the hungry.

(f) Authorizes the Division of Overseas Ministries to enter into consultation and negotiation with representatives of the Roman Catholic Church, for the purpose of more effective and ecumenical Christian relief, welfare, and service activities throughout the world, including joint operations where appropriate. In this connection, close coordination should be maintained with the World Council of Churches in its current discussions with representatives of the Vatican on these and related matters. Appropriate coordination with churches not members of the National Council and with Jewish and other voluntary agencies, is also encouraged.

Appendix I. Relevant NCCUSA Policy Background

1. General board action of June 4, 1958, "Ethical Goals for Agricultural Policy."
2. General assembly action of December 9, 1960, "Ethical Issues in the International Age of Agriculture."
3. World Council of Churches central committee action in 1960 to support the freedom-from-hunger campaign.
4. General board action of February 23, 1961, "Responsible Parenthood."
5. Action of the general board, Des Moines, December 3, 1964: "That the general board requests the division of overseas ministries in cooperation with other units of the council to study the problem of hunger with the intent of bringing to the National Council of Churches at an early date a report with recommendations as to how the churches in cooperation with government and other agencies may more adequately and ecumenically participate in the critical task of meeting the needs of the hungry people of the world."
6. Action of the DOM program board, February 12, 1965: "The program board, having received the request of the general board in December concerning a report on world hunger and Christian responsibility, and a preliminary report and accompanying proposals from the staff, asks that these now be redrafted in the light of discussion, that an interim report be made to the general board in Portland, and authorized the executive committee of the

- program board to prepare a report and recommendations for the general board for action in June."
7. Action of the general board, February 25, 1965: "That the board receive the progress report of the DOM (on world hunger) and that the general board express its urgent request that the subject of 'The Churches and World Hunger' be presented again to the June, 1965 meeting of the board with proposals for specific action by the board at that time with the understanding that present policy of the council authorizes appropriate action to be taken by the division of overseas ministries and other units of the council in the intervening period."
 8. Action of the DOM executive committee, March 12, 1965: "That the executive committee approves in principle the resolution on world hunger and requests all members to make comments with regard to it, to be put into the hands of Mr. Farley. Staff is authorized to make a second draft, to be reviewed by a small committee, and the final draft then to be sent to the general board for its June meeting."

[Appendix II, a selected bibliography on world hunger, appears on p. 1131.]

ANNEX II

SURVEY QUESTIONNAIRE

MAJOR U.S. PROTESTANT EFFORTS TO COMBAT WORLD HUNGER

Introduction

An analysis of U.S. church-related efforts to combat endemic world hunger was attempted by this committee through an examination of published materials and listings. Unfortunately, the information that was obtainable lacked uniformity and left many gaps. Therefore, the following questionnaire has been devised to procure information about the efforts your church or organization is making.

We will make direct use of all the figures on all types of antihunger programs available to us through joint agencies such as Church World Service, Mennonite Central Committee, etc. Your contributions to these agencies need not be included here. Likewise, information on related programs of population control, literacy and literature, and audiovisual aids will be collected directly from committees of the division of overseas ministries which are working in these areas.

We have listed in this questionnaire various types of activities: agricultural, educational, and medical which are related to eradicating root causes of hunger. We are asking that you fill in the information by country which will give an indication of the extent of your involvement in these programs. You will note that part I of the questionnaire needs to be filled out for each country in which you have work. Part II, which may not be applicable to all agencies, is an attempt to obtain information concerning all nongovernmental food supplies sent abroad, and one page may be used for several countries.

We are asking your denomination to use the categories rather arbitrarily assigned here and to answer them as fully as possible from information available in your offices. Since in many denominations the types of activities carried on by mission and service agencies fall into the same categories, it may be necessary for both service and mission personnel to work with both part I and part II. It does not matter whether one person is assigned to gather all information from various departments or whether the task is parceled out to the separate departments of your office. So long as the same personnel and budget items do not appear twice, we will assume responsibility for sorting out whatever information you send. Please include (if appropriate) the contribution of your women's board or auxiliary.

PART I (Cont'd)

	PRESENT		PROJECTED-NEW					
	MEN	WOMEN	MEN	WOMEN	TRAINING COMPLETED		IN TRAINING NOW*	
					MEN	WOMEN	MEN	WOMEN
What is the total number of all your paid expatriate personnel in that country?					Number of nationals in these types of work having received or receiving scholarship help from you for training outside their countries in the fields listed below:			
What is the number of personnel involved in these projects? (The two numbers you list for "Present - men and women" should equal the total in column B on previous page.)								
How many of these have special training or major competence in:								
Agriculture								
Extension Work								
Rural Sociology								
Home Economics or Nutrition								
Cooperatives								
Nursing or nursing education								
Medicine								

*How much is being spent by you per year on scholarships for persons listed in this column? (approximate) \$ _____

What other denominations, if any, are involved with you in any of these projects? Please list _____

Are there any other important projects by United States church personnel in that country which come to your mind as attacking root causes of hunger, but which may not be directly or fully supported by you or a denominational agency? If so, please list _____

OPTIONAL (Part I)

Column F of the Questionnaire is our only attempt at evaluative statement. It is not to be considered as an evaluation of the project, but as an appraisal of effectiveness in relation to hunger.

It would also be helpful to gather informally any opinions or thoughts you would like to record regarding any areas not mentioned, or any aspects or phases of programs related to hunger which have come to mind as this data was gathered. The contents of this page or any additional page will not be quoted in any report, but used merely to indicate patterns of opinion. We are particularly interested in knowing:

1. What, in your judgment, makes your most effective present projects successful; and your ineffective projects unsuccessful?

2. What projects not now being carried on seem to you to offer greatest opportunity for doing effective work on the basic causes of hunger?

Organization

PART II - FEEDING PROGRAMS

Six Protestant agencies are engaged in the distribution of PL 480 commodities: Church World Service, Lutheran World Relief, Mennonite Central Committee, Seventh Day Adventist Welfare Service, Assemblies of God (Foreign Service Committee) and the National Association of Evangelicals (World Relief Commission). Government statistics for annual periods, by countries, are available concerning the volume, value, and types of recipients for such programs. Accordingly, it will not be necessary to request such data from any Protestant organizations.

We do need, however, the following information from *all* agencies, including the six named above, concerning the dollar values (to the nearest thousand dollars) of shipments of *non-government* foodstuffs and food supplements (ranging from grains and flour to sugar, meats, and high protein products) as well as amounts of cash sent abroad for local purchases of such items.

- Please provide data for any convenient *annual* period (Calendar Year 1964 or Fiscal Year 1965). If firm figures are not readily available, estimates are acceptable. Use extra sheets if required.

AREAS* AND COUNTRIES	NON-GOVERNMENT FOODS \$000	CASH REMITTANCES FOR FOOD - \$000
AFRICA -		

*Please arrange countries by areas: Africa, Asia, Latin America, Near East, Europe, and Pacific.

Appendix II. A Selected Bibliography on World Hunger

1. James Norris statement in Vatican Council II.
2. Declaration of the World Food Congress, 1963.
3. Address by Mr. B. R. Sen, director general of the FAO, to the plenary session of the 38th International Eucharistic Congress, Bombay, India, December 1964; and to the U.N. Population Commission, New York, March 24, 1965.
4. Edward Rogers, "Poverty on a Small Planet," the Macmillan Co., New York, 1965.
5. "Are We Our Brother's Keeper?" by Barbara Ward in *Christianity and Crisis*, page 3, volume XXV, No. 1, February 8, 1965.
6. The Visser 't Hooft statement before the WCC Central Committee at Enugu, Nigeria, January 1965: "In our times the basic problem of overcoming hunger or poverty and of social justice has become the issue which dominates all other issues and on the solution of which the future of mankind depends."
7. The Commonweal, November 13, 1964 issue, on "World Poverty and the Christian."
8. The Friends Committee for National Legislation. "Washington Newsletter," November 1964.
9. Vatican Council II, "De Ecclesia."
10. "Closing the Hunger Gap," page 6, *The New Republic*, January 30, 1965.
11. Jonathan Garst, "No Need for Hunger."
12. Ira Moomaw, "To Hunger No More," New York, Friendship Press, 1963.
13. Senator George McGovern, "War Against Want," New York, Walker, 1964.
14. Paul and Willian Paddock, "Hungry Nations," 1964.
15. Walter Lippmann, "The Great Revolution," lecture at U.N. for International Cooperation Year, March 1, 1965.

ANNEX III

LIST OF AGENCIES RECEIVING THE SURVEY QUESTIONNAIRE

Agricultural Missions, Inc.	Heifer Project, Inc.
Allahabad Agricultural Institute, Inc.	Holy Cross Liberian Mission
American Associate Board of St. Christopher's College, Madras, Inc.	Hong Kong Interboard Committee
Assemblies of God, missions department and its foreign service committee	Interboard Committee for Christian Work in Japan
Associate Board of Women's Christian College, Madras, Inc.	Japan International Christian University Foundation, Inc.
American Baptist Home Mission Societies	Japanese Evangelical Missionary Society
American Baptist Foreign Mission Societies	Koinonia Foundation
Board of Foreign Missions, Baptist General Conference	Latin America Mission
Foreign Mission Board of the Southern Baptist Convention	Liebenzell Mission of U.S.A., Inc.
Lott Carey Baptist Foreign Mission Convention	Ludhiana Christian Medical College Board, U.S.A.
North American Baptist General Conference Missionary Society, Inc.	American Lutheran Church, Division of World Missions
Seventh Day Baptist General Conference Missionary Society	Lutheran Church in America, Board of World Missions
Board for Christian Work in Santo Domingo	Lutheran Orient Mission
Brazil Christian Mission	Board of Missions for Africa, Lutheran Church—Missouri Synod
Foreign Mission Commission, Church of the Brethren	Board for World Missions, Lutheran Church—Missouri Synod
Brethren Service Commission, Church of the Brethren	National Lutheran Council, Division of Lutheran World Federation Affairs, Department of World Missions Cooperation
China Inland Mission	Lutheran World Relief, Inc.
Christian Children's Fund	Santal Mission
Christian National's Evangelization Commission	Board for World Missions, Wisconsin Evangelical Lutheran Synod
Churches of God in North America, Board of Missions, Inc.	World Mission Prayer League
Missionary Board of the Church of God	General Conference Mennonite Church, Board of Missions
Congo Inland Mission	Eastern Mennonite Board of Missions and Charities
Congo Protestant Relief Agency	Mennonite Central Committee
Data International	Mennonite Board of Missions and Charities
Executive Council of the Episcopal Church, Overseas Department	Foreign Mission Board of the Primitive Methodist Church, U.S.A.
World Missions Department, Evangelical Covenant Church of America	General Missionary Board of the Free Methodist Church of North America
Division of World Mission, Evangelical United Brethren Church	World Division of the Board of Missions of the Methodist Church
Farms, Inc.	Methodist Committee for Overseas Relief
American Friends Service Committee	Missionary Aviation Fellowship
Board of Missions of California Yearly Meeting of Friends	Board of Foreign Missions of the Moravian Church in America, Inc.
Board of Missions Kansas Yearly Meeting of Friends	National Student Federation, Commission on World Mission
Friends United Meeting, Board of Missions	Okinawa Interboard Committee
Japan Committee of the Religious Society of Friends in Philadelphia	Oriental Missionary Society
Friends Foreign Missionary Society of Ohio yearly meeting	Pan Pacific Centers, Inc.
Good Shepherd Agricultural Mission	Philippines Interboard Committee
Grace Mission, Inc.	Board of Foreign Missions of the Cumberland Presbyterian Church
Gospel Missionary Union	Board of World Missions of the Presbyterian Church, U.S.

- Commission on Ecumenical Mission and Relations of the United Presbyterian Church, U.S.A.
- Ramabai Mukti Mission (American Council)
- Board of World Missions of the Reformed Church in America
- Board of Foreign Missions, Christian Reformed Church, and World Relief Committee, Christian Reformed Church
- Salvation Army
- Seventh-day Adventists, General Conference
- Seventh-day Adventists, Welfare Service
- Unitarian Universalist Service Committee, Inc.
- United Board for Christian Higher Education in Asia
- United Christian Missionary Society (Disciples of Christ)
- United Church Board for World Ministries, United Church of Christ
- United Church Women
- Vellore Christian Medical College Board, Inc.
- World-Wide Missions
- World Relief Commission, National Association of Evangelicals
- World Vision, Inc.
- Wycliffe Bible Translators, Inc.
- International Committee of the YMCA's of the United States and Canada
- National Board of the YWCA's in the U.S.A.

ANNEX IV

SELECTED LIST OF BOOKS, PERIODICALS, AND OTHER MATERIALS CONCERNING
WORLD HUNGER

UNITED NATIONS FAO PUBLICATIONS (ROME)

- World Food Congress: Washington, D.C., June 4-19, 1963, including plenary addresses: "Food for Increasing Millions" by K. G. Myrdal (Sweden), and "From Hunger to Plenty" by Murray D. Lincoln (U.S.A.).
- The State of Food and Agriculture: 1964 and 1965 editions.
- Thirteenth FAO Conference at Rome in November 1965: Report of the Second Freedom From Hunger Campaign Conference.
- Report on Results Achieved and Future Orientation of the Freedom from Hunger Campaign (including U.S. and other countries summaries).
- Six Billion To Feed: World Food Pamphlet No. 4, 1962.

UNITED NATIONS

- Provisional Report on World Population Prospects as Assessed in 1963. United Nations, New York, 1964.

U.S. GOVERNMENT PUBLICATIONS

- Pre-School Child Malnutrition: Primary Deterrent to Human Progress: Summary of an International Conference at Washington, D.C., December 7-11, 1964—National Academy of Sciences, January 1965.
- Congressional Record: "World Hunger and Food for Peace," speech by Senator Mondale (vol. III, No. 138, July 29, 1965) and "The Most Important War," speech by Senator McGovern (vol. III, No. 176, September 23, 1965).
- Doing a Better Job in Development: Speech by David E. Bell, Administrator of AID, at U.S. Commission for UNESCO Conference, November 1965.
- Overseas Programs of Private Nonprofit American Organizations: House of Representatives, Committee on Foreign Affairs, Subcommittee on International Organizations and Movements, Report No. 3, April 29, 1965.
- Report of the Committee on Agriculture and Food of the National Citizens' Commission on International Cooperation, White House Conference, November 1965.
- State Department Newsletter, December 1965: "Food for Peace: It Brings Hope and Life to Those in Need," John F. Wood, Public Affairs Officer, Food for Peace.
- Man, Land, and Food: Lester R. Brown, Economic Research Service, U.S. Department of Agriculture, November 1963.
- Changes in Agriculture in 26 Developing Nations, 1948 to 1963: Foreign Agricultural Economic Report No. 27, Economic Research Service U.S.D.A., November 1965.

World Population and Food Crisis: Hearing before the Consultative Subcommittee on Economic and Social Affairs of the Senate Committee on Foreign Relations: Statement of Thomas Ware, chairman, American Freedom from Hunger Foundation, June 29, 1965. This contains excellent graphic material. Obtainable through the American Freedom from Hunger Foundation or U.S. Government Printing Office.

CHRISTIAN CONSCIENCE AND ACTION

- The Commonweal:** "World Poverty and the Christian," volume XXXI, No. 2, November 13, 1964.
- Poverty on a Small Planet:** Edward Rogers, The Macmillan Co., New York, 1965.
- The Churches and Human Need:** Charles G. Chakerian, McCormick-Quarterly, volume XVII, No. 2, January 1964.
- Deep Furrows:** Ira W. Moomaw, New York: Agricultural Missions, Inc., 1957, 192 pages. Sets forth the goals and successful methods in working with village people.
- To Hunger No More, A Positive Reply to Human Need:** Ira W. Moomaw, New York: Friendship Press, 1963, 176 pages, \$1.95. A brief history of a century of progress in agricultural mission efforts and a handbook of methods based on the lessons learned.
- Crusade Against Hunger:** Ira W. Moomaw, New York: Harper & Row, 1966, \$3.95. Orville Freeman, Secretary of Agriculture, says of this book: " * * * (it) is a fascinating account of the beginnings of the war on hunger long before the crisis of too little food for too many people became apparent."
- Wealth and Want in One World:** A symposium edited by Muriel S. Webb, New York: Friendship Press. A symposium describing human beings, nations, and races of the world as they struggle with the problems presented by the economic extremes of affluence and poverty.
- This Is the Puzzle of Poverty:** Jeanette Struchen, New York: Friendship Press, \$0.85. Presents an overall view of poverty and contains warm, human-interest vignettes with pictures and graphs.
- Cooperation in Compassion, The Story of Church World Service:** Harold E. Fey, New York: Friendship Press, \$1.95. Shows the vastness and scope of Church World Service. An informative and heart-warming story.
- What Future for Foreign Aid?** I. W. Moomaw, New York: Friendship Press, \$0.65. Questions the Christian ethics of foreign aid given for political aims, not from compassion.
- Peace Corps and Christian Mission:** Roger D. Armstrong, New York: Friendship Press, \$1.75. Gives a critical appraisal of the Christian mission and what the churches can learn from the Peace Corps.
- Hope Rises From the Land:** Ralph Felton, New York: Friendship Press, 1955, 135 pages, \$2.50. This book includes gripping accounts of how agricultural missionaries work with distressed people toward a better way of life.
- The Pulpit and the Plow:** Ralph Felton, New York: Friendship Press, 1960, 169 pages, \$1.75. A study of the rural church at work around the world with special attention to critical concerns for land stewardship, cooperatives, literacy, and health.
- The Rich Nations and the Poor Nations:** Barbara Ward, New York: Norton and Company, 1963, 159 pages, \$1. Lucid and erudite analysis of the four revolutions facing the world today: equality, progress, population, technology—with emphasis on the importance of human values.
- The Rural Church and Training of Rural Ministers:** Report of a consultation called by the National Christian Council of India, Board of Theological Education, December 1963. Frank V. Price.
- The Village Pastor—His Work and Training for Tomorrow's World:** Edward K. Ziegler, New York: Agricultural Missions, Inc., 1959, 120 pages. While written for village pastors abroad, this book is packed with practical suggestions, experienced counsel, and inspiration for Christians everywhere.
- Procedures in Rural Reconstruction:** New York: Agricultural Missions, Inc., 1957, 31 pages. A report of a training course in rural reconstruction held at Berea College.
- The Christian Rural Fellowship Bulletin:** Published quarterly by the Christian Rural Fellowships, 475 Riverside Drive, New York, N.Y. 10027, room 624. (Especially "The Rural Church in Asia," by Frank Price, No. 241, Summer, 1965.)

- Better Field Programs, a Manual of Objectives and Procedures: Agricultural Missions, Inc., 475 Riverside Drive, New York, N.Y. 10027.
- Rural Welfare in a Revolutionary World, a guide to Christian participation: The Rural Missions Cooperating Committee, printed by Agricultural Missions, Inc., 475 Riverside Drive, New York, N.Y. 10027.
- World Poverty and the Christian Conscience: Speech by James J. Norris at Vatican Council II. Nov. 5, 1964.
- Freedom From Hunger—Challenge of the Century: Address delivered by Dr. B. R. Sen, Director General of FAO to the plenary session of the 38th International Eucharistic Congress in Bombay, India, Nov. 29, 1964.

OTHER

- Limestone: Quarterly publication of the National Limestone Institute, September 1965, containing:
- "The Problem of Hunger," B. R. Sen, page 8.
 - "World Hunger," Bishop Reuben Mueller, page 12.
 - "Hunger in the World * * * Who Cares?" G. Raymond Bodie and Donald D. Doremus, page 18.
- World Population and Food Supplies 1980: American Society of Agronomy special publication No. 6, February 1965. Four papers of a symposium presented at the annual meeting of the ASA, Kansas City, Mo., Nov. 17, 1964:
- "World Population Growth, Food Needs, and Production Problems," Lester R. Brown.
 - "World Population Determinants in the Future," Frank V. Notestein.
 - "Adapting Food Supplies and Processing Methods To Fit Nutrition Needs," Nevin S. Scrimshaw.
 - "Can We Produce Enough Food?" Kenneth L. Bachman with introductory and summary statements by Bryon T. Shaw.
- The Urgency of World Food Problems: Address delivered by Nevin S. Scrimshaw to the annual meeting of the American Freedom From Hunger Foundation, Washington, D.C., Oct. 18, 1965.
- North American Protestant Mission Agencies: Sixth edition, 1964, Missionary Research Library, 3041 Broadway, New York, N.Y. 10027.
- U.S. Nonprofit Organizations, Voluntary Agencies, Missions, and Foundations Participating in Technical Assistance Abroad: A directory, 1964, with supplement for 1965, published by Technical Assistance Information Clearinghouse (TAICH) of the American Council of Voluntary Agencies for Foreign Service, Inc.
- The Quiet Revolution: A call for action in world organization, International Minerals & Oils Corp., Skokie, Ill., 1965.
- National Seminar on U.S. Food Policy in Relation to World Hunger: Held in Estes Park, June 1965, sponsored by the Estes Park Center for Research and Education—American Freedom From Hunger Foundation, December 1965.
- Population Bulletin: Population Reference Bureau, Washington, D.C., October 1965.
- The Challenge of Hunger: I. W. Moomaw, Frederick A. Praeger, Inc., New York, 1966. A history and analysis of the U.S. foreign aid program.
- Bread From Stones: Golden anniversary symposium of Near East Foundation, Prentice-Hall, New Jersey, 1966 (hard cover, \$3; paperback, \$1.50).

ANNEX V

PRINCIPAL ABBREVIATIONS

GENERAL

- AID—Agency for International Development (U.S. official agency, part of State Department)
- CARE—Cooperative for American Relief Everywhere, Inc.
- CROP—Christian rural overseas program (CWS agency for community appeals)
- CRS—Catholic Relief Services
- CY—Calendar year
- FAO—Food and Agriculture Organization (United Nations agency)
- FY—Fiscal year (of U.S. Government: from July 1 to June 30; i.e., FY 1965 ends on June 30, 1965)
- PL—Public Law

U.N.—United Nations
 WCC—World Council of Churches

CHURCH

AOG—Assemblies of God (and its Foreign Service Committee)
 CWS—Church World Service (part of DOM)
 DOM—Division of Overseas Ministries (part of NCC—see below)
 EFMA—Evangelical Foreign Missions Association
 IFMA—Interdenominational Foreign Mission Association of North America
 LWR—Lutheran World Relief, Inc.
 MCC—Mennonite Central Committee
 NCC—National Council of the Churches of Christ in the U.S.A.
 SAWS—Seventh-day Adventist Welfare Service
 RAVEMCCO—Committee on Radio, Visual Education, and Mass Communication
 (part of DOM)
 WRC—World Relief Commission (of the National Association of Evangelicals)

A FIVE-POINT PROGRAM TO MEET THE WORLD FOOD AND POPULATION CRISIS

Senator GRUENING. One of the world's great public servants is Bill Draper, a man who has confronted the population challenge head on and who persists in this most important fight.

General Draper is the national chairman of the Population Crisis Committee which was founded last year. The committee's first national chairman, former Senator Kenneth Keating, of New York, testified before this subcommittee last Congress on July 21, 1965. His testimony appears on pages 734-759 in part 2-A of the population crisis hearings. General Draper also testified at the 1965 hearings on June 29, 1965. His testimony appears on pages 617-630. I had the pleasure of being present last month when Bill Draper addressed the National Press Club luncheon on May 2 and offered a five-point program to meet the world food and population crisis. I will place it in the hearing record at this time.

(The above-mentioned program follows:)

EXHIBIT 155

DRAPER RECOMMENDS FIVE-POINT PROGRAM TO MEET WORLD FOOD AND POPULATION CRISIS

(Press Release from Population Crisis Committee, Washington, D.C., May 2, 1966, and text of remarks)

WASHINGTON, D.C., May 2.—Gen. William H. Draper, Jr., former investment banker, Under Secretary of the Army, and currently national chairman of the Population Crisis Committee, today offered a five-point program to meet the world food and population crisis. Speaking at a luncheon of the National Press Club, General Draper urged that "one of the administration's top priorities" be given to "the stabilization of world population." "Otherwise," he warned, "disaster for the human race lies just ahead." He also urged U Thant and the United Nations to create an "action arm" to deal with population problems on a world-wide basis.

General Draper, who also serves as vice chairman of Planned Parenthood-World Population, proposed that—

1. "President Johnson and Secretary Rusk ask every one of our ambassadors all over the world to discuss the world population problem seriously with the head of every other government, as they recently were asked to explain our aims in South Vietnam, and with the same fanfare and dramatics."

2. "Our ambassadors suggest that all countries with a population problem try to reduce their rate of growth annually by one-tenth of 1 percent as the United States itself has done for the past 5 years. The result could be a drop in a decade of nearly 1 percent for the entire world."

3. "Our ambassadors stress the world's food deficits and suggest that every country, developed and underdeveloped alike, aim to accelerate its present rate of increase in food production by at least one-tenth of 1 percent a year."

4. "Each ambassador offer our technical assistance, and for the poorer countries, our financial assistance as well, to help them solve both problems."

5. "The Population Commission of the United Nations, so far dealing only with the statistics of world population, become an action arm of the United Nations, be greatly expanded, and be authorized to draw up a world population program and to offer all possible assistance to carry it out. It should work in close cooperation with the Food and Agriculture Organization of the United Nations, and with all member governments. It should set specific goals and strive to help the nations of the world achieve them in stated periods of time."

Reporting on a 2-month trip to Europe and Africa, where he met with government, United Nations, International Planned Parenthood and Vatican officials, General Draper called for "a great worldwide crusade by all the governments and by all the people. If the rate of increase for food goes up one-tenth of 1 percent a year, and for population goes down one-tenth of 1 percent per year, then food and population growth would be brought back into balance in only 5 years * * * and in 25 years most of the world's nutrition problems would be solved.

"Three men," General Draper asserted, "together have it in their power to bring about a satisfactory world solution—the Pope in Rome, President Johnson, and U Thant, Secretary General of the United Nations. Pope Paul's moral influence is so great," General Draper pointed out, "with non-Catholics and Catholics alike, that a redefinition of the church's position would have tremendous impact throughout the entire world."

General Draper has served as an adviser to three Presidents. From 1947 to 1949, he was Under Secretary of the Army and in 1952 was appointed by President Truman as U.S. Special Representative in Europe with ambassadorial rank. In 1958, President Eisenhower appointed General Draper Chairman of the President's Committee To Study the U.S. Military Assistance Program. The report of that Committee, released in 1959, was the first official Government document recommending U.S. assistance on request to the developing countries to deal with problems of rapid population growth. In 1962, President Kennedy appointed him head of an interdepartmental survey team to study and report on the situation in Brazil.

General Draper is vice chairman of Planned Parenthood-World Population, chairman of the Pension Corp. of America, and he has served as chairman of the Mexican Light & Power Co., Ltd. (1954-59) and as chairman of Combustion Engineering, Inc. (1963-65). He is director of Insurance Securities Trust Fund, U.S. Leasing Corp., Cosmodyne Corp., and Stanford Research Institute. General Draper is also a trustee of the World Affairs Council of Northern California.

IS FAMINE THE ONLY ANSWER?

Members of the National Press Club, I have just spent 6 weeks in Europe and Africa trying to determine whether the world's rapidly growing population is in fact outdistancing the world's supply of food, and whether hunger and starvation actually lie ahead for the developing countries of Asia, Africa, and Latin America.

INTERNATIONAL PLANNED PARENTHOOD

First I took a look at the population side of the equation. I was in London for a week visiting the headquarters of the International Planned Parenthood Federation. Family planning organizations in 40 countries make up its membership, including as one member the Planned Parenthood Federation of America.

Sir Colville Deverell, its able Secretary General, reports that women everywhere, of all races and creeds, desperately want help to avoid unwanted pregnancies. He believes that when voluntary birth control facilities become available throughout the world, and when governments give adequate support, the population problem will be well on the way to solution. To meet that objective, the Federation has doubled its budget this year and hopefully will double it again next year.

At the end of World War II, the world's population was growing at the rate of 1 percent a year, higher than ever before in the world's history. Now, only

20 years later, the annual rate has more than doubled to over 2 percent, thanks largely to the export of American medical miracles such as antibiotics and DDT powder to the entire world.

But this 2 percent world rate is far from uniform. Western Europe averages three-fourths of 1 percent, and has no serious population growth problem. Japan cut its population growth rate in half in 10 years and is now only nine-tenths of 1 percent. Russia and the United States average under 1½ percent, whereas Africa's population is growing over 2 percent, Asia averages 2½ percent, and Latin America's rate is nearly 3 percent.

Broadly speaking, the industrialized countries average about 1 percent a year growth. The rest of the world averages 2½ percent and includes more than 2 of the 3 billion people on earth today. These people in the developing countries are adding nearly 60 million of the 70 million new mouths that have to be fed each year.

"A LOSING BATTLE" FOR FOOD PRODUCTION

Then to check the world's food production, I flew to Rome and visited FAO—the Food and Agriculture Organization of the United Nations, which has "the official mission of increasing food production in the developing countries."

FAO has made three "world food surveys" and knows the facts about the production, distribution and consumption of food throughout the world. Under Dr. B. R. Sen, its dynamic director general who started the worldwide freedom from hunger campaign in 1960, it has a staff of some 3,000 at its headquarters in Rome and many more overseas. It is now preparing the first "world food plan" to assess the world's food surpluses and deficits, country by country, and to make specific recommendations for improvement.

FAO reports that per capita food production increased for 12 years after World War II in Asia, Africa, and Latin America. For the last 8 years, however, per capita production has been steadily slipping downward, and is simply not keeping pace with population growth. Dr. Sen speaks of "the losing battle against hunger and malnutrition in Latin America and the Far East." That is a polite way of saying that starvation may be unavoidable.

Doctor Sen has concluded that "the prospect seems dark indeed unless there is a combined worldwide effort to raise agricultural productivity in the developing countries along with determined measures to control population growth." He had the courage to ask the International Eucharistic Congress in Bombay, "Can we any more turn our faces away from the concept of family planning when the alternative is starvation and death?"

The whole world is waiting for the answer.

The fact is that most suitable land is already under cultivation, and that the developing countries cannot expect to increase their yield per acre fast enough to keep up with their population growth. How can a country like Brazil, for instance, possibly expect to support and feed a 3½ percent addition to its population each year when its own yield per acre of corn and wheat has actually declined during the last quarter century? Even Europe, which has increased its yield per acre by 2 percent a year would have a food problem today if its population were rising 2½ or 3 percent a year.

FAO's agricultural experience of the last 20 years, and particularly during the last 5 years, shows conclusively that under present conditions, without capital, without markets, without fertilizer, without modern technology, and even more important, without literate farm populations, the developing countries cannot hope or expect to increase food production much more than 1 percent a year. Unless the countries with two-thirds of the world's population substantially reduce their rate of population growth, they face certain starvation.

DROUGHT MENACES AFRICA'S FOOD SUPPLY

So I went on to Africa. In Cairo I was immediately informed that a serious wheat shortage was only beginning to be relieved now that American "food for peace" shipments of wheat have been resumed. Egypt's President Nasser has officially recognized the need for stabilizing his country's population growth by family planning, and a broad program is now getting started under the personal direction of the Prime Minister.

What finally convinced Nasser were the simple facts concerning the Aswan Dam. One of the great engineering projects of modern times, it will store the waters of the Nile nearly a thousand miles from Cairo to make possible the cultivation of 1 million additional acres of formerly arid soil, equal to one fifth of

Egypt's arable land. The project should be completed in 1970, but during the 10-year construction period, Egypt's population will have increased by one-quarter. Therefore, the tremendously increased food production made possible by the great Aswan Dam will not put any more food in the average Egyptian's mouth.

In Nairobi, the capital of Kenya, the first words I heard on the news broadcast startled me—the Voice of Kenya was asking for contributions to a national fund to alleviate the famine conditions throughout the country. A severe drought last year had ruined much of the corn crop. Delays in food imports aggravated the hunger and distress for many months. Only recently have large U.S. shipments of "food for peace" corn improved the situation.

So famine already stalks in Africa.

The medical director of Nairobi told me that birth control facilities were already available in most of the city's hospitals thanks to the Family Planning Association of Kenya, and that the Government of Kenya encourages this program. He hoped that the Government would soon undertake or help to finance a vigorous national program, so that the rest of the country could have similar facilities.

QUEEN OF BIRTH CONTROL

In Rhodesia the National Family Planning Association has been operating for the past 9 years, supported almost singlehandedly by a devoted woman, Mrs. Stilhaus. She has contributed her time 7 days a week, her home for an office, her telephone, and even her car to travel to all parts of Rhodesia. She has been able to include family planning in 25 health centers in her own country, and has started 5 clinics in the neighboring country of Zambia. Her husband manufactures nitrogen fertilizer, so her friends say the "King of Fertilizer" is married to the "Queen of Birth Control." She told me the family planning work with the white Europeans was self-supporting, but that she needed much more outside financial help to meet the needs of the Bantus or Africans, who outnumber whites in Rhodesia 16 to 1.

The drought that brought famine to Kenya also affected Rhodesia and its neighbors. In Zambia and Bechuanaland record numbers are on food relief. In Rhodesia the rains were so late that the crops are poor, but 2 weeks more of drought would have meant real disaster—a complete crop failure, and serious food shortages.

In general, the food situation in Africa is precarious, partly because of drought, which is increasingly common, and partly because of the primitive state of agriculture which cannot keep pace with the high and still rising population growth rates. There is general interest and support for family planning services, but except in Egypt, little government sponsorship.

SIX HUNDRED MILLION LATIN AMERICANS IN 2000 A.D.?

Last year I visited Latin America several times. Most governments there now realize that the rapid population growth—an average of 3 percent for all of Latin America, and the highest rate for any area in the world—is their greatest obstacle to economic and social development. It even threatens—as Dr. Alberto Lleras Camargo, the former President of Colombia, has openly said "the very survival of their present-day civilization." But the governments have hesitated to take official action largely because of Catholic opposition. Even this opposition is now diminishing because of the rising rate of illegal abortion, and because of the poverty and misery so obviously resulting from the hordes of children who cannot be properly educated, clothed, or fed.

Latin America as a whole is growing less food per capita than before World War II—and the situation is deteriorating year by year. Without the huge and increasing food shipments from this country, famine would be rampant today in many parts of South America. At present growth rates, Latin America's 200 million will triple to 600 million by the year 2000—only 35 years off—and a century later Latin America alone would contain over 10 billion people—3 times the present population of the entire world. Impossible, of course. But what is going to slow down the present 3-percent rate, commonsense or starvation? Is famine the only answer?

You all know the situation in Asia, where China is spending \$400 million a year—40 percent of her annual foreign exchange earnings—to buy grain, and where India is facing its most acute food crisis in modern times.

In 1964, India had the best grain crop in history—88 million tons—but still she needed 6 million tons of our wheat as foreign aid last year. Then the 1965 monsoon brought very little rain. The grain crop last November was 12 million tons short, and there are 12 million more Indians to feed than a year ago. President Johnson is increasing our grain shipments to the very limit, and the Pope has made worldwide appeals for help. But India is in serious trouble.

The Indian Government knows this and is opening a determined drive to produce more food. It also plans to spend over \$200 million on birth control in the next 5 years.

I would sum up the world problem as follows: Every year 1 billion people in the industrialized countries are increasing their population 1 percent and their food 2 percent. Every year the 2 billion people in the developing countries are increasing their population 2½ percent and their food less than 1 percent.

As a whole, the world is increasing its population 2 percent and its food 1 percent. This means that the world is falling behind 1 percent a year—or, to put it another way, food production is falling behind minimum needs by 30 million people more each year. This is why disaster for the human race lies just ahead.

What can be done? What should be done? And who should do it?

Shipping our food-for-peace wheat and corn and rice is no solution. Even if we were willing to pay the cost, we cannot take on the feeding of 30 million more people each year.

The developing countries must solve their own population and food problems. Otherwise nature will take over and starvation will restore the balance between births and deaths.

But we and many others can help them understand that only massive birth control and higher food yields per acre can ever feed them adequately.

THREE MEN CAN ACT

There are today three men who together have it in their power to bring about a satisfactory world solution, Pope Paul VI, President Johnson, and U.N. Secretary U Thant.

The first of these is the Pope in Rome. He has realized the danger of the present population dilemma to the world as a whole and to his half billion Catholic communicants, more than half in Latin America and other developing countries. His special commission on birth control is meeting now in Rome. He has urged it to speed up its work and come quickly to a conclusion. Pope Paul's moral influence is so great with non-Catholics and Catholics alike, that a redefinition of the church's position would have tremendous impact throughout the entire world. It would hasten greatly the day when all men could join at the banquet of life, and, no longer hungry, give greater thought to their moral and mental development.

Another man with great influence is our President, who has already taken the lead in recognizing that all lands, including our own must deal with the multiplying problems of their multiplying populations. He said in January: "The hungry world cannot be fed until and unless the growth in its resources and the growth in its population come into balance."

In 1962, I went to Brazil on a mission for President Kennedy, to study the acute economic and political problems brought on by President Goulart's regime. At that time, the danger of a Communist takeover in Brazil was very real. When I came back and reported to President Kennedy, I also told him about the serious population problem in northeast Brazil, where 25 million people in 9 States had average incomes of about \$100 a year and where economic resources were growing about 1 percent a year and population was growing 3½ percent. After discussing this hopeless situation, and the world population problem as well, the President suddenly asked me, "Why doesn't the Ford Foundation make the population problem its top priority?" Later, he asked that same question of its chairman, and last year the Ford Foundation report, and its huge grants as well, concentrated on population as never before.

So, to paraphrase President Kennedy's words I suggest, quite respectfully, and fully realizing the many other serious problems our Government faces each day, that President Johnson make the stabilization of world population one of his administration's top priorities.

FANFARE AND DRAMATICS FOR THE POPULATION CRISIS

Suppose, first, President Johnson and Secretary Rusk ask every one of our Ambassadors all over the world to discuss the world population problem seriously

with the head of every other government, as they recently were asked to explain our aims in South Vietnam, and with the same fanfare and dramatics.

Suppose, second, they suggest that all countries with a population problem try to reduce their rate of growth annually by one-tenth of 1 percent as the United States has done for the last 5 years. The result could be a drop in a decade of nearly 1 percent for the entire world.

And suppose, third, that in the same conversation, our Ambassadors stress the world's food deficit and suggest that every country, developed and underdeveloped alike, should aim to accelerate its present rate of increase in food production by at least one-tenth of 1 percent a year.

And suppose, fourth, that each Ambassador offer our technical assistance, and for the poorer countries our financial assistance as well, to help them solve both problems.

This, I believe, is a practical and possible program. If our Government would propose it, I believe that the governments of the world generally would back it.

The time has come for a great worldwide crusade by all the governments and by all the people.

If the rate of increase for food goes up one-tenth of 1 percent a year, and for population goes down one-tenth of 1 percent a year, then food and population would be brought back into balance in only 5 years time. In 10 years the present 1-to-2 ratio would have been reversed—food production would be increasing 2 percent and population growing only 1 percent. Not only would starvation be averted, but in 25 years most of the world's nutrition problems would be solved.

Perhaps I am too optimistic. Perhaps it would take longer. But only in that direction—more food, less people—is there hope for the developing countries, and for the human race.

The third individual who has it in his power to promote a satisfactory solution is U Thant, Secretary General of the United Nations. For the first time last year the United Nations sent a technical mission on birth control to India—under Sir Colville Deverell who heads International Planned Parenthood. For the first time last year the United Nations offered to extend technical help in this field to their member nations.

So the way is now cleared for a major effort by this great world body to deal with the world's greatest problem. If unsolved, hunger could become the greatest threat to world peace. Hungry men will fight. Hungry nations will make war.

NEED FOR U.N. POPULATION AGENCY

The U.N. Food and Agriculture Organization already exists under Dr. Sen. What is needed is a great sister organization as part of the United Nations family to deal exclusively with the world population problem, just as WHO deals with the world health problem.

So I respectfully suggest to U Thant, and I would hope our Government would back some such proposal, that his Population Commission, so far dealing only with the statistics of world population, become an action arm of the United Nations, be greatly expanded, and be authorized to draw up a world population program and to offer all possible assistance to carry it out. It should work in close cooperation with FAO, and with all member governments. It should set specific goals and strive to help the nations of the world achieve them in stated periods of time. That is my fifth and most important recommendation.

The Swedish Government has already urged the United Nations to deal more actively with this problem. Every government with a serious population problem could be expected to cooperate. Multilateral aid and multilateral advice on a problem as delicate as this one would probably be much more readily accepted than bilateral aid and bilateral advice, no matter how well intentioned.

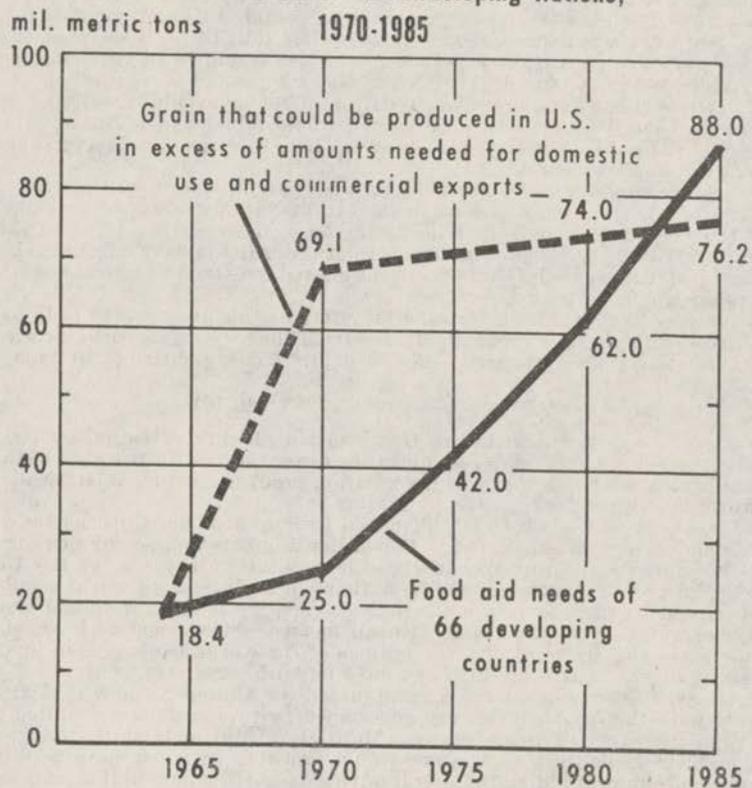
In conclusion I can do no better than to quote Dr. Sen's words to the Population Commission of the United Nations.

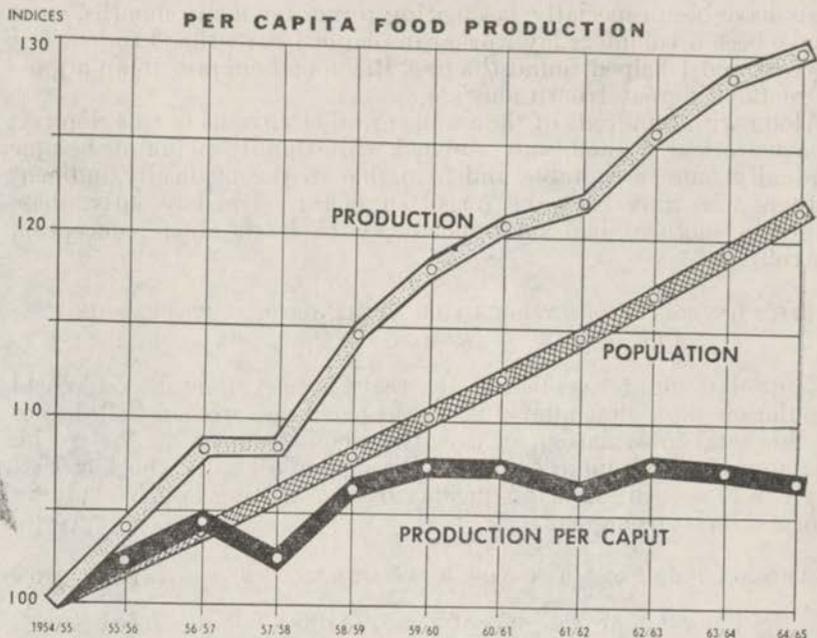
"The next 35 years will be a most critical period in man's history. Either we take the fullest measures both to raise productivity and to stabilize population growth, or we will face disaster of unprecedented magnitude. I myself feel optimistic that mankind will not stand aloof from the drama of life and death that is unfolding before our eyes but will come forward to achieve that miracle of organized will which seems so distant today. This indeed must happen if freedom and dignity are to survive."

No, I would add, famine is not the only answer. Because I too believe that man can rise to meet this challenge, as he has so many times throughout history. But the worldwide crusade must begin soon, or it will be too late for millions of human beings now alive.

THE WORLD FOOD AND AGRICULTURAL CRISIS

U.S. Availability of all Grain for Food Aid and
Food Aid Needs of 66 Developing Nations,
1970-1985





U.N. Food & Agriculture Organization

Senator GRUENING. The next witness is Mrs. Mary Anne Rennolds. Mrs. Rennolds is accompanied by Mrs. James Robinson.

BIOGRAPHIC STATEMENT: MARY ANNE RENNOLDS

Mrs. Mary Anne Rennolds and her husband, Edmund, live in Richmond, Va., with their six children, ages 16 to 7.

Mrs. Rennolds in 1954 was the founder and first president of the Richmond chapter of Planned Parenthood. She is a member of the executive board of the Virginia League for Planned Parenthood and for 3 years was a member of the board of directors of the national organization known as Planned Parenthood-World Population.

She is a member of the Episcopal church. She graduated from Bennett Junior College and the St. Catherine's School.

In addition to her work in the population field, Mrs. Rennolds is a member of the University of Richmond's Chamber Orchestra and the Junior League of Richmond. She is a director of the Richmond Symphony Orchestra and the Women's Club of Richmond.

Mrs. Rennolds, your comments concerning your work—to make family planning information available to persons desiring it—will be carefully studied by the subcommittee.

STATEMENT OF MARY ANNE RENNOLDS, OF THE VIRGINIA
LEAGUE FOR PLANNED PARENTHOOD

Mrs. RENNOLDS. I cannot tell you what an honor and actual thrill it is to appear before the Subcommittee on Foreign Aid Expenditures today. The impact and scope of your hearings on the population

crisis have been especially fascinating to me for many months, since I have been a volunteer lay worker in planned parenthood for the last 15 years and I helped found the first Richmond chapter in an atmosphere far different from today's.

Along with hundreds of thousands of other citizens in this country, I have worked, waited, and watched while family planning became gradually more acceptable and available to the medically indigent mothers who have been the forgotten factor. Until recently, these forgotten mothers had no opportunity to learn about conception control.

BIRTH CONTROL INFORMATION STILL LACKING TO 90 PERCENT OF U.S. WOMEN

Up-to-date figures, collected by the Planned Parenthood-World Population show that almost 90 percent of these women still do not get this vital information, in this, the richest country in the world. Despite the many publications and dialogs on all sides, the fact that only 1 in 10 women in the low-income group is getting family planning information is an enigma.

RICHMOND GROUP PROMOTES SPREAD OF FAMILY PLANNING INFORMATION

In Richmond, our chapter of the Virginia League for Planned Parenthood seeks to promote a program of public information and education so that all classes of society may understand the social significance of planned parenthood. This is a large order despite the fact that we have been fortunate to be able to work within the program of the city health department where family planning is considered an integral part of family health service. The pill and intrauterine devices are given as a matter of course to almost all clinic patients. But what happens to the potential patients who do not come to the clinics? About one-fourth of the families in Richmond earn an annual income of less than \$3,000 and these are the families who have the most children and the least knowledge of fertility control.

FAMILY PLANNING REDUCES SCHOOL EXPENSES

For several years our board members have lectured and talked with prenatal and postnatal patients in the Henrico Clinic. It is estimated that \$576,000 in school funds alone has been saved by teaching the parents how to limit their oversized families. That is over a 3-year period.

Also, we do bedside visiting to about 3,000 clinic mothers a year. Often we are the first and perhaps only contact with family planning that these patients ever have because the nurses, doctors, and other hospital personnel are far too busy and overworked with absolute medical necessities to educate them. These mothers may never set foot into an established public health clinic or doctor's office after returning home. Often they only see a doctor when they come again to deliver their next baby.

Last week I saw one of these mothers who had just given birth to her 10th child. She told me she should not have an 11th child because

of various pending complications, but the young intern who talked to her merely told her to be "careful," whatever that might mean. Isn't that staggering in our modern medical age and especially in a State where planned parenthood has been accepted as a basic part of public health since 1939?

"... INDIGENT MOTHERS ARE RESPONSIBLE AND INTELLIGENT IF GIVEN A CHANCE"

The only excuse that can be said for the intern is that he might have been too young or too inexperienced or callous to know yet that most indigent mothers are responsible and intelligent if given a chance. And what is more important, they are desperate. Mrs. Robinson has told me how desperate she was.

"... S. 1676 . . . WILL MOVE FAMILY PLANNING FORWARD . . . FOR THE BENEFIT OF ALL OF MANKIND"

In my experiences of talking with poverty-stricken mothers, both Negro and white, they are all enthusiastic and eager for acceptable, practical methods of family planning. Any thinking person must agree that S. 1676, to coordinate and disseminate birth control information, will move family planning forward toward its goal for the benefit of all of mankind.

Senator GRUENING. Thank you very much. We appreciate your statement.

I think before asking you any questions, which I think some of the other members of the committee as well as I would want to do, we would like to hear from Mrs. Robinson, who also comes from Richmond, and who has a practical experience with this problem.

Mrs. Robinson, we are very happy to have you here. I wish you would go ahead and read your statement.

STATEMENT OF MRS. JAMES ROBINSON, MOTHER AND CHURCHWORKER

Mrs. ROBINSON. I am glad to tell something about my family in case it will help end the hardship of other families with too many children.

"NO ONE WOULD TELL US ANYTHING"

My husband and I are the parents of nine children from the ages of 17 down to 7. When I had my seventh child in 1958 I begged the nurse and doctors at the medical college to help me. My husband and I could not take care of any more babies and needed information badly. No one would tell us anything. I had my eighth child and again, no help.

When my last baby was born in the same year, I was too weak they told me at the medical college hospital, to have the operation—tubal ligation. I told them that if I left for home to build up my strength to return later for the operation I would surely come back again pregnant and that I was not going to leave the hospital until somebody there gave me the operation.

"THE REAL PROBLEM . . . THERE ARE TOO MANY MOUTHS TO FEED"

For the last 6 years we have had no babies but the burden of back debts hangs over us. We owe the clinic a lot of money. The real problem for a family like mine is that though we work hard, there are too many mouths to feed. My husband does construction work and in the winter months in Richmond often there are days and weeks when bad weather cuts him out of his job. The Family Service has been helping me lately as a stopgap. This is a wonderful service, since my family is not a welfare case.

There are many places where things are unfair. Why is it that only people on welfare can show a card and get hospital and clinic bills free, when we have to try to pay these bills ourselves? I have a little girl, sick practically all her life. I have to go to the clinic and pay for her, while welfare people can come and show the cards and get all that done free. It is very hard for us to try to take care of little children, when some people on welfare is making just as much as your husband working and getting everything free, while we have to pay for everything.

Last Christmas I remember writing the Christmas Mothers' Fund—I didn't get a thing, because I wasn't on the welfare—while the people on the welfare didn't have to ask, they only gave them the check. So I had to do without things for the children.

So I think all information on birth control should be necessary so people can cut down on the population to help the race, and have food and things to feed the children with.

MRS. ROBINSON DIDN'T KNOW WHERE TO GET INFORMATION

Senator GRUENING. Mrs. Robinson, when you had your seventh child and wanted contraceptive information, did you know about the planned parenthood group?

Mrs. ROBINSON. No; I did not. No one had told me.

Senator GRUENING. If you had known about it, would you have gone there and gotten the necessary information?

Mrs. ROBINSON. Yes; I would.

Senator GRUENING. Mrs. Rennolds, how do you disseminate the information that the planned parenthood organization exists, and that mothers, like Mrs. Robinson, who have had seven children and feel they cannot afford any more, can get it? How do you get that information about?

" . . . SUFFICIENT CHANGE IN PUBLIC SENTIMENT . . . ? YES . . . "

Mrs. RENNOLDS. Well, this has always been the problem—reaching the people who didn't know we were there. Even though the Public Health Department knew we were there, until recently they were afraid to go too far ahead of the public. It is intriguing the way it is all enmeshed, as you know. Two days ago I talked to the head of the Social Service Bureau of the Welfare Department. She said just about a year and a half ago, only then, they began really going into high gear, pushing planned parenthood, sending people to the Public Health Department. It just takes time. And I think now with what you have done in Washington, and Senator Tydings, and all the others,

it will give people the nerve and the courage to do what they should have done all along.

Senator GRUENING. In other words, you feel there has been a sufficient change in public sentiment so that you need no longer be timid?

Mrs. RENNOLDS. Yes; that is correct.

PILLS GIVEN FREE TO WELFARE PATIENTS—NOT TO LOW-INCOME
BRACKET WOMEN

Senator GRUENING. Mrs. Robinson, now that the situation is different for you in that you know about planned parenthood and you know where to get the information you need, will that solve your problem?

Mrs. ROBINSON. Well, that is one of the problems. Another problem is if you are in the low-income bracket, you don't have any money. When you go to the clinic, these things are given free to people on welfare. But if you are not on welfare, you have to worry about having the money to pay for them. They are not free to you, if you are not on welfare.

Senator GRUENING. Mrs. Rennolds, is that correct?

Mrs. RENNOLDS. Probably she hasn't been to our clinic lately—since she had the tubular ligation operation. But we give the pill free to people who cannot afford it.

Mrs. ROBINSON. I am talking about the medical college where I go.

Mrs. RENNOLDS. The public health clinic in Richmond gives the pills free. But if somebody wants to contribute a dollar, or whatever they want to contribute, they can. So this is now available.

Senator GRUENING. Senator Simpson, any questions?

Senator SIMPSON. Well, yes, Mr. Chairman.

I was interested in Mrs. Rennolds' statement. On page 1144 you say: "For several years our Board members have lectured and talked with prenatal and postnatal patients in the Henrico Clinic. It is estimated \$576,000 in school funds alone have been saved by teaching the parents how to limit their families."

Could you enlarge on that?

Mrs. RENNOLDS. Well, what they did in Henrico was this. The public health nurse has kept records of the mothers who have not returned. Previously these mothers have come every year with a new baby. And that is the way she arrived at these figures. The mothers did not return, did not produce another baby to attend school later.

Senator SIMPSON. You think this was an accurate computation?

Mrs. RENNOLDS. Mrs. Harry, head of the Henrico public health nurses, is conducting a planned parenthood clinic which is excellent, and she published these figures several times at meetings last year.

SENATOR SIMPSON SCORES IMBALANCE OF ASSISTANCE

Senator SIMPSON. It is a rather interesting observation. I am glad you made it. And with respect to Mrs. Robinson, I think she makes quite a point in No. 3 on page 1146. It is so true. I don't think it is necessary to get into a discourse on it here. But where she says the welfare women get a check for their children born out of wedlock, but it is very hard for her, with a husband, to get aid for her chil-

dren—I think that is true. We have had that before us in the Senate, as you probably know.

I want to thank both of you ladies for a very fine presentation.

MRS. RENNOLDS PREFERS THE "INFORMATIONAL PERSUASION ROUTE"

Senator GRUENING. Senator Curtis?

Senator CURTIS. Mrs. Rennolds, one thing.

In your recommendations—I don't know whether it is covered in your paper or not—what do you recommend concerning those citizens who are not interested even though they have the information as to where they can be helped?

Mrs. RENNOLDS. One thing we are doing is sending a letter out to newlyweds. Every newly married woman whose name is on the records in the city hall of Richmond receives word from us that we are there, if they want us, because we are strictly voluntary; then from the public health people who have really taken over this program. It is interesting. A couple of years ago—

Senator CURTIS. I am not talking about the problem of getting the information. I am talking about the problem of the people who have the information, as to where they can receive help and how, and that they don't need money, and still do not care to avail themselves of what you can do. What, if anything, do you recommend in reference to this segment of our population?

WITNESS OPPOSES GOVERNMENT COERCION

Mrs. RENNOLDS. Well, I hope in time they will care. If they are not motivated—

Senator CURTIS. In other words, you are not recommending any Government coercion?

Mrs. RENNOLDS. I know there is some talk of it—

Senator CURTIS. You are not recommending that?

Mrs. RENNOLDS. No.

Senator CURTIS. You prefer the informational persuasion route?

Mrs. RENNOLDS. Yes—freedom of information for all—which Thomas Jefferson wanted. This is what I am fighting for.

Senator CURTIS. That is all.

SENATOR GRUENING ABJURES ALL FORMS OF COMPULSION OR PRESSURE

Senator GRUENING. I would like to say, following up Senator Curtis' question, that my own personal conviction is that we should abjure all forms of compulsion or pressure. This is supposed to be an exercise in voluntary information. And those who for one reason or another, for reason of religious scruples or otherwise, who do not want to receive the information, or do not want to use it after receiving it, that is their privilege.

This is merely an exercise in freedom of information. And the whole purpose of this legislation is to make this information available for those who want it and who need it.

Mrs. Robinson is a case in point. She wanted the information. She needed it, she was unable to get it until lately, after a serious crisis

had developed in her family, when she had more children than she and her husband felt they could afford, when the health of her family was impaired. I think that was the essence and purpose of S. 1676.

Thank you very much; your testimony has been most helpful. We appreciate your coming.

EVIDENCES OF CONCERN IN LATIN AMERICA

There are many evidences that attitudes on birth control are changing rapidly. Particularly in Latin America is the climate now noticeably different.

Last year this subcommittee heard Dr. Alberto Lleras Camargo talk on the need for change in thinking on this subject. As former President of Colombia and the present editor of *Vision* magazine he could well speak with authority and knowledge of his country and his continent.

I have here, and will place in the printed record of this hearing, an editorial that appeared in the late fall of 1964, in *Listin Diario*, a leading and highly respected newspaper in Santo Domingo, Dominican Republic. The author, Rafael Herrera, is editor of that paper.

Señor Herrera wrote: "The vertiginous population growth, particularly in the economically underdeveloped countries, is the central problem of our times."

Certainly we are beginning to face facts when men of the caliber of Dr. Lleras Camargo and Señor Rafael Herrera can speak with openness and frankness on what I believe is indeed the "central problem of our time."

(The English translation and the Spanish version of the above-mentioned editorial follow:)

EXHIBIT 156

POPULATION EXPLOSION

(By Rafael Herrera, editor, *Listin Diario*, Santo Domingo, Dominican Republic, Dec. 10, 1964; translated by Elizabeth Hanunian, Legislative Reference Service, Library of Congress; the Spanish edition follows the English translation)

The lecture by a distinguished U.S. gynecologist, Dr. Adaline Pendleton Satterthwaite, has given new urgency to the moral, social, and economic problem of the population explosion in our country.

The vertiginous population growth, particularly in the economically underdeveloped countries, is the central problem of our time.

Everything—urban development, public health and sanitation, law and order, public and private morality—all are affected by the tremendous phenomenon of the "demographic explosion." Our country is one of the world focal points of that explosion.

The strange thing is that until recently it was said that this country was sparsely populated, and that it could even tolerate more immigration.

The Dominican newspapers have been concerning themselves with this problem for some time, both by way of commentaries and frequent publication of news concerning it.

Dr. Satterthwaite's lecture has dramatically emphasized the question by showing partiality for birth control in our country, and also, by pointing to the economic and social consequences of the growing Dominican population.

We feel that simply to establish the need for birth control does not resolve the problem. The problem of birth control in itself poses many problems.

Leaving the moral problem to a future commentary, we must point out that the poorest, most wretched, and most prolific families do not realize that a large

family living in extreme poverty may be a tremendous injustice against those born into it.

There is the central problem of education, whatever side may be taken on this dramatic question.

But we want to point out indeed that from now on the population-growth problem will have to be taken seriously in all spheres of Dominican life. Neither the Government nor political parties will be able to go on ignoring it. Nor will the responsible sectors of the community be able to ignore it. The economic, educational, and public health areas must of necessity take it into account. It will be the central point of all discussions on agricultural policy. And of all housing problems.

In synthesis, this nation must discover that it has to make an austere, dynamic, and intelligent investment of its resources for creating jobs and food for a population which is growing—there is no other word—explosively.

The university and secondary school problem, which has had dramatic manifestations in recent weeks, is another aspect of the population explosion.

The problem is here and our duty is to tackle it in all of its aspects.

EXPLOSIÓN DE POBLACIÓN

La conferencia de una distinguida ginecóloga norteamericana, la doctora Adaline Pendleton Satterthwaite ha dado nueva proximidad intelectual al problema moral social y económico de la explosión de población en nuestro país.

El crecimiento vertiginoso de la población, precisamente en los países económicamente subdesarrollados, es el problema central de nuestro tiempo.

Todo: urbanismo, salubridad, educación, desarrollo económico, servicios policiales, movimientos políticos, orden público, moral pública y privada, están condicionados por ese tremendo fenómeno de la "explosión demográfica".

Nuestro país es uno de los focos mundiales de esa explosión.

Lo peregrino es que hasta hace poco se decía que este país casi despoblado que inclusive necesitaba inmigración.

Desde hace algún tiempo los periódicos dominicanos se vienen preocupando de ese problema, tanto por vía de sus comentarios como por su frecuente publicación de noticias acerca del mismo.

Ahora, la conferencia de la doctora Pendleton ha recalcado dramáticamente la cuestión, al manifestarse partidaria del control de la natalidad en nuestro país.

Y también al señalar las consecuencias económicas y sociales del crecimiento demográfico dominicano.

Nosotros creemos que establecer simplemente la necesidad del control de la natalidad, no resuelve el problema.

El problema de control de la natalidad plantea a su vez muchos problemas.

Dejando para un próximo comentario el problema moral, debemos señalar que en las familias más pobres, más prolíficas, no se plantean a sí misma que una familia numerosa en condiciones de pobreza extrema, sea tremenda injusticia contra los que nacen en ella.

Hay un problema central de educación, cual que sea el partido que se tome en esta dramática cuestión.

Pero si queremos señalar, que de ahora en adelante el problema del crecimiento de la población tendrá una toma de conciencia en todas las esferas de la vida dominicana.

Ni el Gobierno ni partidos políticos podrán seguirlo ignorando.

Los sectores responsables de la comunidad tampoco podrán ignorarlos.

Los planes económicos, educativos y sanitarios tendrán que tomarle bien en cuenta.

Será el punto central de todas las discusiones sobre política agrícola.

Y de todos los problemas de vivienda.

En síntesis, esta nación debe descubrir que tiene que hacer una austera, dinámica e inteligente inversión de sus recursos, para crear empleos y alimentos para una población que crece—no hay otra palabra—explosivamente.

El problema universitario y de la escuela secundaria, que ha tenido manifestaciones dramáticas en las semanas recientes, es otro aspecto de la explosión de población.

El problema esta ahí y tenemos el deber de afrontarlo en todos sus aspectos.

Senator GRUENING. The right of each individual to family planning information, if desired, is simply an exercise in freedom and a basic

human right. To deprive any segment of the population from such information by not letting it know that it is available is selfish and thoughtless. How the Government or private agencies let people know that such information is available is the question. Obviously, coercion and exploitation must be assiduously avoided. An eloquent discussion on this particular aspect of the population crisis appears in the May 19, 1966, article by Hannah Lees which appeared in *The Reporter* magazine, and I direct that it be placed in the hearing record.

(The above-mentioned article follows:)

EXHIBIT 157

THE NEGRO RESPONSE TO BIRTH CONTROL

(By Hannah Lees, *The Reporter*, May 19, 1966, pp. 46-48)

"Can we afford birth control as a minority group in the United States?" was one of the questions listed for discussion at a recent panel on birth control in a prosperous Germantown, Pa., church with a largely Negro congregation. Almost all educated and responsible Negroes would answer "Yes." They realize they cannot make progress without it and are taking constructive steps to promote it. But they are also aware of the charge from other Negroes that birth control is a concealed form of genocide.

At the all-Negro panel discussion, two participants out of seven—a city planner and a pathologist—spoke against it. "Until you bring together action and words, until you help people to be free, to maximize their potential, birth control is utter nonsense," the planner stated. "If we have an oversupply of food and there are empty areas in the world, where is the population problem?" the pathologist demanded. "This whole thing is the concern of people who didn't want too many of a certain race."

"The trouble is that this charge is either whispered or hurled as an angry accusation," I was told by Uvelia Bowen, a highly trained Negro social worker who has recently been appointed a consultant to the VISTA program. "The accusation has to be brought out in the open and discussed intelligently because the fear is certainly there, hidden in the thoughts of every Negro man and woman in the United States, whether they express it or not. It is too bad for America that the thrust for world population control should have come at the height of the civil-rights struggle. We are only 20 million, after all, only 10 percent of the entire population, and many of us feel our whole strength lies in numbers, in the power of the vote. Why did the Alabama Democratic Committee, for example, just now take that white supremacy slogan off its ballot emblem? They were forced to by the growing number of registered Negro voters." Yet as she expressed these views Mrs. Bowen was sitting by me at a Philadelphia Planned Parenthood luncheon and has since become a board member.

"The highest birth rate, the most unwed mothers, are in the poverty areas which are largely Negro," she went on. "And they're the target, aren't they? Negroes don't want children they can't take care of, but we are afraid to trust you when your offered help has so often turned out to be exploitation. Negroes are never going to accept birth control in any numbers from the hands of white people. You will have to find and train a great many more Negro workers if you expect to have any real impact."

THE GROWTH OF ACCEPTANCE

There is no question that the fear of exploitation is present in some Negro leaders. Few go so far as Philadelphia NAACP President Cecil Moore, who, at a public meeting of the local antipoverty committee last fall, browbeat the executive director of Philadelphia Planned Parenthood for offering a program of family-planning education, calling it "replete with everything to help Negroes commit race suicide." The Reverend Henry H. Nichols, an eminent minister who tried unsuccessfully to supplant Moore and give Philadelphia's dwindling NAACP more constructive leadership, has told me he is unalterably opposed to any birth-control program until the youth have become moral enough not to use it for immoral purposes—even though the National Council of Churches, of which he was the Philadelphia president in 1963, has come out strongly in its favor.

The Reverend Leon Sullivan, who originated the Negro-operated job-training centers that are spreading across the country, will not even have Planned Parenthood literature—a logical aid to female self-respect and independence—available in the centers. He is not opposed to birth control, he has said; he just doesn't want to have anything to do with it.

That such sentiments are heeded was demonstrated last winter when the Pennsylvania secretary of welfare stated publicly that the time was not ripe for State-supported birth control; he cited the arguments of Moore along with those of the Catholic Church. Later, however, he reversed himself with the announcement that the State would begin paying for family-planning services to welfare recipients.

Despite the attitudes of Moore and Sullivan, it is remarkable how far and how fast many Negro leaders, whatever their inner anxieties, are moving toward awareness that birth control is a weapon in their fight for equality. The number of Negroes on the national and local boards of Planned Parenthood is fast multiplying. Though this is partly because Planned Parenthood has learned to seek them out, their ready acceptance is significant. And there is some more concrete evidence of change.

As recently as 4 years ago, the National Urban League issued this guarded statement: "Every family has a right to be informed about all the resources in the community, including family planning and the various approved methods of birth control. Then it must be left up to the individual family, giving them freedom of choice based on their own values and religious convictions, which method, if any, is desired." In 1964, it issued a considerably more positive statement which said, among other things, that the organization would "attempt widespread publicity about available family planning facilities, services, and possibilities among the lower socioeconomic groups likely to be cut off from such information from private physicians or regular educational channels." Now the Chicago Urban League has gone further and said, " * * * to fight poverty without birth control is to fight with one hand tied behind the back."

THE IMPORTANCE OF CARFARE

With Urban League cooperation, a group of Negro doctors and nurses—most of them doctors' wives—have for the past year been operating a volunteer birth-control clinic in Bell Center, a Cleveland settlement house, under the leadership of gynecologist Dr. Joseph Martin. This is not, of course, the only such clinic in Cleveland. Some are operated by the local Planned Parenthood organization, and others by the major teaching hospitals, but none were reaching the poorest Negroes.

Rejecting the popular circumlocutions, the clinic called itself the Birth Control Clinic at Bell Center, "so that," says Dr. Martin, "a less sophisticated clientele would not be confused by the title—and if this name could be used without engendering community opposition, it would make future disguises of the name in our town unnecessary." Thirty Negro doctors volunteered to staff the clinic in rotation. The only scarce commodity turned out to be patients.

Most women in the area, the doctors gradually found, simply didn't know about birth control. Others had been badly frightened by tales of embolism, cancer, or permanent sterilization, by what Dr. Martin calls "granny medicine." Many had no one to leave their children with or nothing "decent" to wear to the clinic.

At the end of the first year, the doctors at Bell Center had provided contraceptive help to only 200 women, but they had learned from the Bell social workers how to spread the word from door to door. In addition to preliminary education and even reassurance that anyone would be warmly welcomed whatever clothes she wore, the doctors now realized that they would have to provide baby sitters and even carfare for many women. But they had gained enough community support to get private grants of \$12,000 for the next year. (One gift of \$8 was donated specifically for carfare.)

A considerably more ambitious clinic has just been opened in Philadelphia by the African Methodist Episcopal Church. Under the leadership of Austin Norris, a prominent Negro lawyer, and Philadelphia A.M.E. Bishop John Bright, the church has converted a bankrupt hospital into an old-age home and health center. The center, named the Sarah Allen Home, applied a short time ago to the Philadelphia Anti-Poverty Action Committee for funds for what it cautiously called a Conception Regulation Clinic, though in its presentation it forthrightly declared its intention of giving service to all who came for help, including unmarried and adolescent girls.

Since antipoverty funds could only be used for birth-control services to women living with their husbands, Planned Parenthood last fall proposed a purely educational program to the Philadelphia Anti-Poverty Action Committee. It was turned down as much because some PAAC members thought it inadequate as because of Cecil Moore's accusations. This March, PAAC approved A.M.E.'s request, and then went on to endorse a greatly revised proposal from Planned Parenthood to provide services to each poverty area tailored to its individual needs and wishes over the dissenting votes of Moore and a Roman Catholic priest.

The Sarah Allen Conception Regulation Clinic did not wait for the antipoverty funds, however, but opened in March in a separate building adjacent to the hospital with the help of a \$20,000 grant from the National African Methodist Episcopal Church. Only one woman appeared the first day, though Bishop Bright had directed that the clinic opening be announced from every A.M.E. pulpit in the city. Austin Norris, a man noted for direct action, asked a well-known broadcaster to announce the clinic hours on the radio. He also had handbills printed and passed out giving the clinic's hours and address. The next week there were 17 patients.

Because the Negro population is increasing at a rate of 2.4 percent a year as opposed to 1.7 percent for the white population and because its illegitimacy rate is so much greater, there is a widespread conviction that Negroes want more children than whites, or are simply more irresponsible about parenthood. Yet a 1960 study on the growth of American families found that most nonwhite wives wanted fewer children than white wives (2.9 children compared to 3.3). Middle-class Negro families are smaller, on the average, than comparable white families. In a Florida group of public health maternity patients, mostly Negro, 70 percent said they wanted no more children.

Chicago Planned Parenthood recently published a study of 14,000 low-income patients taking the pill, 83 percent of whom were nonwhite and nearly half of whom had not finished high school. It revealed that 30 months after first coming to the clinic, about four out of five patients were still regularly taking the pill.

Freedom to limit family size was first called a basic human right only a year ago, in a report of the National Academy of Science's National Research Council. This was echoed by Mrs. Katherine B. Oettinger, the head of the Children's Bureau of the Department of Health, Education, and Welfare, in a speech last fall and recently by the Population Panel of the White House Conference on International Cooperation. But many Negroes are already adopting this point of view and beginning to see failure to provide birth control services as a form of discrimination they must fight.

They are also becoming remarkably direct and clear sighted about the question of giving birth-control services to the unmarried and underage. Last year Edwin C. Berry, executive director of the Chicago Urban League, stated: "Fortunately, the attitude toward the illegitimate mother is changing. * * * The thought that it is sinful and immoral to provide birth-control knowledge to unmarried mothers will hopefully be reevaluated throughout the country." His words were prophetic, for on March 31 it was made public that any birth-control program under the Department of Health, Education, and Welfare would provide services to all women regardless of marital status—a revolutionary reversal of position that may soon affect the policy of the Office of Economic Opportunity.

Senator GRUENING. The journal of "Medical Opinion & Review" of March 1966 gives a penetrating appraisal of one of our major population problems. I direct that "Unplanned Children: Whose Burden? Whose Care?" be included at this point in the printed record of this hearing.

(The article above referred to follows:)

EXHIBIT 158

UNPLANNED CHILDREN: WHOSE BURDEN? WHOSE CARE?

(By H. Curtis Wood, Jr.,* M.D., Medical Opinion and Review, March 1966, pp. 28-35)

Changes in attitudes regarding birth control have been taking place slowly, over many years, but they have gained rapid momentum recently, perhaps as a part of the sexual "revolution" of modern times. In 1960, 72 percent of Americans

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were in favor of making birth control available to anyone who wanted it. In 1964 the figure was 74 percent, and in the spring of 1965 a Gallup poll showed that 81 percent, 8 of every 10 people interviewed, favored free access to birth control. The national increase was found to be due mainly to the change in the attitudes of Roman Catholics. In June of 1963, only 53 percent of Catholics favored free access to all the facts of birth control, but by 1965 the figure had jumped to 78 percent.

In the last few years there has been a tremendous increase in the number of magazine articles and radio and television programs dealing with population problems and fertility control. Nearly all have been in favor of voluntary and responsible parenthood. Not only have they been instrumental in educating the public, but the time and space given to birth control are also evidence of the wide acceptance of the need for family planning.

We naturally worry about the incontinent birth rate of less developed countries; we see not the beam in our own eye. For a large and increasing sector of the United States, living standards have been going down notwithstanding our otherwise apparent prosperity, and it is among this portion of our population that the birth rate is highest. In fact, many of these people have given up supporting themselves and have passed into the unblissful state known as welfare—they have become charges upon the community, and about half of all the children born in New York City are born to welfare clients who constitute only a 16th of the city's population. A similar tendency is found in other areas.

Direct costs of helping the poor have nearly doubled in the last 10 years. They now cost the taxpayers more than \$5 billion a year (the cost of all social welfare, from private charities as well as public funds, has been estimated at \$100 billion per year). Vast expansion of programs that support needy children and their mothers is the main cause of soaring relief expenditures. Since 1954, aid to dependent children (ADC) has increased by more than 2 million persons, or by 104 percent, and such aid now goes to 4 million, outnumbering the combined total of all others on relief, including the old, blind, and disabled.

THE BREEDING GROUND

ADC proliferates because increasing numbers of jobless and unskilled husbands are deserting their families. (The family, in fact, prospers more with their relief check than it did with the father's paycheck—if he had one.) The wives, who often turn to other men, add to the high rate of illegitimacy in the self-perpetuating "breeding grounds" of city slums. This results in a growing population on welfare, and unless some answer is found this "subociety" is destined to increase in size, in dollar costs, and in many indirect costs (criminality, for one thing). The frightening fact is that the recipients of the welfare funds outbreed the taxpayers who support them.

In New York City, for one example, relief rolls have spiraled from 280,000 in 1954 to about 500,000 in 1965. The present rate of increase is 6,000 per month. In the same 11-year period the costs have risen from \$182 million per year to \$500 million. Three-quarters of all relief recipients in our largest city are in the ADC group, and almost all of these are in families without a male breadwinner. Most alarming of all, from the standpoint of future social and economic problems, is the fact that the 16th of the city's population on welfare are, as stated, producing about half the babies born in the metropolitan area.

However, something is now being done. In 1958 not 1 of the 15 New York hospitals where the indigent had their babies would give these mothers any birth control advice or supplies. Today family planning is available in various forms, from the rhythm method to intrauterine devices, in all 15 hospitals. Not long ago New York State decided to liberalize its birth control policy for those on relief. Now, if the patient or client brings up the subject, if she is not only married but living with her husband, she may be referred to a physician and he may give her this medical service, if he can discover medical reason for not having more children. As we shall see, this policy, while it is a little better than the previous restrictive one, is in sharp contrast with giving birth control help to any married person, or "any parent," from tax funds, which would take care of those who produce a succession of illegitimate children.

In Chicago, while total relief costs have dropped during the past 10 years (due largely to educational and training programs), the number of persons receiving ADC has more than tripled, from 51,000 to 185,000. Men lost their jobs and deserted their families, but the women continued to have babies. Between 40

and 45 percent of indigent children in Chicago are illegitimate. Cook County Hospital delivers up to 20,000 babies a year, most of them on ADC and nearly half illegitimate. Several years ago there was a tremendous dispute, featured on the front pages of the Chicago newspapers, about whether the indigent had a right to be given birth control advice at Cook County Hospital if they wished it. Now any married person, or parent, may receive contraceptive services in the State of Illinois.

AND IN THE WEST

Relief costs in San Francisco County have nearly doubled in the last 5 years, from \$26 million in 1960 to more than \$50 million now. The reason is the same as elsewhere. The increasing growth of automation is involved, since it removes from the labor market the jobs that require the least education, training, and skill. Yet it is in this segment of our society that we find the highest birth rates. Many county public health departments in California are offering family planning services to the indigent, and great progress has been made along these lines.

Again, in Philadelphia, the total population declined slightly from 1953 to 1963, in part because of migration to the suburbs—but during this 10-year period ADC increased by 180 percent. Relief checks for 12,359 illegitimate children cost the taxpayers \$6.5 million per year. The figure explains the answer of the unwed mother when asked by the judge, after she had freely admitted that each of eight children had a different father, who her real boy friend was: "My real boy friend is the welfare department."

Projections of some current trends are alarming. In the next 10 years, if total population remains the same and if the pattern continues, a quarter of the people in Philadelphia will be dependent children living on the taxpayers and totaling 500,000 in number. This would be the same number as those now on relief in New York City, which has a population four times as large as Philadelphia's. While 11 community hospitals in Philadelphia operate some sort of birth control clinic, most are restricted to their own patients, who frequently are quite unaware that such services are available (as may be many of the staff physicians). The city's health department has not used for family planning any of the Federal funds given them for maternal and child care, although they could have done so. Philadelphia General Hospital, where deliveries for most of the indigent and welfare recipients are performed, has no birth control clinic. Some efforts are being made to rectify this, however.

But Detroit, at least, is an inspiring example of what can be done. It is one of the very few cities in the United States where relief costs have actually declined. This is due to several factors, chief of which is the booming auto industry. Daniel Ryan, the city's welfare director, says: "When the auto plants are running strong, everything else picks up and jobs are available."

PUT TO WORK

Of those receiving direct aid in Detroit, 80 percent are Negroes. Costs of direct relief have declined from \$19 million in 1963 to \$8.5 million in 1965. Mr. Ryan believes that vocational training is vital, but he says that a third of the physically able men receiving direct public aid are functionally illiterate. Detroit gives short shrift to "relief loafers." Whenever possible, able-bodied men are put on work projects. They are paid \$2.03 an hour for totally unskilled labor, but they never see the money. Instead, they receive a receipt to be applied against their welfare accounts. "Work programs," says Mr. Ryan, "help maintain any work habits the men may have and give incentive to find private employment. The malingeringer, who thought he was going to get something for nothing, is likely to feel that if he has to work on a project he might as well find a job of his own elsewhere."

There are a number of ways in which the welfare problem may be alleviated. We could, for example, put more emphasis on job training. This may not work in every case, but where it does it can frequently substitute a somewhat larger short-range expense for what could otherwise be life-long support of a family. We could also emulate Detroit and be tougher with able-bodied men on relief. This would decrease the number of relief loafers, but there aren't many of these—and it would add a measure of self respect to those who would feel, as many would like to, that they are earning their keep. But it would not in itself satisfy the requirement of providing jobs where none exist.

We could also use better-trained relief and social workers in all parts of the country. Senator Ribicoff has estimated that only about 4 percent of these people are properly trained. The majority seem to be more concerned for the people on relief than they are for the taxpayers; while this is not necessarily a wrong attitude, we should know to what degree it influences their functions and judgments.

And, of course, we can crack down on illegitimacy, although this is not nearly as easy as the bald statement may make it sound. We cannot just simply give up all support to otherwise helpless infants, but somehow the number of welfare babies, undesired by their parent(s) in the first place, must be reduced and the rise in ADC checked. This would be markedly helped by wide dissemination of all types of birth-control materials for the indigent. It should be encouraged by both the welfare departments and the Public Health Service. Methods suitable for each case should be offered, ranging from the rhythm system to voluntary sterilization.

HOMES AND INSTITUTIONS

Until the production of unwanted babies by incompetent and irresponsible parents is checked, we need more foster or institutional care for welfare babies who grow up in slums and under such conditions that they can seldom escape becoming delinquents and/or public charges. In addition, we must devise new and better incentives for those on relief to seek jobs. Under present systems it is usually advantageous to remain on welfare for life rather than to seek to become self sufficient. Realistically, and perhaps pessimistically, the welfare army has now become so enormous that even if all the suggestions could be put into operation speedily it is unlikely that the Nation's relief bill would be reduced substantially for a long time to come. But we must try to stop the tendency to double the costs at least every 10 years.

Has the medical profession kept up with the public and the Government in the progressive liberalization of attitudes and policies regarding birth control? It has not. The only group that is more cautious and conservative than ours is, perhaps, the legal profession. There has been some progress, however. Thirty-five years ago an eminent professor of obstetrics in one of our largest medical schools, making rounds with his students, came to the bedside of a woman who was utterly exhausted in body, mind, and spirit from frequent and excessive child-bearing. One of the more imaginative and courageous students asked the professor, "how about offering this woman a sterilization procedure and thus spare her future unwanted pregnancies?" The professor replied, "Gentleman, it is not in the province of the physician to attempt to ameliorate economic and social ills by means of the scalpel."

About 5 years ago a former president of the Academy of General Practice stated, "Physicians have one job and one job only—healing the sick." This philosophy of aloofness is still prevalent, but much less so.

Albert Einstein placed both the credit and the responsibility for much of the problem squarely in the hands of the medical profession when he said: "Progress in hygiene and medicine has completely altered the previous, precarious equilibrium of the quantitative stability of the human race. I am, therefore, firmly convinced that a powerful attempt to solve this tremendous problem is of urgent necessity." Medicine has upset the appercart by drastically reducing death rates and ignoring the other half of the "precarious equilibrium," birth rates.

Aldous Huxley said: "To anyone who thinks in biological as well as in economic, political, and sociological terms, it is self-evident that a society which practices death control must at the same time practice birth control. The corollary of hygiene and preventive medicine is contraception."

The National Academy of Sciences also expressed concern when they said: "We feel that after delivery all patients should be offered birth control advice as their right, and physicians must be trained adequately if they are to supply the needed information."

An expression of the new, progressive attitude was given by Philip Barba, M.D., assistant dean of the Medical School of the University of Pennsylvania, when he addressed the Philadelphia Pediatric Society in November 1964: "A community, like a human being, is subject to disease—delinquency, crime, poverty, unemployment, substandard education, the cancer of political corruption, and the problems associated with population growth. This epidemic of turmoil and of maladjustment to community living is just as threatening as the old epidemics of plague, polio, diphtheria, or tuberculosis, if not more so. The challenge of combating the troubles of mankind is doubled for pediatricians, but all

physicians are urged to respond. No other group has the unique combination of knowledge, prestige, and opportunity which we possess. We cannot hide in comfortable, windowless cubicles of specialized occupations and refuse the challenge we have accepted."

THE NEW POSITION

The most significant single step ever taken by the medical profession in accepting its responsibility in family planning was the statement on birth control made by the house of delegates of the American Medical Association in November 1964. Until this meeting the AMA had neither endorsed nor opposed birth control. Its new statement recognized the responsibility of the medical profession in matters related to human reproduction "as they affect the total population and the individual family." I feel that the most important attitudes expressed in the new policy are: "an intelligent recognition of the problems that relate to human reproduction, including the need for population control, is more than a matter of responsible parenthood, it is a matter of responsible medical practice * * *. Physicians must therefore be prepared to provide counsel and guidance when the needs of their patients require it, or refer them to appropriate persons.

"This allows for any physicians who might have objections to birth control to refer patients elsewhere; but it also implies that none has the right to refuse these services because of his own personal beliefs. This has frequently occurred. The prescription of child spacing measures should be made available to all patients who require them, consistent with their creed and mores, whether they obtain their medical care through private physicians or tax- or community-supported health services."

Five years ago a small but courageous county hospital in Virginia decided to offer all its patients, rich or poor, what it called "complete maternity care." This meant not only the usual prenatal visits, the delivery, and a postnatal visit, but also any type of birth control that was desired in order to space pregnancies or to terminate fertility. This help was enthusiastically accepted by the patients, and a survey showed that nearly one-third asked for and received a post-partum sterilization operation. The program received the active support of the Association for Voluntary Sterilization, the only national organization in this field. All over the country, hospitals are gradually accepting social and economic indications for voluntary sterilizations as being just as valid as the ever-decreasing genuine medical reasons. However, many hospitals are not aware of the new AMA policies, including acceptance of voluntary sterilization as a method of fertility control in suitable cases; nor do they know that in December 1961, an official statement was made by the Joint Commission on Accreditation of Hospitals on the matter of voluntary sterilizations which left it to each hospital to formulate its own policy on the subject. All the commission insisted on was that each hospital decide a policy and then live up to it, but they did not in any way dictate what the policy should be.

Other indications of the new awareness of the population problem, in its broadest aspects, and the desirability of voluntary and responsible parenthood on the part of the medical profession, are the following:

There are now some 700 public birth control clinics in the United States. The indigent have this service in 35 States, either in tax-supported facilities or through public agencies that refer the women to private sources and pay the cost. These clinics serve about 200,000 women.

In 1964 Congress appropriated \$25,000 in order to start birth control clinics in Washington, D.C. Six are in operation, and this year Congress will be asked to increase the amount to \$65,000.

The American Public Health Association, in 1958, passed a resolution stating family planning was a proper and legitimate aspect of public health. More and more State, county, and city public health departments are actively engaged in giving birth control advice and supplies to the indigent.

Progress is being made in recognizing that if a couple has the basic right to determine the size of the family, they also have the right to decide what methods to use. Surgical birth control, or voluntary sterilization, is available for those who wish it in various parts of the country, including one large hospital in Washington, D.C. In two counties of Virginia tax funds are used to defray the hospital expenses of women who wish to be sterilized, and the physician is paid a token of \$25 for performing the operation. In North Carolina, in all counties, the welfare department pays at the rate of \$20 per day for the hospital bill of women welfare recipients who elect sterilization. In four counties—Lenoir, Greene, Mecklenburg, and Durham—in addition to the hospital rate,

the welfare department also pays the operating surgeon \$50. There are several counties in Michigan that follow these procedures, and sometimes the physician is paid as much as \$100.

But about 20 States still have laws against birth control, most of which were passed some 65 years ago during the Comstock era. These have been either ignored in recent times or amended by such phrases as "the above shall not apply to licensed physicians or registered pharmacists," which means that only those who cannot afford to pay for professional services are actually denied contraceptives. Ohio provided an example of how amendments made some of the old laws ridiculous. There the law stated not only that it was unlawful for anyone to sell, advertise, give away, et cetera, contraceptives, but that it was illegal to possess them. The amendment exempted physicians and druggists, so that it was all right to give one's patient a prescription for some birth control device, and it was all right for the druggist to sell it, but it was criminal for the citizen to possess it. Fortunately this absurdity has been changed.

The Kansas law, which restricted the performance of voluntary sterilizations to reasons of "medical necessity," has been appealed as of June 30, 1965. This method of fertility control is now legal in 50 States; only in Connecticut and Utah does the law demand that it be done strictly for medical indications.

In 1963 the Arizona Supreme Court ruled that their 1901 law banning "advertisement" of contraceptive devices did not prohibit distribution of birth control literature and the operation of planned parenthood clinics in the State. Except for Massachusetts, in none of the States is there a legal reason to keep birth control information from those who need it.

President Johnson's plea on June 25, 1965, for the entire world to "face forthrightly the multiplying problems of our multiplying populations" was the strongest statement any President has ever made on the subject. In his 1965 state of the Union message he became the first President to mention population problems on so prominent an occasion. He said: "I will seek new ways to use our knowledge to help deal with the explosion in world population and the growing scarcity in world resources." In his speech at the 20th anniversary of the United Nations he said: "Let us act on the fact that less than \$5 invested in population growth is worth \$100 invested in economic growth."

More evidence that advocating birth control is no longer political suicide is the fact that Senator Ernest Gruening, of Alaska, along with Representative Paul Todd, of Michigan, and Representative Morris Udall, of Arizona, have introduced three bills in Congress calling for a White House Conference on Population in January 1967, and the creation of special offices for population problems in the State Department and in the Department of Health, Education, and Welfare. Former Senator Kenneth B. Keating, of New York, is the national chairman of a group campaigning for deeper governmental involvement in promoting birth control; it is engaging in direct lobbying in Washington.

Three agencies of the Department of the Interior have been told to offer direct birth control advice and services, including contraceptives, to American Indians on reservations, Eskimos and others in Alaska, and to some natives in the Pacific territories.

The man who started congressional discussion is Senator Joseph S. Clark of Pennsylvania. In the summer of 1963 he became the first man ever to mention this problem on the floor of the Senate—and incidentally he is still there, so his candor did him no political harm. He said: "The burden of the population control problem rests, not with the well-to-do, but with the poverty stricken; not with the well-housed, the well-fed, and the well-treated, but those in misery, those with whom hunger prevails, those for whom educational opportunity is nonexistent, those who find the constant increase of population carrying down their standard of living. The question is whether families which do not have the necessary information to enable them to have no more children than the number they wish are being deprived of essential individual freedom. I suggest that they are."

Senator GRUENING. Alaska, too, has problems of population. For too long a time, men and women who would like to limit the size of their families have found it difficult to get information on family planning.

The Anchorage Daily News, in a series of articles by Staff Writer Kay Field, has performed a vital service for Alaskans—and for

us—by highlighting the difficulties involved in making family planning information a part of public knowledge.

Freedom of information—this is the reason for my introducing S. 1676 and for holding these hearings. The Anchorage Daily News has performed in the highest tradition of enlightened journalism by publishing this series of articles and has thereby shed more light on the population problem.

At this point I direct that the articles, which ran from May 22 to 28, 1966, be included in the hearing record.

(The articles mentioned above follow:)

EXHIBIT 159

ISSUES, PROBLEMS OF BIRTH CONTROL CONFRONT ALASKA

(By Kay Field, Daily News staff writer, Anchorage Daily News, Anchorage, Alaska, May 22 to 28, 1966)

The light has been turned on in the area of birth control and family planning, the light of freer discussion and easier access to information.

Today it is possible for virtually everyone to plan the size and spacing of a family because of revolutionary methods that are considered nearly 100 percent effective.

This quiet revolution has had a widespread effect on the health, morals, economic, and psychological well-being of our society.

The birth control movement aims to provide the information and means for family planning to all, regardless of their ability to pay. This aim raises economic philosophical questions.

There has been a divergence in the application of birth control policies on the part of Government agencies. While one arm of the Government provides devices free another doesn't have them available at all.

The Catholic Church's position against birth control has had far-reaching effects in Alaska beyond the confines of individual families. With more than 40,000 Catholics in the State, half of them living in the Archdiocese of Anchorage, the influence of the Church has reached into the application and interpretation of public policy.

The moral dilemma of whether or not unmarried girls should have access to contraceptives remains unsolved. And there is a wide difference of views between doctors about the safety and wisdom of various methods of birth control.

But the subject is no longer taboo and many who have found it a baffling or frightening subject are discussing it freely, including Catholics. There has been galloping progress and change in the past year.

The spotlight was thrown on the problem by President Johnson in his 1965 state of the Union message and again early this year the Catholic Church was reappraising its anti-birth-control position. Both of these developments have had a direct effect on what is going on in Alaska.

Here are a few evidences of the change:

1. The passage by the State legislature on April 2 of a State birth control information law which not only authorizes but directs that birth control information be made available to public hospitals and clinics and that the availability of such information be publicized. Passage of the bill didn't cause a ripple.

2. The forming of a chapter of Planned Parenthood in Anchorage affiliated with the national federation. The group hopes to help raise money to provide contraceptives to those who cannot afford them as well as distribute information on birth control.

3. The projected opening early this summer of a birth control clinic at the Anchorage borough health center. These services have been available at the health center but few have known about them.

4. A shift in the policy of some Government agencies. Dr. E. Stuart Rabaugh, chief of the Division of Indian Health of the Public Health Service made clear during a visit to Alaska this spring that birth control is provided at public health hospitals and that funds are available for this purpose. A policy directive from Secretary of the Interior Stewart Udall to the Bureau of Indian Affairs was an even more positive statement of intention to provide birth control information. Agencies which formerly shut their eyes to the fact that information

and contraceptive devices were being distributed have now made this positive policy.

With all this evidence of movement in the direction of wider use and knowledge of birth control, is Alaska behind other States in this field?

The answer is probably "Yes" but there are special reasons. One is geographics—the difficulty of establishing and maintaining medical contact with women of child-bearing age in remote parts of the State.

The nature of the population with its wide cultural and even language differences poses a problem to any birth control program. Another factor is the prominence of Government agencies in the health life of the State.

Some argue that Alaska is behind because it should be behind. They say that much of our population, the native portion, have just emerged from a period of life and death health problems where mere survival of the population was in question. Some, mostly Catholics but not all, have moral objections. Others say we need more population, not less, in order to broaden our economic base.

So why all the concern about birth control in Alaska? After all we are the Nation's largest State with its smallest population. No one argues there isn't plenty of room.

Still there is overcrowding. Some is found in trailer courts where families of five or six are crowded into one trailer. There is overcrowding in villages. But most of all the overcrowding is in the individual family which has too many children too close together. They are unable to provide for them economically or attend to their health needs. Overcrowding leads to juvenile delinquency, poor health, economic hardship and general downgrading of the quality of life.

Many U.S. cities are more overcrowded than any place in Alaska. But we have some problems they do not have.

Alaskans have more babies. Our birth rate is twice the national rate. The death rate of babies is shockingly high and so is the number of babies born with birth defects.

In a report presented this month to the Alaska State Medical Association, Dr. James Maynard of the Arctic Health Research Center gave the results of a study of the birth and death rates of Eskimo babies in the Bethel area. It showed that while the birth rate was more than twice that of the continental United States the infant death rate was five times as great. More than half the mothers had been pregnant six or more times and a third had had eight or more pregnancies.

According to the survey, the typical household consisted of six people while the national average is three. The home of this typical family was 300 cubic feet or less. In our modern cities a home of 600 cubic feet is considered crowded. This crowding leads to the spread of disease.

Dr. Maynard's conclusion: that those who have the responsibility for reducing the infant death rate should also realize there must be a similar reduction in the birth rate.

Translated in laymen's terms this seems to mean that now that man has learned something about "death control," he also must learn birth control.

Overcrowding can be approached from two directions: reduction of the number of people and expansion of space.

The Alaska Native Housing Committee is tackling the space approach. Emil Notti, president of the Cook Inlet Native Association and chairman of the Governor's housing committee said in a report before that committee in March that among Yukon-Kuskokwim Eskimos there is an average of about 45 square feet per person, one fourth the area required for U.S. low-rent public housing.

"Overcrowding doesn't confine itself to the nonwhite or minorities," says Willard Bowman, director of the Human Rights Commission. "It's the low-income groups that are affected."

Economically it's a vicious circle according to Dr. Maynard. "When the birth rate gets ahead of a population's ability to support it all the resources must be spent merely to feed the people and you can't do anything else to improve living conditions." High birth rates check economic development in underdeveloped people, Maynard says.

The high birth rate is not confined to natives in Alaska. A study of women during the childbearing year, 15 to 49, showed that in the total United States women of these ages had 488 children per 1,000 women, Alaskans had 692 children per 1,000 women.

There is evidence of a correlation between mental retardation and too many children born too close together.

The Governor's steering committee for mental retardation planning included among its members high ranking public health officials: Dr. Jack Lesh of the Alaska Division of Public Health; Dr. Holman Wherritt, director of the Alaska Native Health Area; and Dr. Levi M. Brownings, commissioner of the State department of health and welfare. The committee had this to say in its December 1965 report: "The steering committee believes family planning services should be more readily available" and recommended that:

The Alaska Health Service and the State department of health and welfare provide more family planning services, information and materials.

That the Planned Parenthood Federation be encouraged to establish local clinics where feasible.

That genetic counseling be made available to families where there is a likelihood that children will be mentally or physically handicapped.

Hidden though it is in a report on mental retardation, this statement seems to be as clear a written program for a more active birth control policy by State and Federal officials as it is possible to find.

The report also mentions the "battered child syndrome," meaning the unwanted or rejected child who turns out to be mentally retarded. This child is often the offspring of young or immature parents. The report recommends the education of youth as a hope of preventing the "battered child."

While not suggesting that birth control will eliminate mental retardation the report strongly suggests it to be an important factor. Also recommended is the establishment of teaching units in public schools on sex education and family living.

BIRTH CONTROL METHODS MAY RANGE FROM MECHANICAL TO CHEMICAL

MAY 23, 1966.

The loop and the pill are topics of conversation among women these days.

The two methods represent the most revolutionary advances in recent years in birth control.

The loop is one of several shapes of a birth control device more scientifically known as the intrauterine device or the IUD. It is a little larger than a silver dollar and is made of plastic. IUD's also come in the shape of a coil or a bow and can be made of metal.

The IUD is placed in the uterus or womb by a doctor where, in most cases, it remains unless removed by a doctor. In 5 to 10 percent of cases it is involuntarily expelled. In another 15 percent it causes discomfort or bleeding and must be removed. But to the 75 percent of women who are able to use it, the IUD is among the most painless contraceptives.

Only one decision is needed—the decision to have one inserted. A woman can forget all about the problem unless she wants to become pregnant in which case she has her doctor remove the device. No one is sure how and why it prevents pregnancy, but it is considered 97 percent effective, second only to the pill.

The pill, on the other hand is considered 100 percent protection against pregnancy if taken as directed. But a little more effort is required. A woman must keep track of her cycle and remember to take the pill on 20 consecutive days beginning on the fifth day of menstruation. Her motivation in preventing pregnancy must be reasonably high. She must also have access to a supply of pills.

The pill is more expensive too. While the IUD costs about 75 cents plus a visit to the doctor, the pills cost between \$2.25 and \$2.50 per month, depending on the type used. Women using the pill also are expected to have examinations by a doctor at least once a year.

It is estimated that at least 5 million American women are taking the pill by prescription. Between 200,000 and 300,000 are using loop devices.

That both are highly effective is in little doubt. In most cases when a woman taking the pill has become pregnant unusual circumstances have come to light.

For example a King Cove woman became pregnant although she had been taking the pill. When questioned she admitted she didn't know she had to go on taking it when she came to Anchorage.

If the pill is effective, is it safe? In reply to a heckler at a meeting to discuss this question an internationally known scientist said:

"I absolutely agree with you. Women should not take the pill until women have been taking the pill for 25 years."

In other words, scientists aren't certain.

There have been occasional scares but no proof. Blurred vision, blood clotting, aggravation of cancer have been blamed on the pill. But with so many women using it, how can one know these things would not have happened without the pill?

There are sometimes temporary side effects which annoy. They are similar to symptoms of early pregnancy such as nausea, spotting, weight gain, or swelling. They usually disappear, but if they persist the doctor may prescribe a different pill.

Satisfaction with birth control pills is far from unanimous among doctors. One prominent Public Health Service doctor has this to say:

"This is a potent drug. We know what IUD does but we don't yet know what the pill does."

While public health officials seem partial to the IUD, private physicians are less sure about the safety.

"There's nothing new about the Intrauterine Device," says Anchorage gynecologist Dr. David Ekvall, "but it's had an upswing in popularity because of the new nonallergic materials being used."

Dr. Ekvall usually prescribes the pill or the old fashioned diaphragm to the loop.

"I've seen punctured uteruses and infections resulting from the use of IUD," Dr. Ekvall said.

A doctor's approach to contraception depends on his own background, religion, and training. Dr. Ekvall points out.

"Medicine is not an exact science. There is a patient with indications for every form of contraception," Ekvall said.

"It really is a matter of motivation," is the view of another Anchorage obstetrician, Dr. Peter Koeniger. "A woman who isn't going to keep track of the pills is better off with the IUD."

Koeniger is concerned about danger of infection to loop users. So is urologist Dr. Allistair Chalmers.

"When you insert something foreign to body, the body tries to get rid of it," he says.

"But these doctors haven't had any large-scale experience with the IUD," says one mother of five who has been wearing the loop for 2 years. "If it is inserted by a skilled physician there is very little danger."

A general practitioner says you don't have to be very skilled.

"It's a snap," he said.

While the impression in Alaska may be that the IUD is prescribed mainly for families of low income and low motivation, in New York City some Park Avenue physicians charge high fees to insert them. Some prominent families have been using them for several years.

"Once they're in, they're in," said Dr. Albert Diddams of Alaska Native Medical Center.

He especially recommends loops for women in remote villages. If a woman on pills orders a refill from Anchorage and the mail plane is 2 weeks late, it's more critical than if she had never taken a pill at all," he said.

Two hundred loops were received by ANMC last summer and they have been used with great success. Of these, 75 were prescribed at Anchorage, the others at outlying hospitals. And of the 75, one had to be removed due to complications and one repelled.

Six hundred more have just been received.

Named "Lippe's Loop" for designer Jack Lippe, of Buffalo, N.Y., the loop has become big business. Recently a factory in India that will manufacture 5 million loops per year had its opening ceremonies. Six hundred guests received gold plated loops marked "not for use."

Alaska Native Medical Center offers women their choice between the pill and the loop. Acceptance has been close to 100 percent according to authorities, about half choosing each method.

Many private physicians still prescribe the diaphragm, especially for women who have used them successfully for years. The younger generation think of the diaphragm as the "horse and buggy days," but at least it is known to be harmless. Some doctors recommend various foams and jellies. These are not considered as effective.

The rhythm method is the one approved birth control system for Roman Catholics. It requires total abstinence from sexual relations during a woman's

fertile period. Effective use of the method usually means high motivation and understanding of the method.

Women with irregular cycles who are Catholic are permitted to take birth control pills for the purpose of regularizing the cycle. It is the woman's intent that counts, even if freedom from pregnancy results.

"What about the operation for men I hear about?" is a question often asked of Dr. Alistair Chalmers, a urologist. The operation doesn't require major abdominal surgery as in the case of women. It is called a vasectomy and can be done in the doctor's office.

Dr. Chalmers has done a few but "I always advise against it."

"So often I am later asked to reverse it."

The operation to "undo" the vasectomy is successful perhaps 50 percent of the time.

Research continues to devise better methods of birth control. A pill for men, vaccines and injections are being worked on. There is a refinement of the pill called the "sequential pill" that some doctors now recommend. The woman takes one pill for 16 days and another for 5. It is thought to establish a cycle closer to the normal cycle.

The newest and most revolutionary pill, the retroactive pill or "morning after pill." Developed by the Ortho Research Foundation and known as the ORF-3858 it must be taken within 6 days of possible conception. Or it can be taken regularly once a week.

While the currently popular pills prevent releases of the egg from the ovary, the retroactive pill works before the implantation of the ovum in the womb. It is still in the experimental stage and has not yet been approved by the Food and Drug Administration.

And then there is the method not approved by any responsible authorities except when life is threatened: abortion.

The surprising rate in the United States is still as high as 1 for every 4 births. This suggests there is room for education on birth control.

GOVERNMENT POLICY AND BIRTH CONTROL

MAY 24, 1966.

President Johnson said in his January 1965 state of the Union message: "I will seek new ways to use our knowledge to help deal with the explosion in world population and the growing scarcity of world resources."

In his foreign aid message of February 1, 1966, the President said, "we must face the population problem squarely and realistically." These statements have directly affected Alaskans.

They have led to active policy changes on birth control in many Government departments.

Secretary of the Interior Stewart L. Udall, in memorandum to the Commissioner of Indian Affairs last summer specifically directed the BIA to assure that all communities have access to birth control information and family planning services "comparable to those generally available to other communities throughout the Nation."

The directive makes it clear that these services must be entirely voluntary and that acceptance or rejection would in no way affect a family's participation in other BIA services.

The Division of Indian Health of the Public Health Service has been operating under a directive to provide birth control services, drugs, and intrauterine devices to women who requested them for nonmedical reasons but specifically indicating the Division was not to engage in any active campaign to promote birth control.

However, Dr. E. Stuart Rabaugh, Chief of the Division of Indian Health in Washington, said during a recent inspection tour to Alaska, "It is the duty of the physician to advise his patients on family planning."

Further indications of activity at the National and State level are the birth control laws. Alaska's Senator Ernest Gruening is the leading proponent of family planning in the U.S. Senate. He is currently pushing passage of a bill that would make family planning an official Government policy.

The bill would set up departments of population in both the State Department and the Department of Health, Education, and Welfare. It would also promote a National White House Conference on Population Problems. Senator Gruening's bill has not passed the Senate and probably won't this session.

The State of Alaska is ahead of the Federal Government in this respect. On April 2 the Alaska State Legislature passed a bill directing the State department and health and welfare to prepare information on birth control and place it in

"public hospitals, clinics and other health facilities throughout the State" so that the public may obtain it "without request." The law further directs that the department should advertise the availability of this information.

The phrase "without request" is a key one. In most of the State and Federal policy statements, until very recently, the phrase "on request" has been used as a sort of hedging device.

The departments have been saying, in effect, "we don't know if it's right or wrong but if the patient requests it we'll give it." The phrase is more and more being dropped. Alaska State law clearly indicates that residents of the State are to be made aware that there is such a thing as birth control and that the information and means to achieve family planning are available.

In other words, policies are becoming less apologetic.

What about State policy since the law? In January the public health division office of the department of health and welfare issued quite an explicit directive. It stated that information, counseling and assistance would be offered to a married person or mother "on request" but it went on to indicate that the health department should initiate discussion of family planning when it appeared the family could benefit from such services.

The directive says that if an employee objects to active participation in this program for religious or moral reasons he is specifically instructed to notify his superior when a patient needs this information. It does not say what should be done if the superior entertains the same objections.

Dr. Betsy Tower of the public health division office sees no imminent change in State policy but she does expect that the State will lend support to the Anchorage Family Planning Clinic due to open soon in the Borough Health Center.

The still unanswered question: will State funds be available to aid those using the services of the new clinic who cannot afford the contraceptives? Or will other means have to be found to extend this aid?

While the Health Center Clinic concerns itself about where its financing is coming from and the division of public health about how widely to dispense the information, an entirely different situation exists at health facilities run by the U.S. Government.

Military policy regarding birth control seems to be no policy at all. While other Government departments appear to be actively considering more positive attitudes with new and more specific directives from Washington, the military policy seems vague and disinterested.

Contraceptive pills are not to be had on base at either Fort Richardson or Elmendorf Air Force Base.

"We have no policy of positive promotion of birth control but no objection to the individual doctor giving out birth control information or prescriptions in the course of consulting with his patient," is the way Col. Alfred Hamilton, chief of hospital services at Elmendorf describes Air Force policy.

Colonel Hamilton would have no objection to the placing of planned parenthood pamphlets in waiting rooms at the Air Force hospital but so far this has not been done. He does not object to prescriptions being given to married people but they must be filled off base.

The point is made that there are 8,000 to 10,000 women who use the Air Force hospital facilities, 90 percent of whom are of childbearing age. The Air Force cannot provide contraceptives to that many women free of charge, it is explained. However, nearly all other drugs are dispensed free of charge. And there are 440 families on Elmendorf with incomes under \$5,000 a year.

Colonel Hamilton makes the point that military dependents are not issued eye glasses either but must pay for these items according to official Air Force policy.

There is an air of mystery around what, if any, contraceptives are available at the base exchange at Elmendorf. After some difficulty it was determined that the exchange did have one variety of diaphragm. But the spokesman seemed apologetic about this.

The situation at Fort Richardson is much the same. No birth control pills are distributed at the post dispensary purely for the purpose of birth control. But this same medicine can be obtained for a short period of time for other gynecological purposes. Since the pills are essentially hormones they can be used to treat a number of problems, it was explained. Diaphragms may be obtained at the dispensary free of charge, a spokesman said. There are no birth control pamphlets displayed at the Fort Richardson dispensary either.

BIRTH CONTROL—AND ALASKA'S NATIVE POPULATION

MAY 25, 1966.

"I'm tired," said a native woman from Kodiak who had had 14 pregnancies. "I want to get one of those things that will keep me from getting pregnant."

An Anchorage woman said "My aunt had 13 children of her own and adopted foster children. Eskimos love children." This woman has an Eskimo father and an Indian mother. "My Eskimo grandmother thought it was a matter of course to have 13 children. Now most women know you don't have to."

This woman with a background of both cultures doesn't believe in birth control for herself. "I'm not Catholic," she says, "but I feel as they do—that it's against nature to limit the number of children you have." She has six and two grandchildren.

Native attitudes about birth control clearly differ as much as those of non-natives. But there are special problems in their case.

"I think the big problem among natives is the language barrier, lack of communication between doctor and patient," said Elsie Evans, a Tyonek now living in Anchorage. She feels the natives would like to know more about birth control but are embarrassed to talk about it.

If they could get their initial information through pamphlets, she feels, they might become more willing to discuss it.

Do natives resent being told about birth control? Do they feel it's being forced on them?

Mrs. Evans admits it's a tricky problem. "I can see where the white culture is trying to help my people," she said, "but they don't always understand how our backgrounds differ from theirs. They should show us things and then let us go forth and do it ourselves—instead of doing everything for us."

Every Thursday afternoon a maternity, gynecological and post partum clinic meets at Alaska Native Medical Center. It is currently being conducted by Dr. Rodney Layton, staff physician and general practitioner.

At the clinic advice on contraception is available but not advertised. One or two pamphlets on the birth control pill are displayed. Contraceptive pills are given after a pelvic examination and IUD's are inserted.

The services are given to those who request them whether they are married or not. "That's none of our business," the doctors say.

Giving family planning advice and dispensing birth control devices and drugs are time and money consuming activities, Dr. Martha Wilson, director of Alaska Native Medical Center, points out.

"We practice quality medicine," she says. It is estimated that a doctor must spend at least 25 minutes with each patient regardless of the method chosen in order to explain the use of the pills and do a pelvic examination or insert the loop.

There is a budget problem as well as a time problem. "It would be terrible to start someone on the pill and then have to discontinue it because of lack of funds," Dr. Wilson said.

For the first time there is relief in sight on the budget; \$2,200 has been received by the Division of Indian Health from the BIA for nonmedically indicated contraceptives. Part of this is being used for 600 more IUD's and the rest for pills.

The pills cost the Public Health Service \$14.25 per year per person while the cost of the IUD is only 75 cents. The high cost of a doctor's and nurse's time is most of a problem than the contraceptives themselves.

"We just are not staffed for a big campaign," Dr. Wilson says, even if that were the policy. "Our doctors are so busy taking care of broken legs, pneumonias, and other critical problems. We've been stretching every resource just to keep people alive."

Division of Indian Health doctors admit they have only made a beginning in birth control. While some would like to step up the pace others are inclined to go slow for several reasons beyond the staffing problems.

For one thing there is still no clear directive from Washington such as the BIA received from Secretary Udall advocating that birth control be promoted.

Another reason for the go-slow school of thought may be that leading administrators of the Division of Indian Health both in Alaska and in Washington are Catholic. They are placed in a personal moral dilemma until or unless the Pope's forthcoming statement in the subject eases the conflict.

But probably as important as any of these is a genuine concern for the reaction of the native if any active promotion campaign for birth control were initiated.

The question is: will the native feel that the non-native, having told him what to do about everything else is now going to tell him how many children to have?

"These people have just come through a period of life and death medicine," Dr. Wilson explains. "The Aleuts, for instance, had gone from a population of 15,000 to 1,500 a few years ago. They considered themselves a dying race. Now if they feel we want to limit their population, it's frightening."

The infant mortality rate has been so high that in the past, it is estimated, not more than 1 in 5 babies were saved. A woman had to have many pregnancies in order to have any family at all. It will take considerable education for women to understand this is no longer true.

A study conducted in the Bethel area recently showed the birth rate for natives there was $2\frac{1}{2}$ times the national average with a death rate in babies of over five times the national average.

The BIA is more inclined toward an active policy of promoting birth control than the Public Health Service. Pamphlets on the subject are displayed in the waiting room at BIA offices in Anchorage.

"Native women who come to our offices are stuffing birth control pamphlets in their purses and taking them home," says Mrs. Ella Kraig, supervisory social worker. "This is progress even if they don't talk about it." They are thinking economically now about how many children they can afford, according to Mrs. Kraig. She is very enthusiastic about plans for planned parenthood and a clinic here. "BIA will be participating in the program," she says.

The BIA sees family planning as just as important a medical need as any other while the Public Health Service seems to differentiate between curative health measures and birth control.

How widely is information getting through to native women? In Anchorage and other cities they are pretty apt to hear about it or see a pamphlet if they go to the BIA or the native hospital. Some of the outlying areas have very successful programs too, notably Barrow, Kotzebue, and the Aleutians.

A beaming young King Cove mother reported, "The whole town is on the pills."

How much is done in outlying areas depends on the religious beliefs of the people in an area. It also depends on the individual beliefs of doctors and Public Health nurses. A large number of Public Health nurses are Catholic. In some instances the nurse is about the only medically trained person a village woman sees. When the nurse's church teaches that birth control is morally wrong it is difficult for her to promote it.

As a result some officials believe that the reluctance to advance further in a statewide program to dispense birth control information comes from health officers dispensing the information, not the recipients. This will probably be clarified with clearer directives from Government departments and a statement from Rome.

But roughly 84 percent of native women now have their babies in hospitals and these women are easier to reach. Individual doctors have their own way of approaching the birth control subject. Most often a woman is asked by her doctor when she comes for her 6-week checkup after birth if she wants to do something to keep from having another baby right away. Most say they do. Often they want a large family but they say "I don't want to have a baby every year."

Usually the IUD is not installed until the woman's 6-week checkup after birth but she may be given pills in the meantime. The IUD works only about 50 percent of the time when installed immediately after a baby is born.

The only two methods offered the native woman are the pills and the IUD. About half choose each.

Six or seven hundred women under the care of the Division of Indian Health are currently on one method or the other, estimates Dr. Albert Diddams, clinical director of ANS Hospital. They are scattered all over Alaska in places such as Attka, Shismaref, King Cove, and many other villages. Those on the pills write the hospital when they run out and the pills are sent. If the woman can afford to pay, her prescription is filled at a drug store.

There are no birth control pamphlets as yet displayed in Public Health Service field hospitals. Most of the information is passed by word of mouth which seems to be "pretty effective advertising," according to Dr. Diddams.

In the past Public Health policy on this matter has been that the doctor-patient relationship was not interfered with and birth control could be dispensed in that context. But there has been a gradual change in policy, Dr. Diddams observes. Now it is actually being encouraged and funded. "Earlier the contraceptives weren't effective enough to make it worthwhile. Now it's different," said Diddams.

Dr. Holman Wherritt, top man in the Division of Indian Health in Alaska sees the division and the BIA as representing a division of labor heading for the same goal. "We are in accord with the President of the United States' family planning program," said Dr. Wherritt. "It is a joint effort with the BIA. We are providing the services and materials and will go into the medical reasons for it when that is indicated. But we are not doing the campaigning. The BIA does that."

Clearly the direction is toward increased progress and enlightenment.

"We must get the native to talk about this," says Alaska Methodist University Anthropologist Nancy Davis. "We don't really know their views. This is an aspect of our culture we should make available to them if they want it."

BIRTH CONTROL: ILLEGITIMACY AND IMMORALITY

MAY 27, 1966.

One out of every twenty Anchorage area girls of high school age becomes pregnant out of wedlock each year.

These figures, just revealed by the chairman of the board of Alaska's Booth Memorial Home for unwed mothers, apply to a cross section of the population.

Slightly more than one-tenth are native. The rest are nonnative. The problem, therefore, cuts all levels of our society and cannot be laid at the door of any one segment of the population. It is an all-Anchorage problem.

Illegitimacy rates for women of all ages in the State as a whole are rising too. In 1963, 4.9 percent of all births in the State were illegitimate. The national rate was 6.3 percent.

By 1965 the Alaska rate had risen to 6.8 percent, according to the bureau of vital statistics of the department of health and welfare. Comparable national figures are not yet available. The Alaska figure for nonwhites, most of whom were native, is 11.7 percent.

Illegitimacy rates seem to be rising everywhere in spite of the invention and availability of birth control devices.

Is the high rate of high school pregnancies something new? Mrs. Elva Scott, coordinator of school nurses of the Anchorage Borough School District says that a few years ago the schools only knew about one out of four girls who became pregnant. Now, Mrs. Scott believes, three out of four are reported. So "there is an apparent increase," says Mrs. Scott. Other officials believe the increase is 1 to 2 percent.

This year there were 13 married pregnant girls on the rolls of the borough school district and 9 unwed girls who were pregnant. Most of the unwed girls were residents of Booth Memorial, the home run by the Salvation Army where unwed mothers may go for the last months of their pregnancy. The girls at Booth come from all parts of Alaska.

By far the larger proportion of schoolgirls who get pregnant drop out. The beds at Booth Memorial are always full and there is a waiting list.

"Many of the girls who become pregnant go to the lower 48 to have their babies because we just don't have room for them," says Major Karl, director of Booth Memorial. The Salvation Army has kept a list in the past of homes available to pregnant girls outside Alaska. But now this counseling is being done by the high schools, according to Major Karl.

It costs \$1,200 for a pregnant girl to go to one of the homes for unwed mothers in the lower 48 and many of them go. This fact would indicate that it is not always the girl from low-income families who is getting in trouble.

There are often heartbreaking scenes between a girl, her family, and the counselor while the decision is being made whether the girl will go outside or remain in Anchorage to have her baby. Sometimes the girl decides on an outside home and then returns, bringing the baby, much to the dismay of her father, who has made the financial sacrifice to send her away.

After the baby is born, most of the girls return to school, according to authorities.

Birth control raises two major questions about the morality and well-being of our youthful population. The two aspects weigh against each other:

Does the nonavailability of birth control information lead to more illegitimacy?

Does the availability of birth control information and devices lead to more promiscuity and immorality?

Major Karl of Booth Memorial thinks that some of the unwed pregnancies could be avoided through better access to birth control information. "But there are other factors, such as liquor," she says.

Answers to the second question are more difficult and the debate is apt to continue for a long time.

One school authority feels the automobile is more responsible.

Obstetrician Dr. David Ekvall sums up the feelings of many.

"The moral fiber of an individual will not be controlled by the availability of a pill," he says. "Those of lesser moral fiber will have fewer illegitimate babies because of the pill. And there might be a fringe group who formerly did not indulge for fear of becoming pregnant and embarrassing mom and dad."

Sometimes mom is even more responsible, directly or indirectly, for providing her daughter with contraceptive pills. There is a story currently making the rounds about a girl who borrowed her mother's birth control pills and escaped detection by substituting aspirin tablets. The girl didn't get pregnant but the mother did.

Authorities also believe that social pressure on parents sometimes causes them to obtain birth control pills for their daughters. These parents are, in effect admitting they either cannot stop their daughter's activities or do not wish to be embarrassed by her becoming pregnant.

No one knows for sure if large numbers of high school girls are using the new contraceptives. One teacher reported hearing senior high school girls talking quite openly in class about taking the pill.

"I get very few requests for contraceptive pills from teenagers," says Dr. William Ivy, obstetrician and gynecologist.

"It isn't usually the promiscuous girl who gets pregnant," school nurse Mrs. Scott says. "It's the girl who's going steady and is with one boy all the time. He talks her into believing this is the one way she can prove her love for him."

Many doctors and educators see the ultimate answer in the education of youth. In Sweden birth control information is given at the age of 12. Anchorage public schools do not have sex education as an established part of the curriculum at this time but the need is being studied.

In practice sex education is being taught in various courses when questions arise. Fifth and sixth graders are shown a film on human growth and development, usually after school and with parental permission. If questions come up on birth control they are answered.

Films on venereal disease are shown to boys and girls in high school. "The boy must take some responsibility too," Mrs. Scott says.

"The fear of venereal disease and moral considerations should be the deterrent to sexual promiscuity, not fear of pregnancy" is the view of one high-ranking State health official. This official believes birth control should be given to all who request it.

Senator Gruening's birth control bill was studied in detail this year in the required 12th grade course "American Government." Through this study students became acquainted with world population problems and the birth control issue.

But more direct education in this field may be considered necessary. "The schools haven't done their job if a girl gets pregnant out of wedlock," says Mrs. Scott.

Lee Minto of the Seattle Planned Parenthood Association gives talks to seniors in the Seattle high schools. The almost universal response she receives is: "Why did you wait so long to tell us this?" They felt they should have received information starting in junior high school.

NEW LOOK AT BIRTH CONTROL

MAY 28, 1966.

On June 8 the newly formed Planned Parenthood Organization of Anchorage will hold its big kickoff meeting. Senator Ernest Gruening will speak.

It will be the beginning of an effort to inform and educate the whole community on the need and means for family planning.

Spearheading the new program has been Mrs. Jean Dimenti, public health nurse at the borough health center, Mrs. Alexander Zabriskie and Mrs. Eddie Berkley.

Mrs. Dimenti has recently returned from a workshop session at Planned Parenthood headquarters in Seattle. Mrs. Zabriskie and Mrs. Berkley, who between them have 11 children, are cochairmen of the Planned Parenthood Committee now incorporated as a chapter of the Planned Parenthood Federation of America.

Planned Parenthood will operate in four major areas, according to Mrs. Zabriskie: the military, Alaska Native Service Hospital, private physicians, and

the Borough Health Center clinic. The organization will aim to provide low-cost contraceptives to women using the Air Force hospital as an alternative to buying them on the local market. It will advertise the facilities of ANS Hospital and make available a listing of private physicians who provide various types of family planning information.

"For instance," says Mrs. Zabriskie, "one doctor may specialize in the rhythm method while another may be especially interested in problems of infertility." Mrs. Zabriskie emphasized there would be no recommendations made for one doctor's services over another's. Planned Parenthood also will provide some financing of supplies for the health department clinic.

Still unresolved is the problem of financing for the clinic. The question is whether State funds can be used to dispense pills or other birth-control devices free of charge. "Until we get a legal opinion it would be my reaction that we should not use State or borough funds to provide these devices free," said Dr. David Duncan, director of the health center. "But we could act as intermediary to provide these services at cost."

The health department provides preventive, not curative medicine to the public. Dr. Duncan emphatically regards birth control advice as preventive medicine. He sees it as his duty to provide the general public with services that native citizens are already getting.

There are two other possible sources of funds. One is the community action program of the Office of Economic Opportunity (poverty program). It is the only agency specifically authorized to give direct grants to planned parenthood clinics. OEO will pay up to \$20 per year per patient for contraceptives. But there are strings attached. Recipients of the benefits must be married and living with their husbands.

The other agency that makes grants is the Children's Bureau of the U.S. Department of Health, Education, and Welfare. These funds are State administered. Dr. Edith Sappington of San Francisco from the maternal and child health bureau has said that funds already being received by the health center could be used for the birth control clinic but that no extra funds would be available for this purpose.

Malthus proclaimed in 1798 that famine, war, and pestilence were the only checks on runaway population growth. In modern times these checks are no longer acceptable. Scientific man, while working to rid humanity of these scourges has found a substitute controller of population: birth control. It seems evident that every U.S. family should have the opportunity to avail itself of this information if it wants to.

More effort needs to be made to reach with this information the Alaska native living in remote areas. The Alaska native has just emerged from a period of population control by pestilence. He should be educated to the fact that he can assume control over the size of his family and therefore, to some degree over his living conditions. And then he must be allowed to make his own decisions.

There are some measures that might be taken to assist in getting the information to village people.

Special pamphlets explaining family planning and birth control could be prepared that would appeal to the native family and help overcome the communication and language barrier.

The father should be educated as well as the mother. He should be shown the economic implications of birth control and spacing of children.

Distribution of the information might well be undertaken outside of ordinary BIA or public health channels thereby avoiding any implication that this is being forced on the native. One native woman pointed out that nearly every village has a meeting place and that pamphlets could well be placed there. Or they could be given to a local woman's organization in the village to distribute.

Efforts should be made to determine the personal beliefs of nurses and doctors in the field about birth control. Where religious convictions prevent a doctor or nurse from actively educating and, where indicated, giving birth control services to families in the field, other means should be found. In the past some have felt that if there was reluctance on the part of natives to advance in family planning, it has been due to the reluctance of those dispensing the information. Those holding this view point out that when information does reach the native woman, acceptance of birth control has been nearly 100 percent.

There are other areas of possible improvement.

A clarification of U.S. Government policy should be forthcoming. Why does the Government provide free contraceptives to natives at ANS hospital and none at all at the Air Force hospital or Elmendorf? The need for free contraceptives probably is not as great at the Air Force hospital but the need does exist.

Sex education should be instituted as part of the curriculum in the public schools of the Anchorage area and eventually of the whole State. The BIA schools also need to provide sex education. The high illegitimacy rate among natives of the State indicates this is an imperative need.

The illegitimate child who is mostly unwanted very often winds up as a ward of the State or as the "battered child"—mentally retarded, juvenile delinquent or otherwise injured. Sex education and birth control are two ways of combating this evil. Both are needed.

Care should be taken in the selection of individuals to teach sex education. They should be capable of an objective scientific approach and would require special training. The subject can be taught in the same manner as the facts of geography or mathematics and can be adopted into existing courses. Birth control information would be included as a logical part of the subject.

The Secretary of Health, Education, and Welfare this month in Washington unveiled a new policy of added Federal support for voluntary birth control programs and created the new post of family planning coordinator within the Department. He also proposed that public and private schools teach children about sex in the early grades.

The old argument that sex education belongs in the home is no longer valid. The climbing rate of unwed pregnancies and premarital sex as well as sex offenses and juvenile delinquency make it clear the job is not being done in the home. There would be nothing to prevent families from carrying on and further explaining the subject, using the knowledge the child gains at school as a point of departure.

The meaning of the terms "voluntary" and "on request" as used by Government agencies and even in the birth control laws needs clarification. These terms are used by Government agencies to alleviate fears that pressure will be applied to anyone to use birth control. They aim to make it clear that neither BIA nor any welfare aid will be cut off if a family does not wish to use birth control.

However, these terms should not be interpreted to mean that women only be told about birth control when they ask for the information. In a culture such as the Eskimo culture, women have for generations accepted as a fact of life that they have to have a baby every year. They have not known there was an alternative, and a "request" cannot always be expected. They must first be informed that there is a choice.

Planned Parenthood should be encouraged to start chapters in parts of the State outside Anchorage and especially to work with Alaska natives. Birth control clinics should be encouraged in other parts of the State. Everyone is not eligible for Division of Indian Health services. Experience has shown that people on low incomes may spend money for a private physician for emergency or serious health problems but not for birth control. These clinics can provide contraceptives at reduced prices.

There should be greater cooperation and understanding between Government and private agencies engaged in family planning activities. Meetings on this subject are needed so that agencies know more about each other's philosophy and activities. Perhaps a State conference on family planning should be held on the order of the national conference held this month in Washington.

Doctors and public and private agencies should keep abreast of all means of birth control and take care to present the pros and cons of each method without prejudice. Conventional methods, diaphragms, and others should be presented as well as the newer pills and intrauterine devices. While the results from the latter have been more dramatic and require less effort on the part of the patient, no one knows yet the effect of long-term use on the women. The older methods work too, when conscientiously applied and should not be forgotten.

All means of birth control are as yet imperfect. Throughout recorded history man has been searching for the perfect method. He has not found it yet but he is doing better all the time.

The best birth control is education. Through education the necessity for mechanical means can at least be reduced. As man keeps an open mind and gains more dominion over his destiny better solutions to family planning are sure to follow.

Senator GRUENING. Mollie Orshansky, writer for HEW's Social Security Administration, writes, with keen perception, of the poor. I direct that excerpts from her "Measuring Poverty" and all of her May 5, 1966, statement before the Panel on Domestic Programs be included in this hearing record.

(The above mentioned excerpts and statement follow:)

EXHIBIT 160

EXCERPTS FROM "MEASURING POVERTY"

(By Mollie Orshansky, Division of Research and Statistics, Social Security Administration, U.S. Department of Health, Education, and Welfare; Published for the National Conference on Social Welfare, Columbia University Press, New York and London, 1965, pp. 211-212, 218-219)

* * * * *

It would be one thing to have poverty strike at random with no one group singled out. It is quite another to see many predestined for poverty almost from birth—and this is indeed the fate that awaits so many of our children—because of the color, the education, or the occupational status of their parents; because they come into a family which will lose the father before they grow up; or because there are too many children before them.

The 15 million children who as a minimum must be called poor today constitute no general cross section of the population, no random probability set so dear to the heart of every research scientist. These children, in the technical terms we adopt, overrepresent the nonwhite portion of the population, the large families, the mothers who must bring up their children without a father, the farmers who grow our food, the laborers who do our unskilled work. They come disproportionately from the homes of those who are unemployed or cannot work, although they are joined by a sizable number from homes whose breadwinners work and yet are poor. In the language of the layman, these are the kids who do not get an even break, the ones with three strikes against them from the beginning. Our social mythology still clings to the fond fantasy that any lad can overcome the privations of his youth and become a millionaire. We never did find it realistic, however, to counterpoint this with the sad saga of the millionaire's son who "makes it down."

* * * * *

Although of all the Nation's children living in families only 14 percent are nonwhite, of the Nation's poor children 38 percent are nonwhite. Three out of five of all nonwhite children were living in families with insufficient income (measured by the Social Security Administration's poverty index at the economy level), almost four times the proportion of poverty among white children. For over one-third of the poor children the family head was currently unemployed or out of the labor force. But perhaps the more striking statistic is that, white and nonwhite children alike, nearly 40 percent of those in poverty were families where a worker had a full-time job throughout 1963, the year for which income was reported.

The large family.—Families with fully employed heads were in poverty partly because they were large—a fifth had at least five children, compared with only 5 percent of the families who were not poor and whose heads worked year round full time. But also important was the fact that the heads of the families worked at occupations which often pay too little to support even a small family. Nearly half the family heads who worked full time the year round and were poor were farmers, service workers, or laborers; only 2 percent were professional workers. Among the fully employed workers who were not poor, nearly one in seven were professional or technical workers, and only one in seven were listed as farmers, service workers, or laborers.

It is true that the poverty rate for all families with five or six children is three and a half times as high as for families with one or two, and that it is precisely the families of service workers, farmers, and laborers that are most likely to have the larger number of children. Yet it is also true among families of men in poverty, half of those with four or more children had incomes of less than \$3,000 for the year, an amount which would not be adequate even to support two youngsters, and only 25 percent could have supported as many as three. It is difficult to escape the conclusion that something more than family

size is involved. Of all families with children who were in poverty, fully a fourth, it is estimated, needed at least \$2,000 more than they had. Among poor families with five or six children nearly half had a deficit of \$2,000 or more, but even a tenth of the one-child families needed this much more than they had.

EXHIBIT 161

NATIONAL CONFERENCE ON FAMILY PLANNING: PARTNERS FOR PROGRESS

(By Mollie Orshansky, Panel on Domestic Programs, May 5, 1966, Office of Research and Statistics, Social Security Administration)

My assignment today is to review some of the facts about poverty among families as they relate to the issues of this Conference.

The fact that there now exists, even if only as an interim guide, a working definition of poverty makes it possible to pinpoint specific areas of concern in a way not possible before. One such area is the welfare of children.

In 1965 the Social Security Administration developed two criteria of poverty to assay the relative economic position of different types of households in the United States. The lower of these criteria is being used as the current measure of poverty for general planning purposes. The somewhat less stringent measure may be designated as near poor.

In these terms, what are the facts as we now know them?

Of the 60 million households in March 1965—counting as a separate unit every family group and every person living alone or with nonrelatives only—12 million or 1 out of every 5 had incomes in 1964 so low as to be considered poor by the Social Security Administration's basic poverty index. An additional 4½ million units above this poverty line nevertheless had incomes low enough to be bordering on dire poverty if not already in it. There were thus in the midst of plenty a minimum of 34 million Americans and possibly as many as 50 million who lived with privation as their daily portion. Included in this group were from 21 to 31 percent of the Nation's children and from 31 to 43 percent of our aged.

Let us restate these figures in more graphic terms. These measures of poverty and low income are based on the amounts needed by families of different size and composition to purchase nutritionally adequate diets at minimum cost when no more than a third of the family income is used for food. The lower of these two measures is based on the restricted variety of foods suggested in the Department of Agriculture economy food plan for emergency use or when funds are very low. The near-poor level averages about one-third higher in dollar cost and is derived from the low-cost food plan long used by public and private welfare agencies as a benchmark in developing standards of need.

In 1964, by a criterion which assumed an average nonfarm family of 4 could make do on an income of about \$60 a week—a standard implying about 70 cents a day per person for all food and no more than \$1.40 for all the other items that go into a family budget—a total of 12 million households were found wanting. These households included altogether 34 million persons of whom nearly 15 million were children under 18. This means that one out of every five children in the country was growing up in a family faced every day with bitter choices: is it better, wiser, or more expedient to insist upon a minimum adequate diet as opposed to some other necessity like paying the rent. Quite literally there is not enough money for both. An additional half a million children and their parents would be counted as poor if they had to rely solely on their own income rather than that of the relatives whose household and income they shared. And were we to take as the reference point the near-poor measure of need, by no means a generous standard, it is a total of 22 million children whose chances for the future were being jeopardized by their current deprivation.

The ill consequences of poverty set in early in life and last late as well: children of the poor were more likely to share a home with others besides their parents; they would drop out of school or leave the parental home earlier than youngsters better off financially. As early as their teens the children in poverty were already facing difficulties in the job market that presaged the problems that would plague them later on. In or out of school they were more likely than children of the nonpoor to report themselves as out of the labor force entirely, and when they did look for a job they were less likely to find one.

Some children would begin their encounter with poverty long before they reached their teens—because they were growing up in a home without a father

or because their parents had taken on family responsibilities while still very young. And for the child in a nonwhite family it hardly mattered what his age or circumstances of his parents: he would be poor as often as not.

Only one in nine families with children was nonwhite but these families included nearly two-fifths of all the children of the poor.

For the nonwhite youngster, as in truth for the entire nonwhite population, poverty was the order of the day. Nonwhite children ran a risk of poverty four times that of the white. Six out of ten were being reared in poverty and only 3 in 10 nonwhite children were in a family that would be considered above low-income status. Among white children, a total of one in four was poor or near poor, one in seven was poor.

Nonwhite families tended at the same time to include more children than white families and more often to have a woman at the head—situations both likely to be accompanied by a high risk of poverty. In a third of all nonwhite families with children in the home there were at least four; only a sixth of the white families with children had this many. Eight percent of the white and 27 percent of the nonwhite households with children relied on a woman as the family head.

On the other hand, these very situations are in part a result of the underlying poverty afflicting the nonwhite population as well as its cause.

The greater number of children being raised in nonwhite families signified more than the fact that nonwhite women bear more children. (Actually if white and nonwhite families at the same occupational and economic level were compared, the differences between them would be much less.) In part it reflected the overall poverty of the nonwhite population that brings two or more related family units under one roof.

Family groups with insufficient income are more likely to move in with other relatives in order to cut living expenses. Nonwhite families with their generally lower incomes are more likely to include subfamilies than white families—that is, parent-child combinations living in the home of a relative head—and consequently more related children in the household in addition to the family head's own children. Fully a seventh of all children under 18 in nonwhite families in 1964 were "related" children rather than "own" children—that is, they were not children of the family head or spouse but of some other relative who may or may not have also lived in the family. Only 1 in 30 of all white children in families were "related" rather than "own" children.

The poverty standard we use implies roughly an allowance of \$2.10 a person a day, but as a group households of the poor had to manage on far less. Their aggregate income came to only 59 percent of their estimated need, and in general the larger the family the greater the dollar gap between what it had and what it should have had. Poor families with children and headed by a woman were living as a group on less than half the income they needed. What makes the situation worse, of course, is that the chance of a family being poor increases markedly as the number of children increases.

Accordingly, among families raising five or more youngsters under age 18, the majority were, if not poor, at least near poor: the incidence of poverty rose from a tenth of families with one child at home to nearly half of those with six or more; the total in low-income status, that is, poor or near poor, came to 62 percent for families with six or more children compared with 17 percent for the one-child family. Among families headed by a woman the situation was even worse. Indeed, with 68 percent of all families of three or four children headed by a woman classed as poor and 83 percent of those with five or more, it becomes almost tautological to apply the near-poor standard which requires a third more income.

The statistics relating poverty to presence of children, disturbing as they are, refer only to those under age 18 currently in the home. They cannot tell how many other children there had been, now past age 18, or the number still to come. The need for special consideration of the peril of poverty for families with many children is underlined by recent findings that although the total number of families with children in poverty declined from 5.3 million in 1959 to 4.5 million in 1964, the number of poor families with 5 or more children did not decrease. There were still 1.1 million such families in poverty in 1964, as there had been 5 years earlier. And finally, in the face of the American ethic that economic well-being rests in the main on earning power, it is a sobering thought that for 6 million of the children counted poor, the status reflected that fact that 1½ million men and half a million women worked full time the year round and still did not earn enough to support their children.

This is a reflection of the different pay rates and lifetime earnings patterns that workers at different trades can expect. It appears, however, that the association is compounded. Not only do certain occupations pay less well than others, but workers in those occupations tend to have larger families than the others. Thus an income unlikely to be high to begin with must be stretched to provide for more children rather than less.

Of families headed by a male, year-round, full-time worker and with income above the poverty level, more than half had either no children under age 18 in the household or only one. Only 5 percent had more than four. By contrast, among the corresponding group of poor families fewer than a third had no more than one child in the home and nearly a fourth had five or more.

It is also a fact that mothers bringing up children without a father seem to have more children than women of the same age and color still living with a husband. One may well speculate on the relationship between too many children, too little income, and the breakup of a marriage. It is perhaps the inability of the man to earn—particularly among nonwhites—that is conducive to the marriage disruption or the failure to ever undertake legal marriage that leaves so many mothers to bring up children without a father.

It would seem now as though there are surely enough numbers to postulate and guarantee a relationship between family size and poverty. But the solution is not all that simple: We have not yet established the single cause of poverty and its sure and permanent cure.

The tenth of the Nation's families with 5 or more children did contribute almost half of the 15 million children counted poor in 1964. It is true that the poverty rate for all families with five or six children is four times as high as for families of one or two children and that it is precisely the families of farmers, service workers, and laborers—jobs that don't pay well as jobs go—that are most likely to have the largest number. Yet it is also true that among families of men in poverty, half of those with five or more children had incomes of less than \$3,000 for the year—an amount that would not be adequate even for two youngsters—and only 25 percent of them could have supported as many as three.

It is difficult to escape the conclusion that something more than family size is involved. The size and living arrangements of the families sometimes are the result of their poverty, not always its cause. Many families have children because they are poor, they are not poor only because they have children. Many with four or five youngsters would be poor even with two or three, although all would be less poor if their limited resources needed to be spread among fewer members. Yet even for many small families finding a way to add to income will remain a constant need if they are to exchange the bleak world of privation for the gracious living the majority of Americans take for granted.

The poverty roster today for all that it is 5 million shorter than it was 5 years ago bespeaks our past failure to take the steps to end for everyone the scourge of poverty. The task for today is to differentiate and provide for the diverse groups among the poor. Improvement of existing programs for income support can meet the needs of the old, the mothers of young children, and the others who cannot work. For the Negro, the woman and others now at a disadvantage in the hiring hall, it will be elimination of discrimination in employment opportunity that must be provided.

But for many households it is measures to strengthen the family that will be needed. A whole complex of new or revised programs must be devised to remedy the situation for the family heads handicapped not by sex, not by color, not by age, or even by unemployment—but who nevertheless live with poverty because they can't earn enough to support themselves or their family.

It is significant that every fourth household counted poor in 1964 was that of a white man under age 65, not living on a farm. One out of 5 poor families of two or more members belonged to a white man who had worked a full week every week in the year. And every third one-person household in poverty represented a white male worker whose full-time employment netted him less than the \$1,500 it takes to stay above the stringent poverty line.

And above all there are the children, the Nation's most precious resource. For the common benefit of all, we must find ways to provide for all of them, irrespective of the circumstances of their parents, the incentive, the means, and the possibility for extending education. Only then will they have their fair chance to escape poverty for themselves and for their own children.

Senator GRUENING. At this time I will place in the hearing record the testimony prepared for presentation by Bishop John Wesley Lord on behalf of the Board of Christian Social Concerns of the Methodist Church. The subcommittee regrets that it was not possible for Bishop Lord to appear in person to testify in support of S. 1676 which is endorsed in his prepared statement.

I also direct that a letter in support of S. 1676, sent me by Dr. John C. Scott, chairman of the Social Action Committee for the Cedar Lane Unitarian Church in Bethesda, Md., follow Bishop Lord's statement. (The above mentioned statement and letter follow :)

EXHIBIT 162

TESTIMONY PREPARED FOR PRESENTATION TO THE SUBCOMMITTEE ON FOREIGN AID EXPENDITURES

(By Bishop John Wesley Lord, April 15, 1966)

I am Bishop John Wesley Lord, resident in Washington, D.C., and today representing the Board of Christian Social Concerns of the Methodist Church. Let me begin, Mr. Chairman, by congratulating you and the members of this committee for the forthright way in which, through these hearings, you have established an open public forum on a major crisis of this century. Through the good offices of your committee the prestige of the Congress of the United States is at last publicly associated with a dramatic portrayal of the world population crisis.

Glancing through the papers presented at the United Nations World Population Conference in Belgrade last fall, I was amazed at the staggering realities which have not yet become generally known even to the highly educated citizens of our country.

In the Far East and Latin America, per capita food production is less than before the war, a quarter of a century ago. For 7 years world food production has barely kept pace with world population growth. Only a steady increase in the production of food and fiber of 4 percent yearly over the next 15 years will prevent massive famine. When we remember that even industrial Japan was able to achieve a yearly increase of only 2 percent in food production in the post-World War II years, we see the magnitude of the task before us.

Enough food can be produced in the developing nations to feed their people only if they can find the money to purchase fertilizer, pesticide, and improved strains of seed. How many Americans are aware of the disappointing and discouraging results to date of economic expansion efforts in these countries? The American people have not been told that the flow of capital from the rich to the poor nations must increase by *five times over* by 1975 if rapidly growing populations are to be cared for and the means to produce and distribute sufficient food are to be found.

I am a member of the National Citizens Committee for the World Health Organization, newly named the American Association for World Health. As I have witnessed the amazing achievements of the international health teams in combatting malaria and other ancient scourges of man, I have been proud to be associated even indirectly with such an effort. However, I now discover that malnutrition is the largest single cause of infant mortality across the world. It was relatively cheap and easy to spray mosquitoes, distribute wonder drugs, and inoculate children. Flushed with early victory, we have been sobered to find that the hard fight is still before us. All our early efforts will be in vain unless fertility can be controlled in Asia and Latin America, and unless food can be found to nourish the expanding populations.

We are gratified to learn from Mr. John W. Gardner's testimony before this committee that the Department of Health, Education, and Welfare has quickened its efforts in the population field. We were encouraged when AID Administrator David E. Bell reported to the committee a doubling of AID expenditures for population activities. Methodist representatives have testified favorably on the food-for-freedom bill, which will move away from the old surplus food idea and begin to reflect American responsibility both to help feed the world and to help developing nations to expand their own food production.

All of this is commendatory, but in the light of the harsh realities we face is it even a decent beginning? Do such programs lull the American people into believing our Nation is making anything like an adequate response to humanity's need? Perhaps the State and National conferences and the data-disseminating offices envisioned in the legislation before this committee will begin to make America aware of the tragic contrast between the immensity of the world population problems and the minute size of our response to date. Perhaps our citizenry will come to see the enormity of our sin in diverting our substance and the world's attention to a local skirmish in Vietnam while most of humanity faces the threat of a new dark age barely 15 years away.

Our people need to know that only widespread disarmament can liberate the capital needed to rescue the world's people from death and despair. They are entitled to know that America continues a narrow parochial interest in balance of payments, and an unwillingness to support the development of an international economic community. They should be led to observe the shameful way in which the developed nations continue to exploit South America, which with 70 percent of the world's energy has been enabled to put only 2 percent of that energy to work for her own people.

Mr. Chairman, the Methodist Church is morally committed to support every worthy public and private effort to marshal the resources of the nations in meeting the world population crisis. We share the general Judeo-Christian consensus on the ethic of responsible parenthood, and the Judeo-Protestant conviction that any effective and medically approved means of contraception may legitimately be employed by conscientious couples in the limitation of family size. We were perhaps the first Protestant body to affirm not only the right but the duty to control conception. May I read a portion of the 1964 general conference statement:

"We affirm the principle of responsible parenthood. Each married couple has the right and the duty prayerfully and responsibly to control conception according to the circumstances of their marriage. Married couples are free within the limits of Christian conscience to use those means of birth control which meet the approval of the medical profession. We find no moral distinction between periodic continence and the various types of contraception now available.

"We call on the churches to counsel married couples and those approaching marriage on the principle of responsible parenthood. We urge the churches to support public policies which make available birth control advice and means to women on public welfare who wish to limit their offspring."

In addition, The Methodist Church affirms the legitimacy of governmental programs in the field of population control. Again, let me quote:

"Overpopulation in vast areas of the earth has created a social crisis as threatening as the prospect of a third world war. World population, now approximately 3 billion people, will probably double before the end of this century. The ancient specters of poverty, famine, and war stalk the world.

"We encourage the churches to urge participation by their governments in international programs of population control. We urge the United States to implement its avowed policy of offering to any country on request technical assistance for population control. We favor the expansion of public and private research programs on fertility and demography."

Mr. Chairman, statements have been made before the committee to the effect that governmental activities in this field must necessarily lead to the coercion of mind and conscience, and the abridgement of individual freedom. May I express the conviction that failure of the Government to act on this matter will amount to a much more serious curtailment of individual freedom. Americans will be free to respond adequately to desperate human need only if their elected officials develop national policies and commit national resources to appropriate population control and human development programs. Americans will be free from the fear of world unrest and war only if our capital and technical skills are fully deployed to meet the needs of the developing nations. Americans will be victimized by the inexorable forces leading to world destruction, unless, guided and informed by dynamic national leadership, they support the public policies the times demand. Unless voluntary, democratic, rational means are now brought to bear on the population crisis, nations will come to live under a tyranny which defies comparison. The poverty stricken in our own land will be free to choose the size family they can support only if public and private agencies work together in planned parenthood education.

Because I am completely dedicated to freedom of conscience, Mr. Chairman, I favor the legislation now before this committee.

EXHIBIT 163

LETTER IN SUPPORT OF SENATE BILL S. 1676

(By Dr. John C. Scott, chairman of the Social Action Committee, Cedar Lane Unitarian Church, Bethesda, Md.)

MAY 9, 1966.

HON. ERNEST GRUENING,
*U.S. Senate, Senate Office Building,
Washington, D.C.*

DEAR SENATOR GRUENING: The fellowship of the Social Action Committee of Cedar Lane Church strongly supports Senate bill S. 1676 to coordinate and disseminate birth control information upon request.

We feel the passage of this bill is urgent, for without population control we face continued and increased water and air pollution, slum crowding, shrinking wilderness areas, traffic jams, and shortages of professional personnel.

We sincerely hope for a strong bill to insure the right of individual choice in obtaining birth control information.

Senator GRUENING. The statements of Mrs. Rennolds and Mrs. Robinson prove in part that the struggle to bring birth control knowledge to all Americans who want it is slowly, slowly being won. Contraceptive information is being provided through 251 Planned Parenthood centers throughout the Nation. I understand that twice as many couples now receive contraceptives in U.S. centers as they did 5 years ago.

I direct that the statement of the Virginia League for Planned Parenthood be included at this point in this printed hearing record; and that it be followed by an exhibit of Richmond's Maternal and Child Health Clinic manual: "The Barrier of Science," by Mrs. Katherine Brownell Oettinger; and a statement prepared and given by Wilbur J. Cohen, Under Secretary of Health, Education, and Welfare, at the national conference on Planned Parenthood-World population here in Washington, D.C., entitled "Freedom To Choose," on May 5, 1966.

(The above-mentioned items follow:)

EXHIBIT 164

STATEMENT OF THE VIRGINIA LEAGUE FOR PLANNED PARENTHOOD

PLANNED PARENTHOOD-WORLD POPULATION

The Virginia League for Planned Parenthood is a voluntary organization dedicated expressly to teaching, disseminating, and implementing birth control in the health department clinics in the Commonwealth of Virginia. Affiliated with PP-WP, the total program promotes activities in public information and education so that all classes of society may understand the social significance of planned parenthood; its contribution to the health of mother and child; its enrichment of family life; its economic contribution to society through responsible, informed parenthood.

EXHIBIT 165

MATERNAL AND CHILD HEALTH CLINIC MANUAL

(Richmond, Va., Apr. 29, 1966)

PHILOSOPHY

A clinic wherein expectant mothers may seek medical and obstetrical care, if unable to afford private doctors' services. It is our aim to give these patients the best medical care possible and to provide for their safety and welfare during the antepartum and postpartum periods. We also hope to help our patients to adjust to the emotional and physical changes that may take place during these periods.

DUTIES OF CLINIC PERSONNEL

1. *Nurses*

(a) Nurses will interview patients on each Monday morning intake clinic and do the bloodwork on each assigned patient.

(b) All nurses in the returnee clinics interview patients, excepting one nurse in room 7, whose duty it is to do all repeat bloodwork.

2. *Clerks*

(a) The office clerks register all patients, securing name, address, marital status, and telephone accessibility.

(b) Pull and file all clinic charts.

(c) Keep appointment charts drawn for expected sessions, for several days in advance.

(d) Answer phone calls, giving information.

(e) Keep record books at hand with dates of all future appointments at first available opening.

3. *Nurses aid*

(a) Weighs patients or assists in same.

(b) Runs urinalyses for presence of sugar and albumin.

(c) Prepares all examining rooms, keeping them replenished during clinic sessions.

(d) Fills medicine containers with drugs to be dispensed.

(e) Prepares trays and sterile packs.

(f) Returns all rooms to order, following clinic sessions.

(g) Counts all linen.

(h) Sterilizes all instruments.

(i) Compiles orders for all monthly supplies and stores received supplies.

(j) Compiles a set of blank records for new patients.

MONDAY INTAKE CLINIC

All newly registered maternity applicants are given a personal talk of welcome and detailed explanation by the MCH chief of service. Questions are to be submitted to him and all points of questions answered. This furnishes a personal interest and promotes rapport between patients and MCH staff.

INTAKE CLINIC ROUTINE

Duties of clinic nurses

1. Orient patient to clinic routine, explain all clinic procedure, and emphasize importance of keeping appointments on time as well as bringing urine specimen on every visit.

2. Secure complete prenatal history, recording same.

3. Complete the compiled history chart; i.e.:

(a) Yellow history sheet.

(b) Progress note sheet.

(c) Hospital admission sheet.

(d) Nurses reminder sheet.

(e) Call slip.

(f) Immunization record.

(g) Appointment card for patient.

(h) File card with EDC—priority rating on it.

(i) X-ray referral slip.

(j) "Pap" test record.

(k) "Pap" smear papers (four copies).

(l) Laboratory sheets: FA, STS, blood type, Rh.

4. Fill out call slip.

5. Furnishes referral for X-ray, noting most recent X-ray.

6. Furnishes referrals for VD treatments.

7. Furnishes each patient a personal card with recorded Rh and blood type (to be carried at all times).

8. Explains appointment times and number.

9. Checks report on urinalysis, recording same.

10. Ascertains if patient is able to pay for prescriptions given (referring patient to correct drug stores if unable to pay). Stamps each prescription with source of agency help.

11. Gives routine iron and calcium tablets with directions.

12. Furnishes patient with prenatal literature.
13. Gives explanation of hospital papers, regarding hospital fees expected. Special emphasis is stressed to all Johnston Willis cases, the importance of paying \$75 fee, cash in advance, prior to their eighth month of gestation. Hold Johnston Willis Hospital referral slip until the payment has been fulfilled.
14. Checks on any hospitalization carried and record same.
15. Ascertains if husband is in any armed service.
16. Directs patient to undress and put on gown.
17. Gives immunizations if necessary, only after patient signs for the same. Gives no immunizations unless M.D. is in clinic building.
 - (a) Salk polio vaccine—1 cubic centimeter for three doses each with interval of 1 month between No. I and No. II and 7-month interval before No. III.
 - (b) Influenza or virus vaccine—2 doses of 1 cubic centimeter with interval of 2 months between No. I and No. II. Salk and virus cannot be administered the same day.

PRENATAL CLINIC CLASSES

Prenatal instruction is to be held on a routine basis in all returnee sessions. These classes are to be taught by one of the clinic nurses. Various media, i.e., charts, graphs, etc., and methods may be utilized in teaching these classes. Topics to be covered are fetal growth, labor, delivery, problems in pregnancy, dietary regulation, proper wearing apparel, and care of newborn infants. These instruction classes will be fitted into the clinic schedule at the most convenient time for everyone concerned.

For ante-partum returnee routine

Check and record

1. Return of blood typing and STS reports.
2. Return of "Pap" and FA reports.
3. Urinalysis.
4. Hemoglobin level (if below 11.5 gms. refer for repeat checking every 3 weeks).
5. Weight gain or loss.
6. Progress in immunization regimen.
7. Place priority rating in front of nurses reminder sheet.
8. On date when 8 months summary is due—inscribe for clinicians STS, Hb., fetal heart tone, position, and presentation, height of fundus.

ROUTINE QUESTIONS AND EXPLANATIONS

1. Check weight, advise with nutritionist and doctor.
2. Check blood pressure.
3. Is urine specimen brought?
4. Is iron-calcium being taken? Is home supply low?
5. Ask the patient for problematic questions.
6. Explain procedures to be followed during present visit.
7. Offer explanations of abnormal findings such as Rh negative factor, elevated BP, positive STS or FA.
8. See that return dates are on all patients cards.
9. Ask for date of first fetal activity, record same.
10. Make notation regarding edema, varicosities, hemorrhoids and leucorrheal discharge.
11. Instruct patient to call for earliest appointment if she is unable to come at any given time.
12. Encourage 6-week check after hospital delivery, instructing no douching or sex relations until after this examination.
13. Instruct patient to report time and date of her delivery to clinic.

Post-partum returnee routine

1. Record date of delivery, place and nature (complicated, uncomplicated, or operative) on progress notes.
2. When did lochia cease?
3. Has menses resumed? When? How lengthy?
4. Is elimination satisfactory?
5. Are hemorrhoids present and if bleeding?
6. Is urine specimen brought?
7. How is appetite?

8. Any sickness, cold or exposure to infections since labor?
9. Make note of "general feeling" (lethargic, tiring easily, loss of appetite, despondency, insomniac, etc.)
10. Check blood pressure, record same.
11. Check loss of weight since AP visit, record same.
12. Refer for check of hemoglobin level.
13. Check progress of immunization regimen. Advise the patient accordingly.
14. Record if nursing infant or not.
15. Record weight and general condition of baby at birth.
16. Inquire if baby is under medical care.
17. Suggest early registration of each newborn in the well child clinic service.
18. Inquire if patient is interested in contraceptive advice. If she is, fill out a history and progress sheet for transference to family planning clinic.
19. Until registration in the family planning clinic suggest that she use the vaginal foam with doctors' approval.
20. If menses have returned, plan a return visit to family planning clinic as soon as possible at its ending that she may start on contraceptive pills or intra-uterine device.

EQUIPMENT IN EACH NURSE'S ROOM FOR MATERNITY CLINIC

1. Blood work tray:
 - (a) Blood lancet in medicine glass.
 - (b) Two hemometer stands.
 - (c) Three hemometer tubes.
 - (d) Bottle of spirits of ammonia.
 - (e) Glass slides.
 - (f) Four plain oxalate tubes.
 - (g) Two medicine droppers.
 - (h) One bottle HCL.
 - (i) One bottle sterile water.
 - (j) One tube of water for cleaning pipettes.
 - (k) One tube of acetone.
 - (l) One tourniquet.
 - (m) Band-aids in medicine glass.
2. "Pap" tray:
 - (a) Six cytology containers (two pkgs. each).
 - (b) "Pap" sticks.
 - (c) One silver nitrate stick.
 - (d) One can spraycete.
 - (e) FA laboratory slips (miscellaneous).
 - (f) Two packages of sterile cotton tip applicators.
3. Instrument tray:
 - (a) Lubricating jelly.
 - (b) Cotton balls in small basin.
 - (c) Three Thoms pelvimeters.
 - (d) One pelvic speculum.
 - (e) Tape measure.
4. Glove tray:
 - (a) Eight right-handed disposable gloves, size 8.
 - (b) Eight left-handed disposable gloves, size 8.
 - (c) Supply of 4 by 4's.
5. One bottle each of Salk and flu vaccines.
6. Boat of 2cc sterile syringes.
7. Box of sterile disposable needles.
8. Container with sterile blood needles.

INSTRUCTIONS FOR BLOOD WORK

New patients

1. Rh typing: Insert 7 cubic centimeters of blood into oxalated tube, tip 2.3 times to oxalate the blood. If there is a previous clinic Rh positive test recorded, this procedure is waived. Always repeat on every previous Rh negative. Send both tubes to city health laboratory.
2. Hemoglobin:
 - (a) Place 2 grams of 0.1 normal solution of HCL into a hemometer glass square.

- (b) Collect one good sized drop of patients' blood on a clean dry glass slide.
- (c) Draw up drop of blood from side into a clean dry pipette to 20 mm mark on the pipette.
- (d) Blow 20 mm of blood in the pipette into the hemometer square with the HCL.
- (e) Allow content to stand 10 minutes.
- (f) Add distilled water—two to three drops at a time, stirring each time until color matches that standard blown glass scale located on the sides of the hemometer tester.
- (g) Read directly the concentration of hemoglobin in grams per 100 milligrams of blood.

RETURN PATIENTS

1. Repeat hemoglobin test every 3 weeks if level is below 11.5 grams.
2. Take repeat STS at 8 months of gestation. Secure 5 cubic centimeters of blood in tube and send to Richmond city laboratory.
3. Antibody check on patients with Rh negative factor. Do this at initial finding and repeat again both at 7 months and at 8 months of gestation. Repeat this procedure more often if titre is elevated.
4. Nurse attempts to secure blood type on the father of the fetus, by having him come to the clinic.
5. Drawing blood for titre—place 5 cubic centimeters of drawn blood into each of two tubes. Label bottle No. 1 with patients' name and birth date on attached adhesive tape. Bottle No. 2 has special MCV requisition form—which must be filled out completely. Be certain that the date when blood is drawn is tabulated thereon.

CLINIC ROUTINES FOR MATERNITY CLINICIANS

- All patients are to be seen by a doctor on every visit.
- All clinicians are to record all measurements, examinations, medications, diagnoses, hospital references, venereal clinic transferences, dietary advice, and date of return appointments on patients charts, dating them and signing same.
- All clinicians are to sign clinic register at the MCH secretary's desk, to facilitate honoraria. Be certain of correct date and hours of clinic attendance.
- All clinicians have access to consultation and advice with the Chief of MCH services at all times.
- All clinicians are expected to report any inability to attend clinic in adequate time so that a substitute doctor may be obtained.

ORDER OF SEEING PATIENTS

1. Interview returnees, check all laboratory reports, secure all pertinent physical conditions, advise dietary regimen, and order all necessary medications, check carefully each positive STS or FA and record date of last administered venereal therapy.
2. Complete all 8-month summaries, as to height of fundus, fetal heart tone, position, and presentation. Secure mutuo-accommodation of fetal head to pelvic inlet.
3. Give routine 6-week postpartum examinations and furnish all needed MCV clinic referrals.
4. (a) Administer complete antepartum examinations on all new patients, recording results of physical and pelvic findings.
 - (b) Cautious pelvimetry and diagnoses of pelvis.
 - (c) Take routine "Pap" smear.
 - (d) Take routine FA cultures from both cervix and urethra.
 - (e) Sign hospital admission sheets.
 - (f) Give a written date for return appointment.
 - (g) Personally sign all diagnoses, medications, and referrals on the chart.

FAMILY PLANNING CLINIC ORGANIZATIONS

Philosophy

To help maintain a woman's optimum health in planning her family. To be of sympathetic understanding and to offer individual contraceptive advice to all women who are unable to pay for private medical care.

Eligibility

1. Patient must be indigent.
2. Patient must range between 14 years to menopause, whether married or single, providing they have had a pregnancy.
3. Any nonindigent patient must present a signed referral by any licensed medical practitioner.

Appointments

Attendance is by appointment only. The clinics are held only on each Wednesday, with registry from 8:30 a.m. to 9:30 a.m. or from 1 p.m. to 2 p.m.

Charges

Oral contraceptives: 1-month supply \$1; vaginal foam, one bottle with applicator \$1; diaphragm with cream, no fee; and intrauterine devices, no fee. If the patient can positively not pay, any contribution is acceptable.

Intrauterine devices

Both Gynekoils and Lippes loops are utilized with record kept of date of insertion, patients name, and results.

All applicants for an intrauterine device are interviewed personally by the chief of MCH, who evaluates and grants their acceptance or refusal. Each woman is given individual instruction as to what to expect and procedures to be self-maintained. The nurse reiterates, and the operating clinician follows through so that there is a thorough understanding. Dates for return examination are furnished before the patient leaves the clinic.

Contraceptive pills

Two varieties of medication are available. A detailed explanation is furnished each patient as to the daily inception. Additional pills are given to cover possible breakthrough.

All questions are answered by the administering nurse, with request that such routine be repeated by the patient to insure proper comprehension.

First dispensation is to last 1 month, later dispensations are for 2-month supply or (3-month).

Date of return is given at each administration with admonition that these are for her individual usage only.

Patient is instructed to call at anytime to report any untoward results or symptoms.

PLANNED PARENTHOOD CLINIC ROUTINE

1. Appointment is made in person or by phone.
2. Patient is registered by admission clerk.
3. A nurse interviews the patient, completes the history on new applicants, or makes pertinent notation on returnees.
4. Weight is recorded by nurse on every visit.
5. Nurses in rooms 2, 3, 5, 6, and 9 assist the physician in examinations.
6. Nurses give postconferencing, after patient is seen by M.D.
7. All patients have a yearly pelvic examination and a "Pap" smear. "Pap" alone is repeated in 6 months.
8. All new patients must have a pelvic examination and "Pap" smear, unless early transferees from postpartum clinic.

DUTIES OF PLANNED PARENTHOOD CLINIC PERSONNEL

Clinicians

Interview all patients with problems, evaluate these with physical and mental conditions found. Transfer patients from one oral contraceptive to another. Limit of Norlestrin 3 years. Limit of Oracon 2 years.

Insert intrauterine devices only after signed approval of clinic chief and signed patient acceptance.

Insert intrauterine devices after cautious pelvic examination.

Refers all hospital patients to proper MCV clinics (gyn, surgery, anaplasia, etc.).

Consults with chief of MCH about any or all problems.

ROUTINE FOLLOWED IN PLANNED PARENTHOOD CLINICS

1. All patients are interviewed by a nurse on every visit.
2. Each new patient is furnished an examination of heart, breasts, varicose-tracing, a "Pap" test, and pelvic examination by attending clinician.

3. One nurse assisting doctor in each private examination room for any given reason.
4. One nurse assisting doctor in each insertion of intrauterine device.
5. One nurse records dispensation of contraceptive pills, date, and amount given.
6. Courteous reassurance and informative cooperation is to be maintained at all times.

EQUIPMENT FOR PLANNED PARENTHOOD CLINICS

1. Instrument tray:

- (a) Lubricating jelly.
- (b) Disposable nonsterile gloves size 8.
- (c) Basin of cotton balls.
- (d) Calculator.
- (e) Four sponge forceps with attached cotton balls.
- (f) One Martin pelvimeter.
- (g) Three Thoms pelvimeters.
- (h) Five vaginal speculi.
- (i) Tape measure or ruler.

2. "Pap" tray:

- (a) Six cytology containers with four laboratory sheets.
- (b) "Pap" sticks.
- (c) Cotton tipped applicators.
- (d) One silver nitrate stick.
- (e) One can of sprayeye.
- (f) FA laboratory slips.
- (g) Two packages sterile cotton tip applicators.
- (h) One package "Pap" records.

3. Coil tray:

Keep eight coil trays available for each clinic session assisting nurse secures these from utility room.

- (a) Speculum.
- (b) Tenaculum.
- (c) Sterile towel (opened).
- (d) Cotton balls.
- (e) Cotton tip applicators.
- (f) Small cup for antiseptic solution (zepharin).
- (g) Sterile disposable gloves, size 8.
- (h) Gynekoil or Lipps loop with inserters in special sterile boat.
- (i) Clipping scissors (sterile).

WELL CHILD CLINIC ORGANIZATION

Philosophy

A clinic wherein parents or guardians may bring their preschool children for systematic health examinations and therapeutic protection by pediatric examination together with routine immunizations needed under city health department requirements. Concentration is on the development of the well child, with correct referral to clinics for any pathological, surgical, or psychiatric care. Clinicians evaluate and order routine immunizations. They also record growth development, nutrition, dentition, checking the criteria which are desirable at the accruing periods of growth. All medical problems are discussed and behavioristic problems are advised. We hope to support the mother and child in any difficulties which present themselves.

Eligibility

Any infant from 6 weeks of life to 2 years of age, providing the parents or guardians have not the means to afford a private pediatrician.

*Duties of clinic personnel**Clerks*

Registration of all applicants, following phone appointments, postpartum hospital appointments, personal applications at registry window, or referrals given by any city physician with personally signed authorization.

Establish on record books—date of birth, place of birth, eligibility, name of both parents, address of mother, and accessibility of phone.

Answer all phone applications, giving time and date of clinic appointment.

Keep records pulled for expected cases well in advance.

Have all clinic records filed succeeding each completed clinic session.

Type registration and information on index cards. Type and insert labels on all new charts; separate and transfer field records to the proper health centers.

Check registration sheets and report all failures in appointments; file all return appointments in calendared appointment books; report all pertinent data to clinic supervisor of nurses.

Coordinate with MCH chief in all matters; confer with MCH chief to whom each clerk-typist is directly responsible.

Nurses

1. Interview parent of all infants or children.
2. Weigh each child routinely.
3. Take temperature on all applicants. (All temperatures above 100° should be referred to MCV pediatric services).
4. PKU test is to be taken on first visit. This test is to be repeated by field nurse if report is positive.
5. Send phenylplate call slip to district public health nurse.
6. Have all positive PKU's recorded in special record book, kept by nursing supervisor of clinic.
7. Hemoglobin is secured at 6 months of age; repeated at 1 year, and at each year thereafter, if reading is satisfactory.
- If HB is eight or below, child is referred to MCV pediatric services.
- If HB is nine, the test is to be repeated in 2 weeks following administration of iron therapy.
- If HB is 10, liquid iron may be started and the HB repeated in 10 months.
8. Give PPD where indicated. Start by age of 5 months. Repeat yearly.
9. Nurse may make a call slip out for district public health nurse, if necessary. This facilitates instruction of mother.
10. Give routine immunizations after child is seen by doctor. No immunizations are to be given within the health department unless there is a licensed practitioner of medicine within the building.
11. Assist physician with every child examination.
12. Do postconferencing with mother after each examination.
13. Complete all necessary referrals to MCV.
14. Furnish parents with proper child care pamphlets.

ROUTINE OF RETURN PEDIATRIC EXAMINATIONS

1. Unless baby of 6 weeks is entered, first clinic exam is 6 months, then at 12 months
2. Yearly reexamination by physician until child is 6 years of age.
3. All appointments written for routine immunizations.
4. Consult with clinician as to advisability of giving immunizations in presence of slight cold, body rash or exposure to any communicable disease.

Age	IMMUNIZATION SCHEDULE	Vaccine
1½ to 2 months	DPT No. 1, tri-valent polio No. 1.	
3 months	DPT No. 2.	
4 months	DPT No. 3, tri-valent polio No. 2.	
5 months (or fraction)	PPD.	
6 months (or fraction)	Smallpox.	
9 months	Live measles.	
10 months	Tri-valent polio booster.	
12 months	DPT booster.	
4 years	DPT booster.	
5 years	Tri-valent polio booster.	
6 years	Revaccination (smallpox).	

If infant has received two Sabin, give TVP as No. 2 in 2 months, then booster 6 months later.

If infant has received one Sabin, treat child as having received none and give TVP series as listed above.

PPD test is begun at 5 months, prior to smallpox vaccination. Repeat yearly.

At the initial 5 months PPD administration, instruct a clinic return on following week to have test read. Follow this by a smallpox vaccination if needed at this time.

INSTRUCTIONS TO PARENTS ABOUT MEASLES VACCINE WITH GAMMA GLOBULIN

The left arm where gamma globulin was given may be sore.

About the 5th to the 12th day, the child may have a slight rash and/or fever, but he usually will continue to feel well despite this.

If the child really needs it, give baby aspirin every 6 hours for no more than 2 days.

Age, 1 year and under, give one baby aspirin (1¼ grain).

Age, over 1 year to 2 years, give two baby aspirins.

Give the child extra liquids to drink while he has fever.

Call the nurse if you have any questions, telephone: 649-4377.

Essential factors of routine physical examination

Heart, lungs, abdomen, genitali, skin, eyes, ears, nose, throat, glands.

Circumferences of head and chest, and length measurements are recorded until baby is 6 months of age.

GUIDE FOR RECORDING GROWTH AND DEVELOPMENT

Age	Behavior
1 to 2 months	Head held bobbingly erect; responds to talk; follows midline movement with eyes.
3 to 5 months	Head is balanced; recognizes bottle; takes object in hand to mouth; laughs and coos.
6 to 8 months	Rolls from side to side; may pull up; sits with some support; reaches and grasps using thumb; drinks from cup, uses fingers to feed self; first tooth may appear; variety of sounds increases.
9 to 12 months	Sits without support; pulls up to standing and may walk holding on; says "da da," copies other sounds; tries to feed self (spoon, cup, bottle); beginning to show hand preference; waves by-by.

GUIDE FOR OBSERVING AND RECORDING DEVELOPMENT

12 to 18 months	Stands without holding; puts objects in and out of container; begins to walk without support (toddler gait); speaks a few words; follows simple command (will hand you block upon request); tries to use cup and spoon.
18 to 24 months	Uses 3-word sentence with verb; can turn pages (not 1 at a time); does not use spoon adequately yet; is able to seat himself in child's chair (backs or slides into it); play is on solitary level; has bowel control; holds glass with both hands to drink; walks up stairs; pencils spontaneously with pencil or crayon.
2 to 3 years	Develops bladder control; holds glass with 1 hand, uses spoon with some spilling; play in parallel, not yet co-operative with other children; helps to dress self; uses sentences; asks "why"; uses me and mine; runs well.

Clinicians may refer patients to private pediatrician or MCV for any problems, according to mother's preference or ability to sustain cost of services.

Referrals may also be made to a district public health nurse for any specific reason.

Duties of nurses aid in well-child clinic

(a) Prepares all examining rooms, keeping them replenished during clinic sessions.

(b) Allocates needed immunization sera to distributing nurses, instruments, linens, and checks batteries in all otoscopes in each examination room.

(c) Keeps supply of pediatric drops and tablets on immediate hand for dispensation by clinician or nurse.

(d) Returns all rooms to order following clinic sessions.

(e) Counts all linens.

WELL-CHILD EXAMINATION ROOM EQUIPMENT

1. Hemoglobin tray.
2. Thermometer tray.
3. PPD tray.
4. Stergun.
5. Jar of pediatric tongue depressors.
6. Flashlight.
7. Otoscope.
8. Stethoscope.
9. Tape measure.
10. Baby scales.
11. Boat of sterile syringes.
12. Disposable sterile hypodermic needles.
13. Can of alcohol—cotton balls.
14. Sterile forceps in alcohol jar.
15. Medicine glass full of bandaids.
16. Biologics.
17. Tri-Vi-Sol for dispensation to indigent.
18. Mol-Iron for dispensation to indigent.
19. Vita-Chew tabs for older indigent children.
20. Two containers of tuberculin syringes.

BIOLOGIC SUPPLY CARRIED

1. Box Tri-Valent polio vaccine.
2. Four boxes of measles vaccine.
3. Two vials of gamma globulin.
4. Twelve DPT vials.
5. Two pediatric DT's.
6. Six tubes of smallpox vaccine—each holding 10 immunizations.
7. Twelve tubes of smallpox vaccine—each holding five immunizations.

ADJUNCT MCH CLINIC PROCEDURES

The techniques outlined in this manual are to be observed in detail, within the Southside clinic, or in any satellite clinics which may be installed at future dates.

Exceptions:

All general infections are to be referred to central clinic building for therapy. Reports of treatment will be mailed immediately to the clinic of registration.

All patients desirous of, or recommended for insertion of intrauterine contraceptive devices are to be referred to the office of the MCH chief for evaluation, i.e., permission or denial of same.

All intrauterine devices are to be inserted within the central MCH clinic building.

EXHIBIT 166

THE BARRIER OF SILENCE

(By Katherine Brownell Oettinger, chief, Children's Bureau, U.S. Department of Health, Education, and Welfare, Welfare Administration, Washington, D.C.; remarks before the Planned Parenthood Conference, Shoreham Hotel, Washington, D.C., May 5, 1966)

There could be no more apt theme for this national conference than "Partners for Progress."

The impressive scope of your program, the distinguished speakers who have addressed you, and the momentum which the conference already is creating in forwarding this partnership must be an inspiration to each of you.

Indeed, as each day passes, we can all see clearly the need for a partnership in the public and voluntary sectors of our national society to achieve the goal which assures each newborn child the full entitlement of his birthright.

There can be no argument with this worthy purpose, for children are indeed the world's best and only hope for a bright tomorrow.

It should follow, equally without argument, that to assure the full entitlement of his birthright for every child requires basic parental decisions: The most fundamental of these is the right to decide how many children a family can rear in economic, physical, and emotional health.

I think it is appropriate to remind you, once again, that this is the proper sequence in which to view our partnership. The rights of the child to be well born should be as inalienable as any other right which we consider a fundamental part of the advancement of our civilization.

Sequentially, only as parents have the right to the kind of information which will secure that right for every child will we have fulfilled our obligation to the children of all the tomorrows.

I appear before this group as the Chief of the Children's Bureau, which is the Nation's spokesman for children. We therefore have a special responsibility to remind each of you that the common barrier to the fulfillment of these rights is the lack of adequate communication—communication among the helping professions; communication between the helping professions and those they seek to reach; communication that assures everyone, here or abroad, that our national policy on family planning is based on the twin principles of the preservation of human dignity and the complete freedom from any form of coercion.

I cannot minimize the importance of breaking this barrier. In its own way it has infinitely greater significance than the achievement of aviation in breaking the sound barrier—an achievement which launched a whole new era in our conquest of the skies and, indeed, the outer reaches of our universe.

It has been about two decades since the aviation sound barrier was broken—now air speeds have increased so greatly that we have exceeded mach 5 in our most advanced experimental aircraft.

But in breaking our own sound barrier—which in reality is a barrier of silence—our achievements will not be measured in supersonic terms, but by the enhancement and enrichment of family life, with such concomitant dividends as raising the whole level of our national aspiration, and equipping each individual to make a more measurable contribution toward reaching that level.

How do we break our own sound barrier—our barrier of silence?

I would suggest to you that it has these characteristics:

1. Misinformation, or complete lack of information, among large groups of our people about their right to know how to plan their families.
2. Ambivalence, particularly among those members of the helping professions who work at the community level, not only about how to give information but about whether they have the appropriate training to give this information in a way that is acceptable.

3. Our failure to pay enough attention to the needs of children, at whatever age they are able to grasp it, for the kinds of information about basic physiology and biology which will give them the kind of solid factual background we expect them to have in other subjects which surely may not exert as great an influence on their total life patterns, I would emphasize that we must pay more attention to the needs of children for this kind of information at whatever age they are able to grasp it. It is vital that they consider the subject of sex at a time in their lives before they are caught up in the emotional aura and trauma of adolescence.

I spoke of misinformation, or lack of information, and a single study serves to illustrate this point. At Tulane University, a project funded by the Children's Bureau showed that in a survey of families in a cross section of socioeconomic levels in Metropolitan New Orleans, 91 percent agreed that couples have the right to decide for themselves when to stop having children.

But in the lower socioeconomic group, only 53 percent had even rudimentary knowledge of reproductive physiology. The only variable factor in the groups surveyed was the degree of adequacy of their education. In the low socioeconomic group, three-fourths of the women never want to get pregnant again, two-thirds of them want more information about how to keep from getting

pregnant and nine-tenths want their sons and daughters to be informed of family planning techniques.

The ambivalence among the members of our helping professions which is another characteristic of our barrier of silence shows us as clearly as anything could that adequate information about family planning must become a part of the curriculums of schools of medicine, social work, education, nursing nutrition, to mention a few; and that refresher courses must be provided to those who are already practicing their professions. Steps already are being taken in this direction.

The failure to meet the needs of our children for information about basic physiological and biological concepts is costing us dearly indeed when literally thousands of girls 16 years of age and under have babies each year—the end result of immature sexual conduct on the part of children.

We can take some comfort from the fact that the teaching of biology in both primary and secondary grades is now much more sophisticated than it has ever been; that the general educational materials now available undoubtedly will make significant changes in the attitudes of children now in the primary and secondary school systems of our country because of the greater understanding of human biology.

But the "new biology" will not reach every child who today could benefit from it. It is ironic indeed that today these children who study animal husbandry in high school have a much greater understanding of human physiology than their classmates. To reach other children, we must extend our information giving through the churches, through youth serving agencies, through the family.

It has been said many times that mothers are the principal source of education for their children. This is a precept which has traditionally underlined the publications which the Children's Bureau has prepared for parents to help them rear their children from infancy through adolescence.

It is the Bureau's purposeful intent to make information about family planning available in each one of the parent publications which it issues, just as it has updated other areas of health knowledge for more than 50 years, so that parents themselves—many of whom out of self-consciousness or self-imposed restraints have not shared their own knowledge with their children—will feel easier about playing their appropriate role in being the molders of their children's future in this important area.

The Bureau also is planning to gather together materials, which have been adequately tested on groups up and down our socioeconomic scale, which will be available to parents in addition to our regular publications. We regard this as a parallel obligation to that which already is being assumed in giving training to members of the helping professions who will be working in the area of family planning.

The group that troubles us most, in breaking the barrier of silence, is that group in the low socioeconomic levels of our society with whom we have not established effective communication. I have said it before, and I say it again today, that it is my firm conviction that these men and women would like to be the last tonguetied generation and that we have an obligation no matter how much innovation and ingenuity it may take, to see that they know they have the right to information about planning families and that means are at hand to help them if they wish to exercise that right.

In our battles against all communicable disease, in our more recent campaign against polio, in our current efforts to tell our people about the need for vaccine against measles, we have been motivated by the highest concepts of public health in making sure that immunization as a weapon was used to its maximum degree.

I maintain that we have a similar obligation here: that the right to plan families is a public health concept which must have the same basic community roots which we seek for all programs which affect the lives and well-being of our people.

Early this year, President Johnson said, in a message to Congress, "Population planning remains a question for each family and each nation to decide. But we must be prepared to help when decisions are made."

Let us be sure we are equal to that charge.

EXHIBIT 167

FREEDOM TO CHOOSE

(By Wilbur J. Cohen, Under Secretary of Health, Education, and Welfare, a speech presented at the National Conference on Planned Parenthood-World Population, Shoreham Hotel, Washington, D.C., May 5, 1966)

I am very pleased to participate in this very important conference. Your organization has led the movement in behalf of family planning and your work on population problems has focused attention on one of the most serious problems facing the world today.

Your sustained concern with the integrity of the family and the development of the individual to the fullest potential within the family and within the community has helped in bringing about public understanding of the responsibilities of parenthood and in dealing more effectively with these vast problems we face in a rapidly changing society.

Until a few years ago, family planning and birth control problems were "hush-hush" subjects, not only in polite circles but in the executive branches of government as well. Now, through your efforts and the efforts of President Johnson, Senators Gruening, Hart, Clark, and Tydings, the Secretary of Health, Education, and Welfare, John Gardner, and many others, these subjects are being discussed openly more courageously, and significant developments are taking place and this is as it should be.

Senator Gruening has probably done as much as any one person in the Congress to bring these problems into the open. The hearings which he has conducted have focused attention on the nature of the problems. He has contributed courageously to the education and enlightenment of the American public. Because of his efforts and others like him, we are going through a period of rapid change in thinking about family planning and population problems.

I need not tell you that there has been a long history of opposition to family planning, and that there has also been controversy over the Government's role in the area. Until very recently both State and Federal Governments have been inhibited in this field because of the fear of religious and political controversy. It was, after all, less than a year ago that the U.S. Supreme Court declared unconstitutional a State law making contraceptive use illegal.

Now there is a growing body of opinion favoring the dissemination of information about family planning methods. The subject is now openly discussed in the public media and in public gatherings and debated in congressional circles. This is all to the good and consistent with that belief that we have in our country both individual freedom to know and to choose.

And now, you may rightfully ask, "What is the Federal Government's role in this important area?"

FEDERAL POLICY

President Johnson as you know has made several important statements regarding the Federal Government's responsibility in the area of family planning and world population problems.

In his state of the Union message in 1965, President Johnson said:

"I will seek new ways to use our knowledge to help deal with the explosion in world population and the growing scarcity in world resources."

In his state of the Union message this year the President reaffirmed his concern with the problem.

Then again on February 2 of this year, in his very important message on international education and health programs, the President said:

"By 1970, there will be 300 million more people on this earth. A reliable estimate shows that at present rates of growth the world population could double by the end of the century. The growing gap—between food to eat and mouths to feed—poses one of mankind's greatest challenges. It threatens the dignity of the individual and the sanctity of the family.

"We must meet these problems in ways that will strengthen free societies—and protect the individual right to freedom of choice. To mobilize our resources more effectively I propose programs to—

"(1) Expand research in human reproduction and population dynamics.

We are supporting research efforts through the Department of Health, Edu-

education, and Welfare, AID, and the World Health Organization. I am requesting funds to increase the pace and scope of this effort. The effort, to be successful, will require a full response by our scientific community.

"(2) Enlarge the training of American and foreign specialists in the population field. We are supporting training programs and the development of training programs through the Department of Health, Education, and Welfare, and AID. We will expand these programs at home and abroad.

"(3) Assist family planning programs in nations which request such help. Here at home, we are gaining valuable experience through new programs of maternal and infant care as well as expansion of private and public medical care programs. Early last year we made clear our readiness to share our knowledge, skill, and financial resources with the developing nations requesting assistance. We will expand this effort in response to the increasing number of requests from other countries."

The policy of the Federal Government was stated very clearly by President Johnson this year in his message to the Congress on health and education when he said:

"We have a growing concern to foster the integrity of the family, and the opportunity for each child. It is essential that all families have access to information and services that will allow freedom to choose the number and spacing of their children within the dictates of individual conscience."

The President also stated:

In the fiscal 1967 budget, I have requested a sizable increase in funds available for research, training, and services in this field. The National Institute for Child Health and Human Development will expand its own research and its grant program to study human reproduction. The Children's Bureau and the Office of Economic Opportunity will support family planning to the maternal and infant care programs in local communities when requested. State agencies will be aided by Federal welfare funds to provide family planning services to mothers."

Through the National Institute of Child Health and Human Development, we are extending our knowledge of fertility, infertility, reproductive biology and family planning. Through the Children's Bureau, the Bureau of Family Services and the Office of Economic Opportunity, the Federal Government is providing financial support of family planning programs in the local communities in cooperation with AID programs abroad now being expanded.

The Department of Health, Education, and Welfare is taking steps to carry out the President's policy statements. The Secretary of Health, Education, and Welfare, John Gardner, is providing forceful leadership for the Department's activities in family planning and population problems.

In January of this year, the Secretary, in a memorandum to the heads of operating agencies, defined departmental policy on population dynamics, fertility, sterility, and family planning.

This policy statement reads as follows:

"The policy of this Department is to conduct and support programs of basic and applied research on the above topics; to conduct and support training programs; to collect and make available such data as may be necessary to support, on request, health programs making family planning information and services available; and to provide family planning information and services, on request, to individuals who receive health services from operating agencies of the Department.

"The objectives of the Departmental policy are to improve the health of the people, to strengthen the integrity of the family and to provide families the freedom of choice to determine the spacing of their children and the size of their families.

"Programs conducted or supported by the Department shall guarantee freedom from coercion or pressure of mind or conscience. There shall be freedom of choice of method so that individuals can choose in accordance with the dictates of their consciences.

"The Department will make known to State and local agencies that funds are available for programs of the sort described above, but it will bring no pressure upon them to participate in such programs.

"Each agency shall assure the effective carrying out of this policy, the regular evaluation of programs and the reporting of information on programs to this office.

"The Assistant Secretary for Health and Scientific Affairs will serve as the focal point for departmental policy and program coordination; will review and

evaluate policies and programs; will conduct liaison with other Departments; and will cooperate with interested public and private groups."

Secretary Gardner has designated Dr. Philip R. Lee, the Assistant Secretary for Health and Scientific Affairs, with the responsibility for developing, coordinating and strengthening the Department's policy and programs dealing with family planning and population problems. A new post, Deputy Assistant Secretary for Science and Population, has been established. The Department recognizes that scientific development and population problems are closely related to its programs and policies dealing with family planning. The New Deputy Assistant Secretary will focus attention on these areas.

We are organizing a series of regional meetings to explain the Department's policy and to describe the resources available to help States and local governments, as well as local institutions, to develop family planning programs. These meetings under the leadership of regional office staff will serve as a means to pass the information on our policies and programs along to the State and local level.

The Secretary has set up a task force under the Assistant Secretary for Health and Scientific Affairs to evaluate the results of the regional and State meetings and to make a recommendation as to the desirability of convening a national meeting to consider population developments and to consider alternative approaches to deal with related problems.

The Department will shortly establish a Secretary's Committee on Population and Family Planning. This committee composed of persons from all parts of the Department will review and evaluate policies and programs.

The Department believes that much can be learned from the States and localities that have had progressive family planning programs, and will work closely with them. For example, under the able leadership of Governor Pat Brown in California, family planning services are now available throughout the State. This has been accomplished primarily through public and private, State and local efforts, with very little controversy. Other States have been expanding the role of public health departments in meeting communities' family planning needs. The State health officers have stated that:

"State health departments should assume a leadership role in developing family planning services as a part of total health care."

Through project and institutional grants, we hope to encourage more population studies centers similar to those which have received HEW support at the University of North Carolina and Johns Hopkins University.

In other ways, too, the Department has helped to bring family planning services to those who wish it. The Department is supporting a bill, H.R. 8451, which would amend the Tariff Act of 1930 to eliminate the prohibition of importing drugs, medicines, and other articles for the prevention of conception. The Department is also supporting another bill, H.R. 8440, which would remove the prohibition in present law on the use of the U.S. mails for distributing articles for preventing conception and for the purpose of advertising the sale of these articles. The Department recognized in its report on the bill that these drugs, medicines, and other articles for the prevention of conception are established means for protection of health and are used in family planning.

What are the Department's activities in the family planning field? Let me begin with the National Institute of Child Health and Human Development.

NATIONAL INSTITUTE OF CHILD HEALTH AND HUMAN DEVELOPMENT

The Department's activities in the field of research are some of the most exciting and fundamental activities that are being carried on today. By encouraging basic research in the broad area of child health, President John F. Kennedy focused attention on the long-range and fundamental issues involved in human reproduction and family planning when he recommended the establishment of the National Institute of Child Health and Human Development. I am proud of the fact that I was the chairman of the task force which recommended this to him in 1961.

The National Institute of Child Health and Human Development was established by Congress in 1963, in recognition of the need to stimulate, support, and develop research into the nature of human development and the health problems of children and mothers.

The Institute is concerned with the individual's health problems and requirements throughout his lifespan.

Assuring that a child will be well born may take several generations. It involves the genes of his ancestors, the circumstances of the parent's early home, psychological and sociological problems of family formation and child-bearing practices.

At the Institute, people from many disciplines—medicine, biology, the behavioral and social sciences—have the opportunity to study child health, the basic life processes, the biology of reproduction, development differentiation, maturation, and the aging process.

The importance of the research being conducted by NICHD was recognized by the Committee on Appropriations of the House of Representatives. The committee report issued April 28, 1966, stated:

"The Institute's present programs on the problems of sterility and fertility, which are equally important, and population dynamics should be continued and expanded. At present, one couple in six fails to have children. The importance of investigating the long-term effects of oral contraceptives and intrauterine devices on both maternal and child health cannot be overemphasized."

In its report, the committee recommended an appropriation of \$61 million for 1967, an increase of over \$6 million appropriated for the Institute for 1966.

The largest program area of the Institute deals with reproduction, under which \$18 million is being paid out to 700 projects. This \$18 million represents about one-half of the Institute's total grants program.

The Institute is developing basic knowledge on which fertility regulation and family planning programs, both here and abroad, can be based. Studies are concerned with the clinical, biological, and behavioral aspects of animal and human reproduction. Of special interest are gametogenesis, fertilization, gamete transport, male and female genital tract development and function, pregnancy and its complications, and perinatal and neonatal problems.

Studies are being made of both the short- and long-term effects of the different contraceptive practices on the health of the mother and her subsequent child.

The practice of medicine of prenatal life—fetal medicine—is an important area of the Institute's concern. Ways are being studied to provide both the obstetrician and pediatrician with the knowledge they need to make the best clinical decision which may affect the outcome of the pregnancy. A good example of this type of research is the work being done on the effects of viral infections during pregnancy which show that they cause mental retardation, along with other congenital malformations, such as congenital heart disease, blindness, etc. There are a number of projects being carried out at the Institute along these lines.

A study financed by the Institute has produced some interesting facts on the usage of contraceptive pills. The research conducted by Dr. Charles F. Westoff and Dr. Normal B. Ruder, has found that race, religion, education, and age are significant factors in the use of contraceptive pills.

As part of the overall approach to family planning, the Institute is also interested in helping couples who are desirous of having children who are not now able to do so.

A significant statement on research on fertility, sterility, and population dynamics was developed by the National Advisory Child Health and Human Development Council (issued on June 8, 1965). The Council, which is composed of 15 distinguished leading scientists and informed public-spirited citizens, has recommended the NICHD should exert every effort to promote: "The day when each child is wanted, when parents will be able to exercise free choice as to the number of children they wish to have, when each fertilized egg will have the greatest chance to develop into an infant that will be born physically and mentally normal, and when each newborn infant will have the greatest possible opportunity for surviving and developing to productive maturity."

CHILDREN'S BUREAU

The Children's Bureau supports, through grants, maternal health and family planning services; training in maternity care, family planning, and population dynamics; and studies of maternity care, family planning, and population dynamics. Federal grants are available to State agencies for extending and strengthening the services for maternal and child health, for crippled children, child welfare, the mentally retarded, and for special maternity and infant care projects.

Federal grants are also available to public and voluntary agencies and organizations and institutions of higher learning for demonstration and research projects and to institutions of higher learning for training child welfare personnel.

The Children's Bureau, under the provisions of title V of the Social Security Act, finances family planning services as part of maternal and child health programs. Legislation under this title V, in 1963, which called for project grants of up to 75 percent of the costs of comprehensive programs for maternity care for women in low income families and for their infants, has led to the development of 35 such projects. The programs operate in rural areas as well as in the most congested areas of our big cities. Nine of the programs are in our largest cities. Appropriations for these programs amounted to \$30 million for fiscal year 1966 and \$30 million has been requested by the President for the fiscal year 1967.

The maternity and infant care programs have made family planning services available to an increasing number of low income families who have never had access to these services before. Most of the projects provide the service directly or through voluntary agencies. In some cities it was this program that enabled local agencies to change their public policies and to include family planning services in tax supported programs.

As a result of the maternal care services that are offered, an increasing number of women return to the clinics for post partum visits. In New York, at least 50 percent of the project patients return for post partum visits and over 90 percent receive family planning services.

Some examples of the Bureau's activities:

1. We estimate that \$3 million of maternal and child health and maternity and infant care funds will be spent in fiscal year 1966 by 32 States for family planning services. This will increase to about \$5 million in 1967.

Twenty-seven maternity and infant care projects have been authorized which have provisions for family planning services. A number of other projects are under review and most of them include family planning services. We expect that the number of projects will probably reach about 50 under the present authorization.

2. The Children's Bureau is supporting training programs relating to family planning at a number of universities.

For example, a grant of over \$150,000 was made to the New York Medical College for training nurses in clinical specialization on maternal and newborn nursing techniques.

Another grant was made to Marquette University for \$80,000 for continuing the education of general practitioners in obstetrics—gynecology care.

Adelphi University, School of Social Work, received \$32,000 for a training institute, primarily for social workers, on high risk mothers.

In addition, the Children's Bureau grants support for the teaching of maternal and child health in nine graduate schools of public health and five schools of nursing which include curriculums on family planning and population dynamics.

3. The Bureau's extramural research grants program is developing research concerned with the programs and services providing birth control information and services as part of maternal care programs. Research efforts are geared to understanding the utilization of birth control services to studies relating to motivation, capacity, opportunity, and attitudes of different cultural, socio-economic, ethnics, and religious groups. The information derived from these studies can be useful, not only here in this country, but in other countries of the world. The Children's Bureau assists AID in developing cooperative research programs in foreign countries.

This year one of the research projects being supported through a \$161,000 grant to Tulane University School of Medicine is for research on fertility, attitudes relevant to fertility, and family structure in Metropolitan New Orleans.

Another \$76,000 has been granted to the University of California at Berkeley for a cooperative study of intrauterine contraceptive devices and other family planning methods.

The University of California received \$24,000 for a demographic study in the correlates of infant mortality in Western United States, particularly in reference to Spanish American cultural groups.

Hudson Institute received \$44,000 for a study on alternative birth rate projections for planning maternal and child health services.

The University of Chicago, which is conducting a study of community and personal factors in adoption and nonadoption of family planning services, received a grant of \$38,000.

The Children's Bureau also includes family planning information in its widely circulated publications which are prepared to help parents rear their children.

BUREAU OF FAMILY SERVICES

Another program through which the Department assists in family planning services is through the public assistance provisions of the Social Security Act. Federal matching funds are available to State assistance programs for hiring personnel needed to implement family planning programs and for assistance expenditures related to family planning, e.g., clinic services, drugs, supplies, or transportation.

The Bureau of Family Services of the Welfare Administration participates with State welfare agencies in the development of programs which permit families to plan the spacing and number of their children. The Bureau's participation in this field has increased considerably in recent months.

Title XIX, a recently enacted amendment to the Social Security Act, will serve as a further impetus to this type of planning. I should mention briefly what title XIX is because it has not been given as much attention as medicare, although it was a significant part of the 1965 amendments.

Title XIX provides Federal funds to the States for medical services to low-income individuals and families. The States define the level of income for eligibility. The medical services may be as broad as the State wishes to define them. The medical services can be available to all children under age 21 in low-income families, and all mothers with dependent children whose fathers are dead, disabled, absent from the home, or unemployed. The law requires each State to make a satisfactory showing that it is broadening its plan with a view toward finishing, by 1975, comprehensive care and services to substantially all individuals who meet the plan's eligibility standards.

The significance of this new medical assistance program is that States will be able to develop programs of comprehensive high-quality medical care for the medically needy. Seven State plans putting title XIX programs into effect have been approved; two States have programs in operation with the plans pending review for approval; and an additional 25 States have indicated that they intend to initiate a title XIX program before the end of the year. Funds available to the States under this title can be used to develop family planning services as part of the State's effort to provide comprehensive health services.

The Welfare Administration also undertakes studies of population dynamics and family planning with reference to its programs for preventing and reducing economic dependency.

The research and development grant program administered by the Welfare Administration supports training and research in the family planning area being conducted by universities, and public and private nonprofit agencies. The Community Council of Greater New York was awarded \$101,233 for a project concerned with unmarried mothers who keep the first out-of-wedlock child. Another \$48,000 has been granted to Bowman Gray School of Medicine in North Carolina for a project on family planning and birth control among poverty level Negro families.

PUBLIC HEALTH SERVICE

The Public Health Service plays an important role in family planning activities through the general health grants in aid program. General health grants are designed to provide financial support for, and to stimulate the development of adequate State and local public health services that will promote the Nation's health. The grants may be made for a number of purposes—services, training of personnel, or for specific demonstration projects. States receiving grants may use the funds to finance family planning activities.

The Public Health Service also provides family planning services to specific groups—among these, American Indians and Alaskan Eskimos.

FOOD AND DRUG ADMINISTRATION

The Food and Drug Administration is also concerned with family planning through its responsibility for continued surveillance for possible adverse effects of the use of oral contraceptives.

An advisory group to the Food and Drug Administration, chaired by Dr. Louis Hillman, is preparing a report on the long term effects of oral contraceptives based on a careful review of all available evidence. The advisory group will advise the Food and Drug Administration concerning the steps it should take to provide effective and continued surveillance of possible adverse effects on the use of oral contraceptives.

INTERNATIONAL ACTIVITIES

On the international side of the picture the Department has worked very closely with AID. The Department has helped to develop training programs for foreign personnel in fields of family planning and population studies. For example, the Children's Bureau conducted a special training program for foreign nurses and midwives. Advisers have been sent to foreign countries to assist them in developing family planning programs.

Through all the Department programs and activities runs a common thread—the objective of improving the health of the families and to strengthen the integrity of the family.

Studies have shown that there is a close relationship between poverty, education, and lack of family planning. The strengthening of family integrity and the development of individual and family responsibility requires a broad approach. We must raise the educational levels of our society. We must improve our AFDC programs and give hope to those whose lives have been characterized by fatalism, alienation, and despair. And we must make vast improvements in our health programs in general.

The Elementary and Secondary School Act passed last year by the Congress was one of the most significant steps the Nation has taken to provide succeeding generations with a good education, to reduce the despair of dependency, and to make it possible for them to be able to make choices and decisions of what to do with their lives.

The effect of this new legislation will be to greatly reduce the numbers of educationally disadvantaged. Education's greatest deficiencies are found in the schools that serve children in the heart of our cities and in many rural communities. Here poverty reduces local resources to the point of peril. Because the tax base is low, funds for education have been inadequate and inadequate education perpetuates the cycle of poverty, deprivation, and family instability.

The Elementary and Secondary School Act is designed to remedy these problems. The act puts money into the school systems on the basis of the number of children from low income families. More than \$1 billion this year has been directed to the education of children of low income families—to more than 5 million children. This year the President has recommended that the law be extended to benefit an additional 3 million children.

A number of programs are being financed to raise the level of education of these disadvantaged children. Among the ways in which local school districts can use the Federal funds are for increased guidance services for pupils and families, programs for early identification and prevention of dropouts, home and school visitors and social workers, preschool training programs, and broadened school health services. These services should enable the disadvantaged children of this generation to become responsible parents and citizens of the next.

We are becoming increasingly aware of need for sex education in our schools. In our public and private schools there is a small but, I think, hopeful awakening to the responsibility of formal education for helping young people think about and understand their own sexual development.

While we have a long way to go in this respect, there is some evidence that the inhibitions of Victorianism are gone and are now being replaced by more open, direct, and constructive attitudes.

We should ask what role the school should play? Of course, that is the decision of the people who control the individual school. They know the local attitudes and values; they can assess what is possible and what is wise.

As local leadership is able to bring acceptance of responsibility for education about sexual growth and development, there will be a need for well thought out materials in this realm. All levels of education from elementary school through college need appropriate units for study to bring understanding of the sexual development of human beings as well as an appreciation of the problems of responsibility and value related to that development.

Just as the Federal Government does not prescribe curriculum in English or mathematics, it should not attempt to do so in this realm. It should, however, make its funds available for promising research efforts in curriculum development and for demonstration teaching projects which will stimulate local school districts to learn from each other about how to work with success in this controversial but significant area of study.

Family planning information and the teaching of sex education could become a part of the curriculums of schools of medicine, social work, education and

other professional schools. The growing body of knowledge being developed in this field can only be translated effectively through well trained teachers and professional people.

An example of the need for this kind of education was demonstrated very well by a Children's Bureau project which was funded here in the District of Columbia for a rehabilitation program for pregnant teenage girls. The project provided continuous education for girls during pregnancy and returned about 90 percent of the girls to regular school, 2 months after the child was born. A multidisciplinary approach was used—teachers, psychologists, obstetricians, public health nurses and a nutritionist participated in the project.

As a result of this approach in meeting the educational, social, physical and mental health needs of the girls, some of their attitudes on dating, marriage, and child rearing were improved.

The results of the project have emphasized the need for sex education as an integral part of school curriculum beginning in the early grades. The project has also pointed out that teachers at all levels, particularly those of children in preadolescent years, need special training in the presentation of sex education in order to make the course meaningful. We would like to see more communities institute demonstration projects of this kind.

Through our increased investments in education, health and welfare, we will make possible a greater freedom of choice of what people want to do with their lives. Increased freedom of choice will contribute to, and be reinforced by a strengthening of parental responsibility, more education for parental obligations, and more adult education.

It is only through all of our programs designed to reduce poverty, raise educational levels, improve health and general welfare that we will be able to make this freedom of choice possible.

Through a strengthened program of aid to families with dependent children, we could also help more dependent persons attain greater self-reliance and prevent children from inheriting the poverty and patterns of behavior of their parents. Improved AFDC programs can do much to strengthen family life. AFDC is intended to give children deprived of parental support or care the economic aid and social services they should have for wholesome development. But in many States the programs fall far short of this goal because of inadequate funds, shortage of personnel and lack of public understanding and support of the program. They do not always assure the child the opportunity to grow up to be a responsible member of a family group, to become a responsible adult and parent, to share in the life of the neighborhood and community, or to become self-supporting.

Because of restrictive measures, low payments, and the lack of services, many States cannot always accomplish what they hope they could do with better support. There are 3,400,000 children and 1 million mothers in this program. They require more attention, greater help, and more services.

A bill, the "Comprehensive Health Planning and Public Health Services Amendments of 1966," embodies a recommendation made this year by President Johnson in his message on health and education which would strengthen our Nation's health facilities and services.

Passage of this bill will add to, and increase the capacity of the States to provide better public health services by emphasizing comprehensive health planning and by providing funds in such a way that health resources can be used flexibly and efficiently. Under a flexible grants program, increased Federal funds could be used by the States to improve their family planning services.

Passage of the bill would permit us to marshal all our available health resources—public and private; local, State, and Federal—in a vital partnership to promote and assure the best level of health attainable for every person.

The Federal Government wishes to support the efforts of all groups, public and private groups, in providing services to the people who desire them. Only through this kind of a partnership shall we accomplish our goals.

The Department of Health, Education, and Welfare through the programs it administers aims to assure that a child will be well born, that he is wanted, that he has the opportunity to realize his full potential, and that he will be well educated, receive the medical services he needs, and become a responsible citizen in his community.

Let me conclude by saying that the Department is vitally concerned with the problems of family planning and population dynamics.

Although effective contraceptive methods have been developed, they are not available to many of the people who need them or want them the most. They should have an opportunity to know and to choose the methods they select.

It is the goal of this administration, and a proper goal in a free and pluralistic society, to extend the limits of freedom of information and freedom of choice for individuals—beginning with the time they are born—to make the most of their lives and to enrich the national heritage which is the responsibility of each succeeding generation.

But in carrying out this goal, we must guarantee each individual the full right to choose—and the right to all the information needed to make an intelligent choice. That is why all the Department's policies relating to family planning guarantee freedom from coercion or pressure of mind or conscience and guarantee the availability of several methods of family planning so that individuals can choose in accordance with the dictates of their conscience.

Senator GRUENINGS. Our next witness is Dr. Otto Hakon Ravenholt.

BIOGRAPHIC STATEMENT: OTTO HAKON RAVENHOLT

Dr. Ravenholt, since 1963, has been the chief health officer of the Clark County district health department in Las Vegas, Nev.

He is married, and he and his wife, Marie, have four children.

He received his B.A., M.D. and M.P.H. from the University of Minnesota.

Born May 17, 1927, in Luck, Wis., Dr. Ravenholt has served as health officer and director of the Topeka-Shawnee County Health Department, Topeka, Kans., and as lecturer in preventive medicine and public health at Kansas University.

Two earlier witnesses at these hearings have come from Kansas: Mrs. Theodore F. Wallace of Shawnee Mission and Dr. Kermit Krantz, chairman, Department of Gynecology and Obstetrics, University of Kansas School of Medicine.

Dr. Ravenholt served in the U.S. Army Counterintelligence Corps during World War II and until 1952. At present he is a senior assistant surgeon in the U.S. Public Health Service Reserve Corps.

His honors include membership in the ad hoc committee on tuberculin testing of the National Tuberculosis Association and the subcommittee on development of clinic standards and manual for the association.

He is a member of the AMA, the American Public Health Association, the Kansas Public Health Association, the Nevada Public Health Association, the American Association of Public Health Physicians, and the International Academy of Law and Science.

He is the author of several publications and I shall direct that the list appear in the printed hearing record at this time.

(The list referred to follows:)

EXHIBIT 168

PUBLICATIONS OF DR. OTTO H. RAVENHOLT

1. Ravenholt, Otto H., a letter—and a report, "The New Physician," J.S.A.M.A., 32-34, May 1957.
2. Ravenholt, Reimert T. and Ravenholt, Otto H., "Staphylococcal Infections in the Hospital and Community, Hospital Environment and Staphylococcal Disease." A.J.P.H., 48:277-287, March 1958.
3. Ravenholt, O. H., Baker, E. F., Jr., Wysham, D. N., and Geidt, W. R., "Eliminating Blankets as an Infection Source." Hospitals, J.A.H.A., 32:75-80, June 16, 1958.
4. Ravenholt, Otto and Jensen, Alice P., "Quality Control in Maternal and Newborn Care in Topeka, Kans." A.J.P.H., 52:1853-1857, November 1958.

5. Ravenholt, Otto H., "Cost of Care in Last Year of Life," bulletin, Shawnee County Medical Society, Inc., June 1961.
6. Ravenholt, Otto H., "Outpatient Community Clinic Control of Tuberculosis," bulletin, Shawnee County Medical Society, Inc., November 1961.
7. Ravenholt, Otto H., "Epidemic Jaundice," bulletin, Shawnee County Medical Society, Inc., March 1962.
8. Ravenholt, Otto H., "Syndrome Surveillance," bulletin, Shawnee County Medical Society, Inc., April 1962.
9. Ravenholt, Otto H., "Venereal Disease Control," bulletin, Shawnee County Medical Society, Inc., January 1963.

Senator GRUENING. Dr. Ravenholt, before you proceed with your testimony and explain the meaning of the exhibits you have brought for the subcommittee's information would you tell us if you are related to Dr. Ravenholt who is the Chief of the Population Branch, Technical Cooperation and Research Health Services for AID? I understand that you are accompanied by Mr. Pat Scanlon. If you are, I would like to have him come forward, too.

STATEMENT OF DR. OTTO HAKON RAVENHOLT, CHIEF HEALTH OFFICER, CLARK COUNTY DISTRICT HEALTH OFFICER, LAS VEGAS, NEV.

Dr. RAVENHOLT. Thank you, Senator. Yes, Reimert is a brother of mine, or I of his, and we are both active in the public health field.

Senator GRUENING. A very distinguished family.

DECLINING DEATH RATE ACCENTUATES CRISIS

Dr. RAVENHOLT. Mr. Senator, for some years I have had an interest in population growth, with its medical, social, and political implications. And I have observed in this regard a growing problem of communication between the professionals in this field, with their increasing knowledge of population growth dynamics and problems, and the many individuals who must put this knowledge to practical use in making political and economic decisions if such knowledge is to be of value.

Such leaders have for many years been making decisions about programs to reduce mortality. Our failure to identify and communicate an understanding of the inescapable population growth resulting from such mortality control has led us to the crisis we face today.

RAVENHOLT DEVISES NEW WAY TO ILLUSTRATE POPULATION PROBLEM

This observation has led me to experimentation with some three dimension models of populations, to show elements of growth and control in a new form which I believe is understandable to many more people needing a grasp of these variables.

It is a number of these models which I should like to show to the committee and discuss in terms of the things that appear to me to be evident in this form, without the complexity of the language generally used in discussing these matters.

COMPARING POPULATION TRENDS

Gentlemen, this is a model of a fairly stable population in Shawnee County, Kans. (fig. 1).

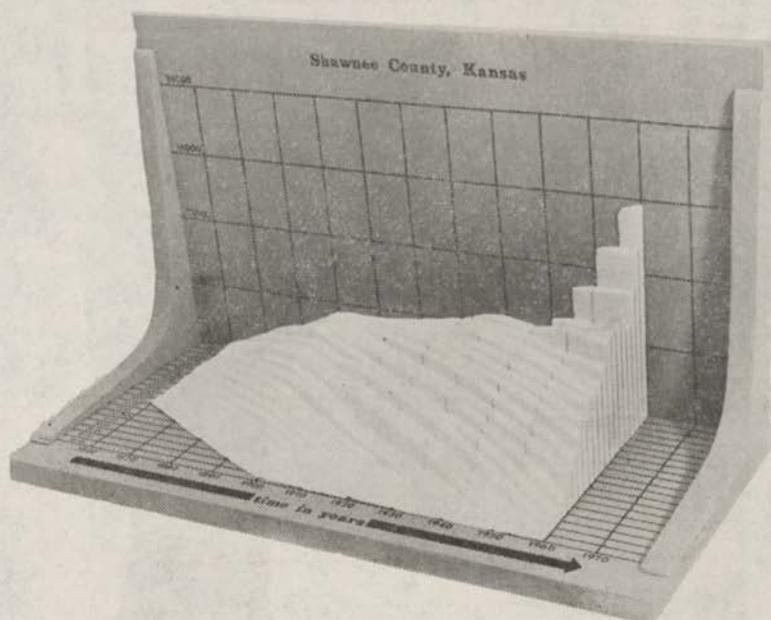


FIGURE 1.—Population profile model, 1860 through 1960.

The basic model is achieved by taking decennial census data for the population represented in 5-year age groups, thus creating population profiles for this population time of the several censuses, and then interpolating these, thus representing each 5-year age group from birth all the way through its lifespan to its demise.

This permits one to follow each age group across the model, and in turn depicts its longevity in terms of the percentage of the group surviving to different ages. It particularly permits one to observe at different points in time the changing profile, and, therefore, age distribution, in the population of a given community—county, State, or country.

We see in this segment of the model of the Shawnee County population a considerable dip which represents the reduced births during the 1930's, and then the increase in births occurring after the depression, particularly after World War II.

On the whole, this is quite a stable population, though it shows the rapid growth that has occurred since World War II in most of the American population.

By contrast, I have here a model of the population we deal with at present in Clark County, Nev. (fig. 2).

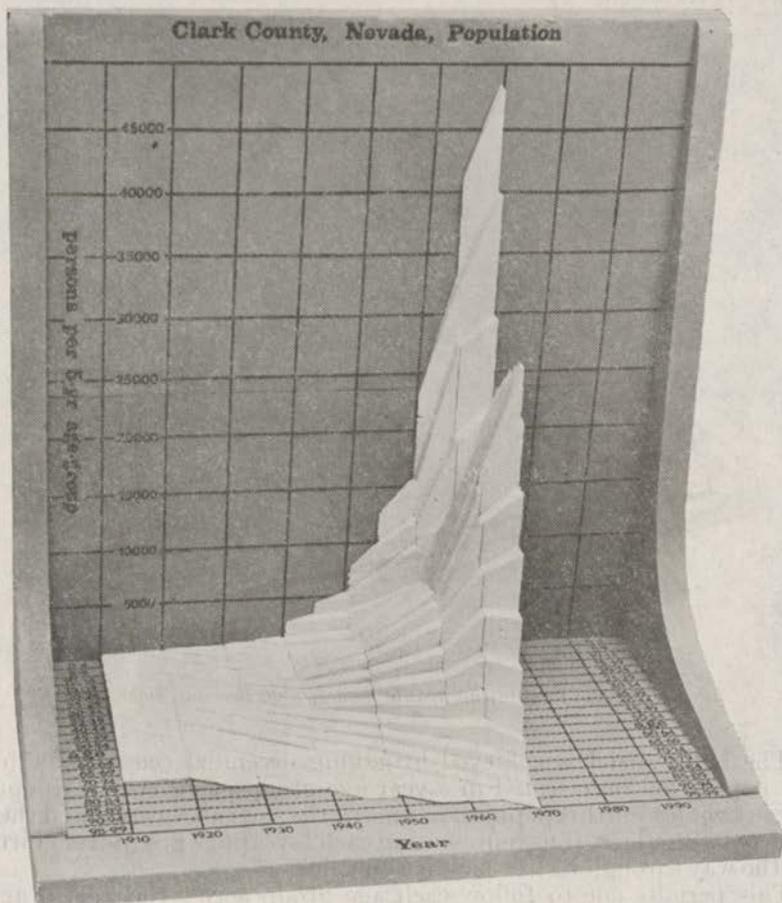


FIGURE 2.—Population profile 1910 through 1970.

CLARK COUNTY, NEV., POPULATION INCREASES THROUGH IMMIGRATION

It is extrapolated only to 1970. The population in Clark County has doubled in size in 5 years, from roughly 120,000 to 250,000 permanent residents.

SIX HUNDRED NEW TEACHERS ARE NEEDED IN ONE YEAR

The enormous influx into the school system and the need to build and staff educational facilities is an example.

For instance, in a single year, there was need for almost 600 new teachers to be brought in to teach these incoming children in the school system. And the new teachers themselves brought enough children to

fill another elementary school in Clark County. It becomes a problem to keep up with this rate of population growth.

However, this growth is largely by immigration to the community, and not by natural reproduction in the community.

MODELS SHOW TRENDS IN UNDERDEVELOPED NATIONS

By use of three-dimensional models, some useful things are revealed as regards what is going on in underdeveloped countries where rapid changes in population are occurring. The mechanism of population growth in the underdeveloped population is frequently misunderstood.

These are some mortality curves illustrating historical survival rates. I will just cite them, and you can see what changes occur.

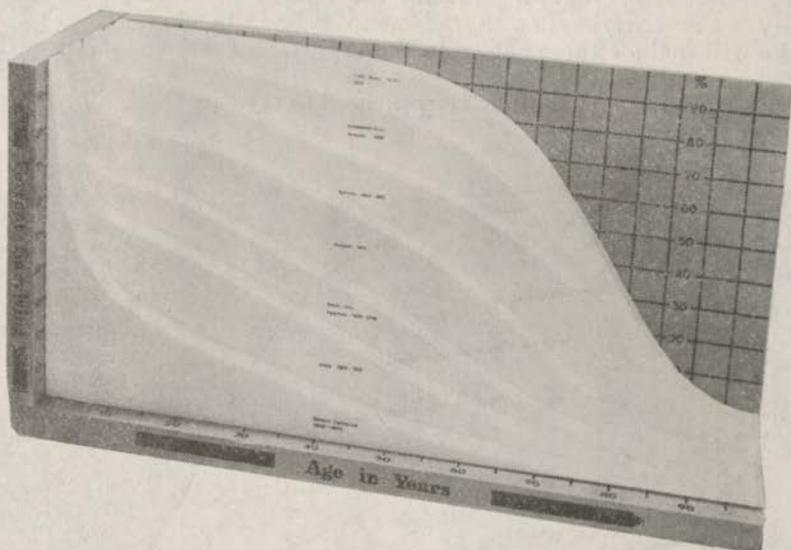


FIGURE 3.—Population profile for seven mortality curves.

Of 100 infants born in these various populations, this percentage would survive to the different ages indicated.

We can go back to the more dismal survival experiences of the 1840's, the Boston Catholics, with less than half the children reaching 10 years of age. The same was true of the working class in England at the time. Mortality in the early childhood years was enormously heavy.

We see a survival curve from India of 1901-10, in which roughly 50 percent of the children reached 10 years, with a gradual loss of life during succeeding years.

We observe similar pessimistic survival curves for Washington Negroes here in Washington, D.C., in 1901-10. In Boston in 1901, we see survival has improved to where "only" 25 percent are lost in the first 10 years; and we finally come up to the U.S. mortality curve of 1958, in which 90 percent of the newborn reach 50 years of age.

Now, I would like to contrast these two (India 1901-10 and United States 1958) in another framework because this illustrates the essence of what is happening in many of the underdeveloped countries, and it is an understanding of this—

Senator SIMPSON. Could you wait just a minute. I am very much interested in those charts. I wonder if they could be photographed for the record, and then referred to, because we are not going to relate your conversation with the charts to the proper chart.

Dr. RAVENHOLT. I have some photographs with me.

Senator SIMPSON. I think they should be marked.

Senator GRUENING. They will be included in the record. I would like to suggest, Dr. Ravenholt, that you go over your testimony and relate them to these charts so the record may be complete. As it is now, it would be very difficult for the reporter to relate your testimony to the chart, because there is no visual relationship.

We will include these charts in the report, and your testimony will then be complete.

Dr. RAVENHOLT. I shall be very pleased to try, sir.

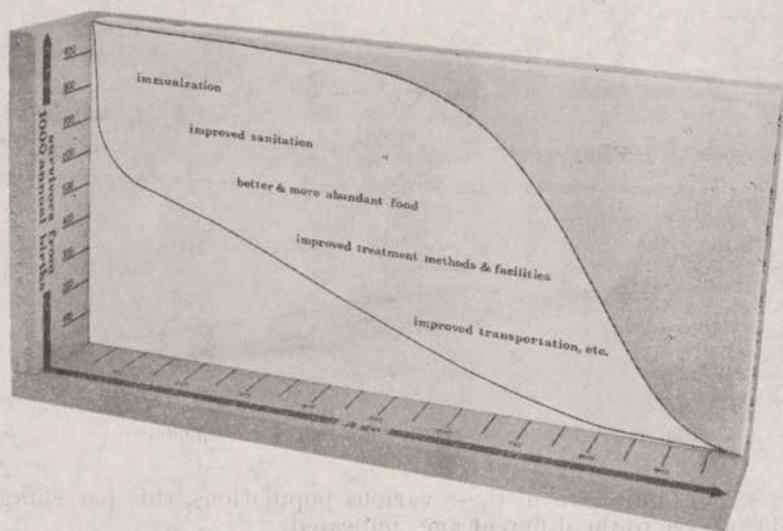


FIGURE 4.—Population profile model for two mortality curves in the United States, 1966.

MORTALITY RATE IS IMPORTANT FACTOR

This graph (fig. 4) illustrates the contrast between the survival curve that we have recorded for the Indian population more than 60 years ago, in 1900, and the survival curve that is common to the American population today. It is this shift—from a very early mortality pattern—which has been consistently the case in underdeveloped countries to this late mortality pattern, by basically the techniques identified here, which leads very quickly to the population growth problem.

I will follow that through.

It also leaves us with other problems, other causes of mortality, which are largely the target of our efforts in this country at the present time in terms of our domestic population—attempts to further shift this survival curve up and out to improve the prospects of each newborn in our population.

Now, the reason this is so potent is illustrated in part by these several pieces here.

We observe (fig. 5) that in a population with survival such as that of India 60 years ago—and many underdeveloped countries today—the number of fertile women in the population was approximately of this order. To produce the number of children necessary to sustain this population they were reproducing in the range of six children per woman during her fertile years and this high fertility was commensurate with a stable population because of the poor infant survival.

Now, when the mortality curve is changed, the number of fertile women increases almost threefold for that very same number of births. And then, of course, the continuation of that same fertility pattern—

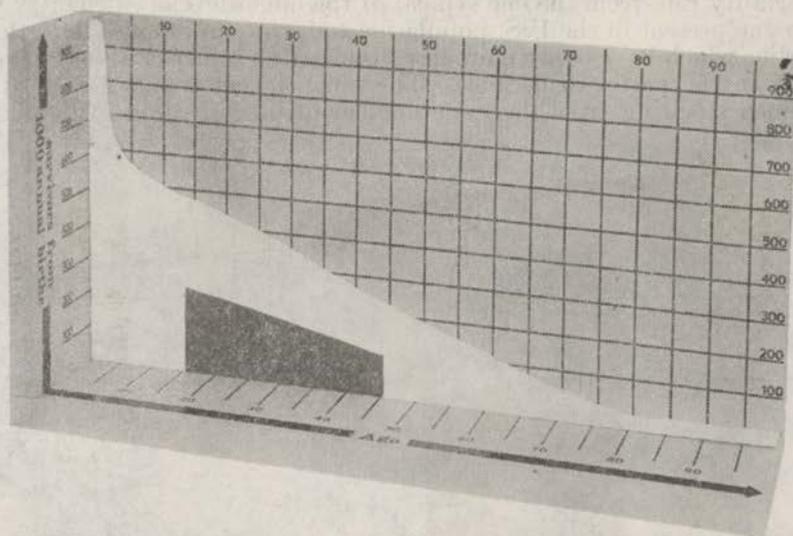


FIGURE 5.—Population profile model for mortality curve in India, 1901-1910.

Senator SIMPSON. Let me see if I get this.

In other words, where there are six children on your first chart, now there would be three times the fertile women, but you would have that three times producing the same?

Dr. RAVENHOLT. If you are to have a stable population, the reproduction per fertile woman must, of course, be dramatically reduced.

Senator SIMPSON. How did you happen to pick India? Has their performance been good?

Dr. RAVENHOLT. Only because the survival curve that we had in India 60 years ago is fairly typical of what we have in the technologically underdeveloped countries—with their heavy early mortality of children. And this is still true, as I suggest, in many of these countries.

Senator SIMPSON. This committee has been advised by witnesses before that there has been a very sharp upturn in the attitudes of the people of India, and they are really doing something about the birth control problem. Is that your understanding?

Dr. RAVENHOLT. I think there is great interest and a great deal of activity in India on this at the present time. And I am using this only as an example to illustrate where the potent effects from the elimination of early mortality in the underdeveloped country comes from. It does not come from an increase in fertility. It comes simply from continuation of the same fertility habit by what is very quickly a markedly larger number of fertile women.

LOWER DEATH RATE MEANS GREATER NUMBER OF FERTILE WOMEN

This model (fig. 6) illustrates just this change.

What we are showing here is the effect of simply changing the mortality rate from the one typical of the underdeveloped country to the one present in the U.S. population today, by techniques indicated earlier which have been vigorously promoted in underdeveloped countries in the past two decades. The much larger number of fertile women resulting from the same number of births is now evident.

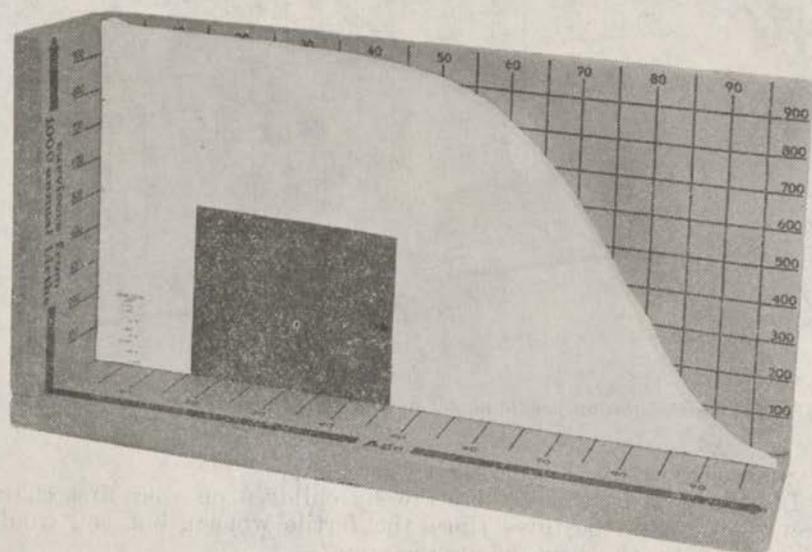


FIGURE 6.—Population profile model for U.S. mortality curve, 1958.

This next population model (fig. 7) illustrates the growth which will occur in a 50-year period in what can be a stable population, with very heavy early mortality, and high fertility—two features which

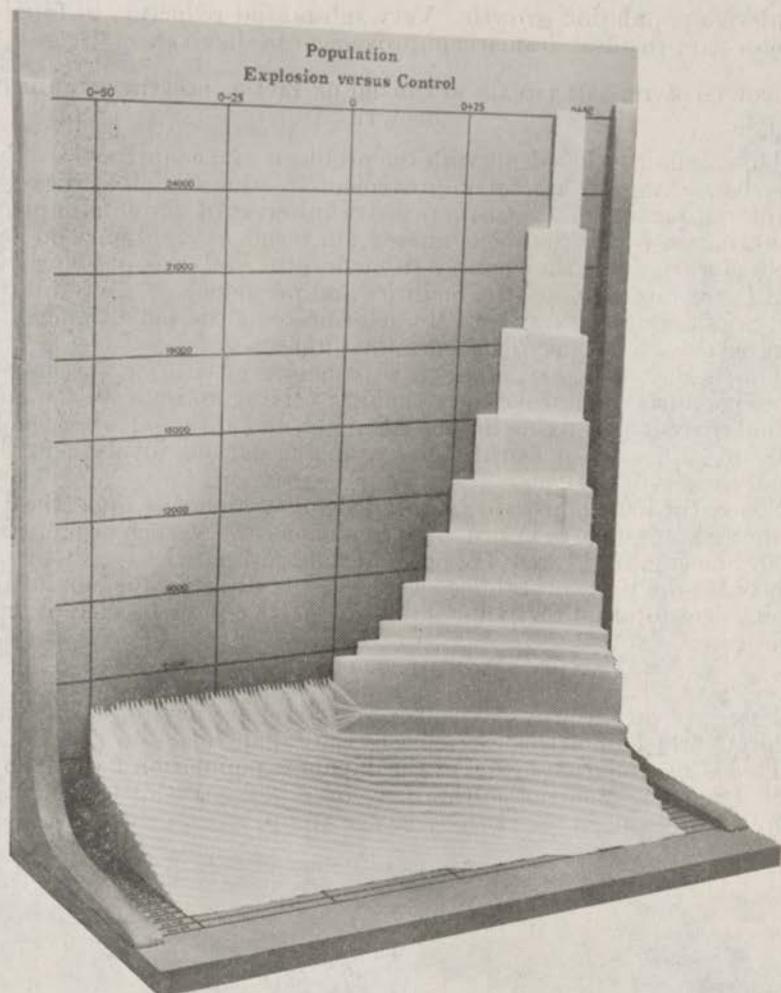


FIGURE 7.—Population profile model.

are quite compatible, undesirable though they may be—with a simple change from high early mortality to the U.S. pattern of late mortality, and with no change in fertility. A change soon comes into the picture from an increase in the number of survivors now reaching the reproduction age and the "feedback," which begins to occur from their carrying on the customary habits of reproduction, produces this type of change in the number of people present in that population in a mere 50 years of time. This being the number where there were 23,000 people living in the early mortality population, there would be 144,000 people present in that same population 50 years later from simply this change in the mortality pattern, without change in fertility.

I think this is precisely the phenomenon we are dealing with in so many countries. It is obvious that with sharp increase in survival even a moderate reduction in fertility per woman does not prevent

explosive population growth. Very substantial reduction in fertility is necessary to offset dramatic improvement in survival.

GROWTH RATE CAN IMPAIR STANDARD OF LIVING DESPITE ECONOMIC GROWTH

This committee has dealt with the problems of a country where they may be making an annual improvement in educational facilities, in plant and personnel, that is impressive in terms of absolute improvement, but in which the denominator (in terms of children who need such education for the country to modernize itself) is growing at a still faster rate than are the facilities and personnel. As a result, the per capita situation can actually deteriorate at the same time as the country may be claimed to be improving its situation.

This is the phenomenon which is becoming of such critical importance in efforts to improve the standard of living, to improve the individual's freedom of living in such countries, and at the same time hopefully to gain some political stability in the nations involved in this whole process of change.

Concentration upon reduction of mortality alone, or upon the immediate things done to improve the conditions of life, such as increased food, housing, and other factors which have been the target of our efforts for the past several decades, leaves us with the dilemma of per capita deterioration of living standard that has now become of such concern.

JAPAN FACED FERTILITY PROBLEM

There are various ways, of course, of controlling fertility. The most vigorous attack upon this was made by the Japanese.

This is a population model of the Japanese population from 1888 to 1980 (fig. 8). You notice the signs of rapid growth, the increased numbers of young at each successive age group.

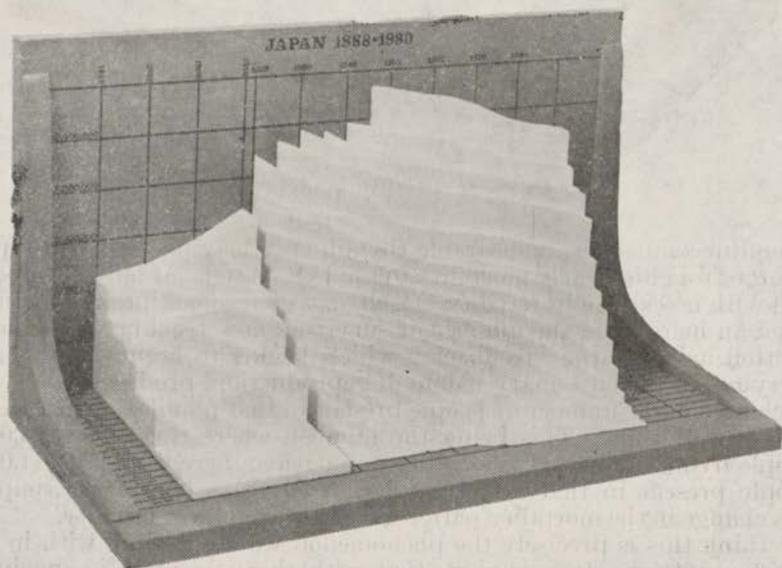


FIGURE 8.—Population profile model for Japan 1888-1980.

COMPLETE PATTERN OF JAPANESE POPULATION CITED

Now, as one looks at the gross pattern of the Japanese population, some interesting things are evident, without getting into statistical details.

One is that from 1930 to 1940 the Japanese had small increase in their newborns. This was a time when a great many of their males were overseas in their empire enterprise, and the conception of young was decreased.

We see in 1940 to 1945 a substantial mortality of Japanese troops affecting the size of the cohort from 20 to 35 years of age.

At the same time we see an interesting increase in births during this time, which I understand from the information available from Japan was related to an actual formal undertaking by the Japanese Government to rotate troops home during that period in order to stimulate the birth rate. They were concerned about the drop in it; and about their future military strength.

Now, in 1945 after the War, the Japanese reproduction increased sharply, as you see here—an increase in newborns, 0 through 5 years of age.

JAPAN MOVES TO CURB POPULATION GROWTH . . .

In 1950, disturbed by the population growth and by the threat to per capita living standards, they undertook a formal attempt and a vigorous one, to control the population growth. And I would like to show you the 1960 profile of the Japanese population, because this illustrates a striking phenomenon compared to what is true in virtually every other country. Namely, that the number of young born between 1950 and 1955, and between 1955 and 1960, was successively less than had been born during each previous 5-year period.

. . . AND SUCCEEDS

In effect, this means that the Japanese population, instead of continuing to grow in size, was being held at essentially a stable number of individuals which is projected here to 1980, reflecting the rate of births per fertile woman as influenced by continuation of the abortion practices started in 1950 and the methods of contraception now being used in Japan. The shift there, as I understand it, is increasingly to contraception, to prevent conception, rather than relying upon earlier techniques of aborting conception.

The net effect of this program in Japan has been that of relieving the pressure of population growth.

It has further been that of permitting a substantial improvement in per capita standards of living—education, whatever you wish—simply because what would have been the vastly increased demand for these things, and the competitors for them, has been reduced by control of the rapid population growth which has marked many of the countries suddenly adopting techniques to prevent high early mortality.

I wish to summarize this—

JAPAN USES PILLS AND IUDS

Senator GRUENING. What are the methods employed in Japan?

Dr. RAVENHOLT. They are now using quite a range of them, Senator, particularly pills are gaining acceptance there. The loop was

extensively used there before being brought here. In fact, some of the research experience on the intrauterine loop was acquired in Japan over a period of time and involved quite a few women.

CEYLON HAS POSTWAR BABY BOOM

Now, this is a population model of the Ceylon population (fig. 9) done from such census data as are available since 1881. You notice here a fairly stable population through 1945, with very limited growth. From 1945 on, they begin to demonstrate the very substantial, quite rapid growth in newborns each year compared to those born the year before, with an increase in the number present at the younger ages and consequently in the competitors, you might say, for whatever is available in terms of education, housing, and other things.

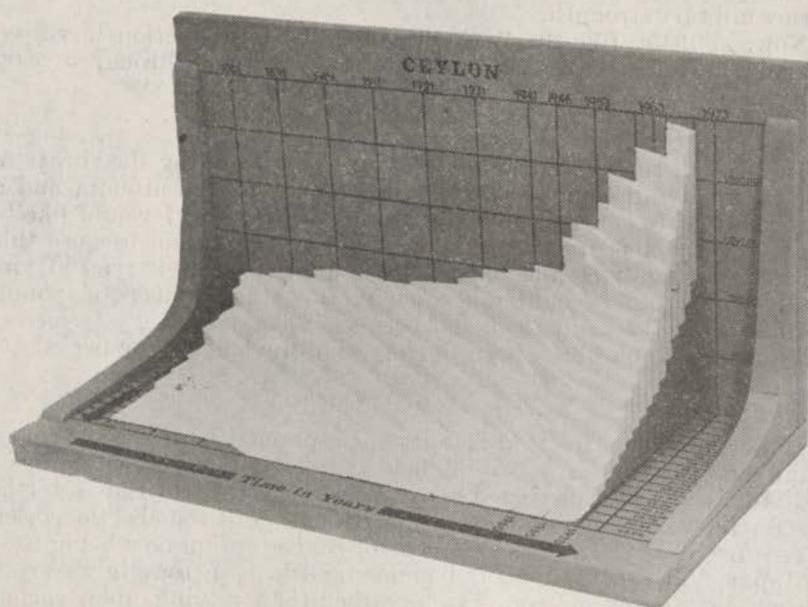


FIGURE 9.—Population profile model for Ceylon, 1881-1970.

In the short period of some 20 years we have this dimension of increase in the Ceylon population. The big question seems to be: Will this increase continue, or will the Ceylonese join those employing methods and programs which effectively limit the rate of population growth as they try to improve the per capita availability of the 'things which can stabilize their standard of living and perhaps politically provide a more stable community?

(Dr. Ravenholt subsequently submitted to the subcommittee the following information entitled "Ceylon in Lifeband Perspective.")

EXHIBIT 169

CEYLON IN LIFE-BAND PERSPECTIVE

The population of Ceylon has exhibited extremely rapid growth in the past 20 years. Fortunately, Ceylon, unlike many other rapidly growing communities, also has a long history of recording demographic data. As a result it is now possible to review some features of its population change in historical perspective.

This three-dimensional lifeband model of the population of Ceylon is based on data from censuses taken from 1881 through 1953, and projections of the population to 1970 as calculated by the Ceylon Department of Census and Statistics.¹ The 1931 and 1941 divisions of this model are interpolated.² The three dimensions of this model are age, time, and number of persons per 5-year age group.

As indicated by these dimensions, Ceylon experienced gradual and steady population growth from 1881 to approximately 1946. From that time to the present, growth proceeded at a higher level. The fact that the census of 1946 was the first since that of 1921 limits the possibility of determining the exact point in time at which the change in growth rate occurred. But it appears, from the model, that the change occurred after 1946 and before 1953 (the first census following that of 1946) rather than before 1946, since the census of 1946 indicates that the population pattern at that time was not significantly different from that of the preceding 65 years.

A birth, death, or fertility rate is reliable only to the extent that both numerator and denominator are reliable. In Ceylon, as in most communities, the reliability of the numerator (births and deaths) has consistently exceeded that of the denominator (the population or relevant portion of the population) except in census years. Therefore, conclusions concerning birth, fertility, and mortality rates, except in census years, are necessarily derived from approximations of the denominator.

As in most communities exhibiting a sudden change in rate of population increase, the data reveal a change in the survival pattern of the young from a low survival rate in early childhood years to a high survival rate. From 1946 to the present time the population increase in Ceylon has resulted, largely, from a decrease in such deaths. In the mid-1960's, the first generation of those who survived infancy and childhood who would not have so survived prior to 1946 is entering the childbearing period. It can be expected, therefore, that the population increase in the next 20 years will exceed that of the past 20 years in much the same way that increase in the past 20 years exceeded that of the 65 years that went before.

It is this apparent "quantum evolution" of Ceylon population growth that appears to pose the greatest obstacle to success of Ceylon's national programs aimed at keeping social and economic development on a level with the population increase. It is conceivable, if the population increase continues at the present rate, that development of resources could increase at a comparable rate for some time to come. But, since the rate of population increase, itself, may soon rise, the ability of the economy to keep pace is problematical. Certainly, the prospects of improving per capita food, shelter, and education is not good.

However, the factors which can produce the dilemma of a growing economy outstripped by an accelerating rate of population growth are not all fixed. Both the number of births per woman during her childbearing years and the timing of those births is subject to influence. And, today, the means for altering these events are increasingly available and socially acceptable. The effects upon a population's rate of growth by reducing the number of births per fertile woman during her childbearing years are well known and understood, though often overestimated, in terms of immediacy. The benefits to be obtained from increasing the interval between the birth of a woman and the birth of her own children are not equally understood and not often discussed. It is certain that if childbear-

¹ Straight line age cohort by author.

² Another census taken in 1963 is still incomplete as of this writing (May 1966).

ing begins at a later age, and if subsequent children are spaced further apart than has been common practice, the rate of increase in the population is significantly lessened, despite an equal average number of births per fertile woman.

Population growth in Ceylon, even at present, is occurring at a rate which, for many nations, might outstrip the national capacity to cope with attendant social needs. To date, Ceylon appears to have held its own in providing for this growing population. The estimated number of primary and secondary schools, teachers, physicians, and dentists per capita, as well as national product per capita and most other indexes of national well-being, indicate that the Ceylonese standard of living has remained at a fairly constant level for the past 15 years. However, one important index of standard of living, that of calories per day per capita, appears to have declined from 1951 to 1962 (2,140 calories per capita per day in 1951 to 2,000 calories per capita per day in 1962).³

Thus there remains not only a question of whether Ceylon can continue a stable society without improvement in per capita national development, but also a question of whether Ceylon can even match its impending accelerated population growth rate with production of facilities and food. If the 1956-62 ratio of primary and secondary schools to persons aged 5 to 19 is to be maintained at a level of 1 to 450,³ it will be necessary that 1,600 new schools be constructed by 1970 to supplement those already in existence in 1962, and within the following 5 years another 1,300 will be required. In order to maintain the 1962 ratio of teachers to persons aged 5 to 19,³ Ceylon must have 90,000 teachers by 1970 (as compared to 76,000 in 1962) and 102,000 in 1975.

Rice is a food staple in Ceylon; and in 1963³ Ceylon produced 1,131,000 short tons of rice, or about 212 pounds per person.³ To accomplish this same per capita production in 1970 Ceylon must produce 1,370,000 short tons of rice.

It appears that new changes must come in Ceylon—to an extent comparable to the changes that have already taken place in the early mortality pattern—if Ceylon's growing population is not to outstrip that nation's economy. This three-dimensional model illustrates the growing imbalance in age distribution of the Ceylon population and thus illustrates the cause for concern. Therewith, it also identifies the target for remedial efforts.

Dr. RAVENHOLT. I think there is one other model that we forgot to put on showing population control possibilities as contrasted to growth possibilities. Perhaps we can just set that up here a moment (fig. 10).

³ Statistical Abstracts of the United States, 1954-65; U.S. Department of Commerce, Bureau of the Census, Government Printing Office, Washington, D.C.

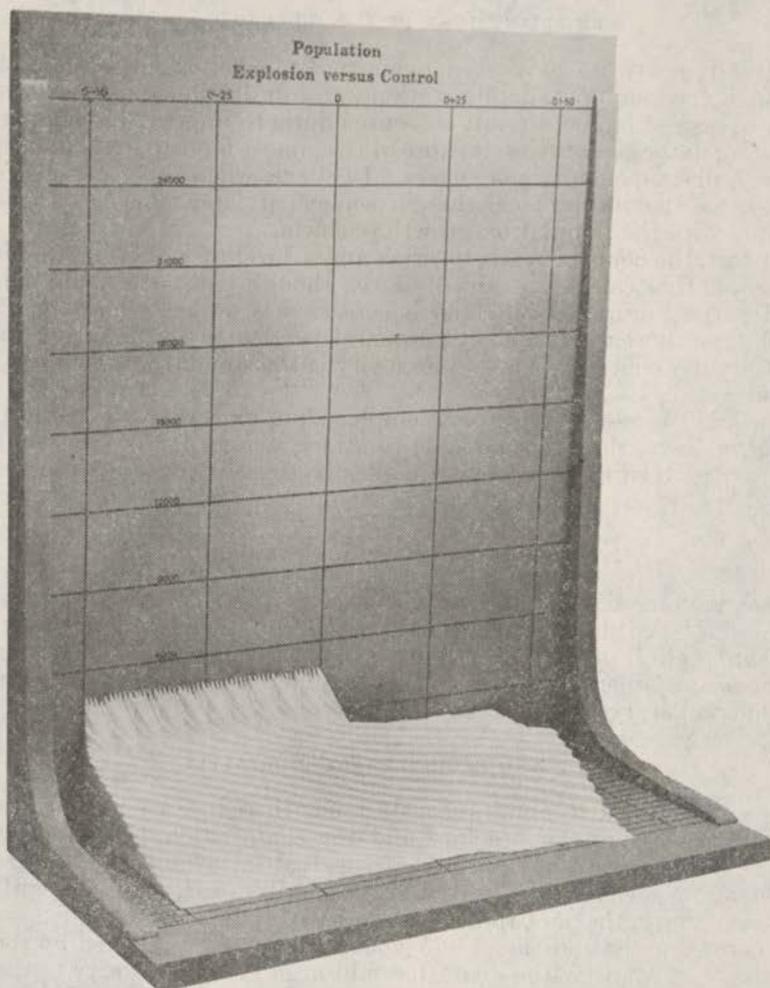


FIGURE 10.—*Population profile model.*

It seems to me this illustrates an important contrast in priority of effort. None of us endorse the early mortality pattern that has typically marked the underdeveloped countries. But important differences exist in the ways in which we may attack high early mortality.

FERTILITY MUST BE CONTROLLED . . .

Most recently we have seen primary attack upon early mortality through food support, immunizations, and sanitation for disease control. These endanger already insecure efforts to improve the standard of living in these countries, because of the almost immediate population growth phenomenon which ensues. I believe, when this course is followed, we inevitably face, though somewhat later, the necessity of dealing with the population growth problem.

In fact, the country tends to reach a new level of maximum number of people that can be sustained. Even though you have doubled the food output, or if outside food is consistently added, very soon this level again is reached. They become dependent upon imported food and fertility control becomes a necessity if the standard of living is to be improved.

I would suggest in contrast to emphasizing mortality control to the point we have, that it is possible to attack primarily the community fertility pattern with assistance in effective fertility control programs, and that this has several effects.

. . . TO IMPROVE ECONOMIC WELL-BEING . . .

One, it immediately—to the extent the fertility control program is successful—restrains population growth, and thereby improves the per capita effect of indigenous efforts to raise the standard of living—without any other thing being done—to increase education, the food output, and everything else they have.

. . . AND REDUCE EARLY MORTALITY

Second, I think it simultaneously tends to reduce early mortality, because it relieves the pressure and the competition for those very things which permit a high rate of survival in infants and children. Whether we speak of things within the family itself, or things within the community, the per capita availability of these is improved as soon as the pressure of additional new young each year is relieved by some fertility control activities—and I would urge greater priority to these measures, with encouragement of them through technical assistance.

POPULATION CAN BE CONTROLLED

The possible effects are illustrated here. If we take the same population in which we have just shown the dynamics of explosive growth, and we begin, not with mortality control and continuation of the old fertility pattern, but with emphasis on an effective fertility control program, and then have the same elimination of early mortality, the actual growth in that population can be controlled. This depends upon the effectiveness of the fertility control program and—this model presumes that almost three-quarters of the fertile women were engaging in fertility control as effective as the loop—only thus is it possible to shift the mortality pattern to the relatively attractive American one and not get caught in phenomenal population growth.

So these are essentially two extremes of what can happen in such an underdeveloped country with vigorous outside assistance. One, a

change in mortality without any effect on fertility, followed by phenomenal population growth. The other, a change in fertility along with a change in mortality, resulting in stable population size and a more favorable age distribution pattern.

FERTILITY CONTROL MORE IMPORTANT THAN MORTALITY CONTROL

It is, therefore, my conclusion, and I think it is reflected in the philosophy of some of the participants in these hearings, that effective fertility control programs—and not mortality control efforts—must have greater priority if the underdeveloped countries which we wish to aid are to have any realistic hope of achieving the improved per capita education and well-being which must be the foundation of any stable and technologically advanced community.

Senator SIMPSON. It would apply to us, too?

Dr. RAVENHOLT. Yes; it would apply to us, too.

Thank you very much.

SCIENCE: A CAUSE OF POPULATION GROWTH

Senator GRUENING. Thank you very much, Dr. Ravenholt.

Your testimony really, in addition to the very valuable data that you have furnished us, focuses attention on the fact that the improvements in medicine and surgery and therapeutics and sanitation are responsible for this great increase in population in our time, is that correct?

Dr. RAVENHOLT. Yes, sir, Senator, inasmuch as they have eliminated early mortality, and thus increased so enormously the number of people surviving into the reproductive years.

Senator GRUENING. So that this is really a problem that is created by advances in science, is that correct?

Dr. RAVENHOLT. I believe there is no question but what the population growth problem has been, is a reflection of, the advances in science; and nutrition, transportation—these other factors as well.

Senator GRUENING. Would you favor legislation of the kind that we are discussing here?

RAVENHOLT BACKS S. 1676

Dr. RAVENHOLT. Very much so, sir. I think recognition of this problem is overdue. Vigorous attempts to match efforts in the mortality control field with efforts to reduce incompatible reproductive rates in the populations that one is attempting to assist in improving living standards are imperative. In fact, I think that if we fail to provide fertility control assistance we cannot succeed in our first objective.

Senator SIMPSON. Would you accord a high priority, Doctor?

Dr. RAVENHOLT. Yes, sir. It seems to me it should have at least the priority of mortality control, because mortality control can, in fact, be substantially achieved by relief of the growth rate in the very same community. This by itself may give them as much or more assistance than they can gain from direct aid in controlling early mortality.

Senator SIMPSON. Let me compliment you on a cracking good statement; it was simple and graphic and well said. And you certainly

have helped this committee a great deal. And I do want to repeat that you align your comments to the exhibits, and mark those exhibits for the record, and put the photographs in so we can have them.

Senator GRUENING. Thank you very much. I share Senator Simpson's views about the value of your very comprehensive and useful testimony, which covers a field that has not hitherto been covered in testimony.

Before calling our next witness, Dr. William A. Lynch, of Brookline, Mass., I shall insert in the record some excellent information concerning the problems caused by school population growth in one school district.

Population growth problems touch areas which surprise many Americans. The subcommittee had hoped it would be possible for officials from the Dade County Public School District to come to Washington, D.C., and personally describe the problems which expanded enrollment has created in the Miami, Fla., area. The subcommittee had asked the chairman of the Board of Public Instruction of Dade County, Mrs. Jane Roberts, and the superintendent of the Dade County Public Schools, Dr. Joe Hall, to testify.

Inclement weather, a hurricane, made this impossible last year, and this year conflicting engagements have prevented their appearance. However, all is not lost. Mrs. Roberts and Dr. Hall agreed to submit written testimony which the subcommittee is delighted to have for study.

Their biographic statements and the information concerning the growth problems of the Dade County, Fla., public school system will be made a part of the hearing record at this time.

The subcommittee regrets that it could not thank Mrs. Roberts and Dr. Hall in person, but perhaps this will be possible at a later date.

(The above-mentioned items follow:)

OFFICIAL BIOGRAPHY: JANE S. ROBERTS

Mrs. Jane S. Roberts is chairman of the Board of Public Instruction of Dade County, Fla. She has been a resident of Coral Gables since 1934, is the mother of four children, and is a member of St. Thomas Episcopal Church. Mrs. Roberts is a graduate of Hannah More Academy, Baltimore, Md., attended the University of Miami School of Music, and completed business school in Miami.

For over 20 years Mrs. Roberts was active in the construction business and is now secretary-treasurer of Lyle Roberts, Inc., general contractors. In 1955 she became the first woman to be appointed to the Dade County Budget Board. Mrs. Roberts resigned from this position when she was appointed to the Dade County School Board in 1957 and was reelected to this office in 1958 and 1960. In 1961 Mrs. Roberts became the first woman to be appointed chairman of the Dade County School Board. She is now serving in this capacity for her third term.

Mrs. Roberts has been a member of the advisory council of the Dade County Health Department, and from 1957 to 1959 was a member of the interim committee on education to the legislature.

In 1960 Mrs. Roberts was voted the "Outstanding Woman of Dade County" by the Miami News. In 1962 she received the "Headliner

Award" from Theta Sigma Phi, and was also presented with the "Outstanding Citizens Award" by the Coral Gables Junior Chamber of Commerce.

In 1963 she was listed in "Who's Who in American Women." was voted a commendation award by the Dade County Classroom Teachers' Association in the field of general education, and was awarded an honorary life membership in the Congress of Parents & Teachers. In 1965 Mrs. Roberts was honored by the Miami News by being selected for the "Permanent Hall of Honor"—which includes the women previously honored as "Outstanding Woman of the Year."

OFFICIAL BIOGRAPHY: JOE HALL

Joe Hall, superintendent of Dade County public schools, Miami, Fla., was born in Mentone, Ala., September 22, 1909.

He was valedictorian of his high school graduation class at the Martha Berry School near Rome, Ga. He received the A.B. degree from the University of Florida in 1931; M.A. from New York University in 1936; and Ed. D. from Florida State University in 1955.

Dr. Hall has served as a teacher and principal in the public schools of Florida. At the time he came to the Dade County school system in 1948 he was director of the division of instruction, State department of education, Tallahassee, Fla., where he had worked for the preceding 12 years, except for 40 months during World War II when he served in the Navy, attaining the rank of lieutenant commander.

He was named director of instruction of the Dade County public schools in 1948; assistant superintendent in 1949; and associate superintendent for instruction in 1953. He became superintendent in January 1957.

Dr. Hall is active in a number of professional organizations including American Association of School Administrators; Florida Education Association, in which he has been president (1964-65), a member of the board of directors, a member of the program action, retirement, tenure, resolutions, and other committees. He is a member of the Kappa Delta Pi Educational Fraternity.

He has also been active in community affairs. As a part of these activities he has served as president of the Florida Junior Chamber of Commerce (1940-41); State chairman for the March of Dimes (1953); member of the Everglades National Park Commission which succeed in establishing the park; secretary of the Florida region, National Conference of Christians and Jews; board of directors, Museum of Science; chairman, schools divisions of United Fund; board of directors, Dade County Chapter of American Red Cross; member of the Coral Gables Kiwanis Club (president, 1962); member of the Coral Gables post of the American Legion; and a member of the advisory committee, Greater Miami unit, Recording for the Blind, Inc. At the national level he is a member at large, National Council of Boy Scouts of America; and officiates at the Fisher Body Craftsmen's Guild. He is also a trustee of the Joint Council on Economic Education.

In 1957 he was selected as a member of the Silver Anniversary All-American Team by Sports Illustrated magazine as one of 25 college athletes graduating from the colleges of the Nation in 1931 and at-

taining subsequent distinction. In 1962 he received an honor certificate from the Freedoms Foundation at Valley Forge for his opening of school address on "The American Way of Life." In 1964 he also received the American Educators Medal from the Freedoms Foundation at Valley Forge.

Dr. Hall is married; has five children (two sets of twins); and has served as deacon and superintendent of the Sunday school in the University Baptist Church, Coral Gables, Fla.

(The previously mentioned statement follows:)

EXHIBIT 170

STATEMENT OF SOME PROBLEMS RESULTING FROM THE PHENOMENAL GROWTH OF THE DADE COUNTY, FLA., PUBLIC SCHOOL SYSTEM

(By Mrs. Lyle Roberts, Chairman, Dade County Board of Public Instruction, and Dr. Joe Hall, Superintendent, Dade County Public Schools, Apr. 5, 1966)

BACKGROUND AND GENERAL CHARACTERISTICS

A brief consideration of the setting in which the schools operate may be conducive to a fuller understanding of some of the problems which resulted from the tremendous population growth during the 1950's and early '60's of the Dade County, Fla., public school system.

The school system which comprises an area of more than 2,000 square miles along the Atlantic seaboard of the Southeastern United States stretches for a distance of some 50 miles from north to south and 40 miles from the coast inland. Approximately 800 square miles of this area are inhabitable, the remainder being water and everglades.

From the late 1800's when the Indians and early white settlers bartered their wares on the Miami River and men of vision foresaw the tremendous possibilities of capitalizing on the unusual climate of south Florida, the area has grown and flourished. Dade County, one of the fastest growing metropolitan areas in the Nation, almost tripled its population from the end of World War II to 1960 and today there are more than 1 million permanent residents in the area. This total is swelled by several million visitors during the winter and summer tourist seasons.

Although Miami Beach is well known as the "Nation's Winter Playground," the tourist trade may be found on the mainland as well and tourism remains the leading "industry." However, agriculture flourishes in the southern part of the county and this area supplies a large part of the Nation's winter vegetable crop. Light manufacturing industry also has found the area attractive and today there are more than 2,500 plants of modest size located here. The location of the county on the southern tip of the United States gave impetus to the growth of air transportation and today thousands of persons pass daily through the gates of the Miami International Airport.

Thirty-one percent of the population lives in the city of Miami, another 31 percent in the other 26 municipalities of the county, and the remainder in the unincorporated areas. A county metropolitan form of government, created by the legislature in 1957, has control over sewerage, water supply, transportation, traffic, central planning, and other municipal functions susceptible to areawide control.

THE SCHOOL SYSTEM

Each of Florida's 67 counties operates a school system which serves the entire county and is under the control of an autonomous board of public instruction. In Dade County, the seven-member board, elected by the citizens, appoints the county superintendent who serves as secretary and executive officers of the board of public instruction. He is responsible for administration and supervision of the public schools from kindergarten through junior college in accordance with policies of the board and State regulations and statutes.

A major population explosion occurred in the schools following the close of World War II as families moved in ever-increasing numbers to Florida and became permanent residents of the greater Miami area. This tremendous influx which pushed the State into the position of one of the fastest growing in the country, together with the impact of a rapidly rising birthrate in Dade County,

resulted in tens of thousands of new children entering the public schools during the decade, 1950-60. By 1950, the enrollment had climbed to more than 62,000 and just 10 years later the number was 156,000—an increase of some 94,000 in a 10-year span. Although the growth rate has declined during the present decade, there are still some 4,000 to 5,000 new pupils enrolled annually in the schools.

During the opening week of this school year (1965-66), there were 198,565 pupils enrolled in the 208 elementary and secondary schools, an increase of 4,819 over opening week last year. This figure has risen steadily to a total of more than 203,000 in January 1966. In addition, there are some 17,000 students enrolled in the Miami-Dade Junior College, one of the fastest growing institutions in the Nation.

For a number of years, the Dade County public school system has ranked as the seventh largest urban system in the country. The annual population increase of the system and the live births in Dade County which contributed to this growth are shown in tables 1 and 2.

The thousands of Cuban refugee children who came to Miami during and after the Cuban revolution, particularly from 1961-63, contributed also to the growth of the school system. Many of these children have since been relocated to other areas of the United States, but the last official census taken of these children in January 1966, revealed there were still some 16,209 enrolled in the public schools of the county including almost 900 who had entered the United States since October 3, 1965. These children brought into focus new problems for the schools, a major one being that of communication since many of them were non-English speaking.

MAJOR PROBLEMS RESULTING FROM GROWTH

Among the many problems faced by the school system in providing for the population explosion which occurred, those which taxed the ingenuity and resourcefulness of everyone concerned to the utmost were: building and equipping classrooms; securing sufficient qualified teachers and other staff; financing the system; and upgrading the quality of the educational program. While great inroads have been made and tremendous strides taken to meet these problems, much remains to be accomplished. The task for the future is a tremendous but exciting one which will challenge the best efforts of everyone involved.

Classrooms

To provide for the pupil increase during the peak period of population growth, the middle 1950's, 400 new classrooms were needed annually or the equivalent of one new 20-classroom building every other Monday morning during the school year. This need was partially met in a number of ways. Some \$60 million in bond moneys was utilized, about \$1½ million in Federal funds was received under Public Law 815, and large expenditures from annual appropriations were made. During the 10 years from 1955-65, a total of 111 new buildings containing 3,053 classrooms were opened. (See table 3.)

Other measures which proved helpful in relieving the classroom shortage included: the use of staggered opening and closing hours for secondary schools; the institution of a daily lesson by television for some 50,000 pupils in large group situations; and the use of 400 portable classrooms which were shifted about the county as needs dictated. These portable classrooms are still in use and this year, for the first time in many years, it was necessary to open one new elementary school consisting entirely of portable frame buildings.

Although past efforts to meet classroom needs have been tremendous, the school system faces pressing future needs in this area. An extensive and detailed study of these needs prepared in 1964 projected a need for the next 5 years totaling some \$98 million. This includes new construction of \$30 million to house an expected 4,000 annual pupil increase, almost \$20 million to meet needs for improvements to existing facilities, and some \$48 million to care for other unmet needs such as the elimination of the noise (airplane) factor, provision of space for kindergartens countywide, replacement of portable buildings, and securing additional sites for future schools. An estimated \$15 million of this need would be met from State funds, leaving about \$82 million to be secured from local and other sources.

Teachers and other staff

During the 1950's more than 8,000 new teachers were recruited and employed to staff the classrooms for the ever-increasing pupil population and to provide replacements for those who retired or left the system for other reasons. The

personnel department of the system which provides all personnel functions for some 15,000 employees this year, of which about 9,000 are instructional, has faced many problems with the growth of pupil population. A recruiting staff was added, fingerprinting of all employees instituted, personnel forms revised, and most recently a tape information system developed in connection with the system's data processing services to speed up the flow of information and processing of personnel records.

In addition to teachers, the personnel department has processed employment of the hundreds of other persons necessary for operation of the schools including secretarial, custodial, maintenance, transportation, and lunchroom staffs. It employs annually some 1,000 teachers for substitute service as well as aids and part-time help. The growth of the pupil population as well as the updating of procedures and forms has resulted in tremendous pressures on the entire personnel process of the school system.

Financing the schools

Support for the Dade County Schools is derived from three main sources—the local, State, and Federal governments. The major portion of the support, about 58 percent, is from local sources, mainly the local tax on Dade County property. Some 36 percent is from State sources and for the current year 5 percent is anticipated from the Federal Government. By the constitution, the local tax is limited to 20 mills on nonexempt property of which up to 10 mills must be voted by the citizens in a biennial election and not less than 3 mills nor more than 10 may be levied annually at the discretion of the board of public instruction. For a number of years, the maximum of 20 mills has been required to support the program. However, for the past year this was reduced because of a reassessment program and doubling of property values to 8.66 mills for operation of the schools. For the current year, this has increased to 11.68 mills which were necessary to provide for an increase in pupil population of more than 4,000 as well as to offset reductions in revenue from the Federal Government for Cuban refugee pupils, a decrease in the yield of 1 mill, and other losses.

From 1955 to the current year, the operating budget has increased from almost \$30 to \$99 million. The per-pupil cost for 1955-56 was \$283; the estimated pupil cost this year is \$520. For the current year, in order to bring the budget allotments within anticipated revenue it was necessary to effect some \$10 million in cuts. Items deleted included some counseling, physical education, and assistant principal positions; clerical positions; needed building improvements; and some planned classroom construction. These reductions, if they are continued in effect over a period of time, cannot help but affect adversely the quality of education that boys and girls will receive.

Improving the quality of education

Many of the services which existed prior to 1950 have been expanded and improved in line with the growth of the school system and many new programs and changes have been instituted in recent years directed toward improvement of quality.

In addition to a week-long orientation program for new teachers held annually, there are numerous provisions for in-service education of teachers and other personnel conducted by the system in cooperation with institutions of higher learning. The latter include self-study practicums in which entire faculties of a school participate biweekly for the entire year; 2-week special institutes; special courses; a 2-week workshop for teachers in their first 3 years in the system; seminars for principals and prospective principals; and numerous informal activities such as clinics and conferences of 1 to 3 days duration. There are also intervisitation by teachers and principals and visits by teachers to observe the teaching and programs at the special schools in the county which provide for this type of activity.

Other measures undertaken to improve quality include the continuous preparation and revision of curriculum bulletins, expansion of the supervisory staff, the organization of curriculum councils, and the introduction of many new materials, techniques, and modern programs. Among the latter may be mentioned modern mathematics and science programs, honors courses, advanced placement, and the use of television, radio, language laboratories, team teaching, nongraded schools, a bilingual school, and preschool programs.

Much impetus for improved quality was given by the quality education committee, a citizen's group formed to study the schools, which presented its report containing some 75 recommendations in the spring of 1963. The recommendations ranged widely from reorganization of the system into subdistricts, to library and guidance standards, reading needs, mathematics and science, English, and the educational needs of culturally different boys and girls.

One recommendation concerned the need for kindergartens countywide. While full implementation of this recommendation has not been possible because of financial and classroom limitations as indicated previously, steps in this direction have been made through establishment of the J. F. Kennedy preschool classes in 22 schools. Generally, these classes operate in low economic areas of the county in which there are large numbers of economically and educationally disadvantaged pupils resulting largely from the high birth rates of the late 1950's and early 1960's.

Other measures taken to improve programs, not only countywide but especially for the densely-populated low-income areas, includes establishment of central reading clinics in each of the six subdistricts; assignment of special reading teachers to each junior high school; the addition of 114 reading teachers to staffs of schools with severe reading problems; and the addition of special arithmetic teachers. Also, additional library books have been purchased and special materials developed for use with the disadvantaged. Among the latter are the Miami Linguistic Readers, developed under a Ford Foundation project for Spanish-speaking and culturally disadvantaged pupils, which are now used in school centers in five Southwestern States and Puerto Rico.

The school system has taken advantage of several of the recent Federal acts and has programs operating with financing from the Economic Opportunity Act, the Vocational Education Act of 1963, the Civil Rights Act, the NDEA Act, and the Elementary and Secondary Education Act of 1965. The system financed locally its preschool program known as the J. F. Kennedy program during 1964-65 which was continued during the past summer with approximately 1,200 4-year olds participating in the system's own version of "Operation Headstart." The latter included programs for 5,300 5-year olds and programs in 10 junior and senior highs which were financed by funds made available by the Commissioner of Education. Presently, the system is participating in the "Headstart" program with Federal financing with more than 30 schools involved.

Although some financial assistance has been secured by the school system under the various Federal acts toward meeting the multiplicity of needs, the phenomenal growth of the school population during the past 15 years and the efforts of the system to provide quality education, adequate classrooms, sufficient teachers and other staff, and materials and equipment to meet the needs of every individual pupil have culminated in a stringent budget situation for 1965-66 which has been unequalled in the past history of the schools. Unusual effort will need to be expended and every resource tapped if the Dade County public schools are to maintain and improve their expectations in meeting the educational needs of the community. Specifically, these problems include the following:

Housing.—Providing additional classrooms to relieve overcrowded situations and to reduce the size of many classes where special help is required; renovating many existing facilities to make them more suitable for a modern educational program and to eliminate distracting noise from modern traffic both on land and in the air; and providing facilities for kindergarten and prekindergarten children as well as for adults.

Staffing.—Obtaining staff to conduct the kinds of programs required and training and retraining already competent staff to meet the needs of new programs.

Programming.—Developing new and more effective programs especially for culturally different populations. This includes those normally considered to be of school age as well as those now considered to be preschool or adults.

Providing instructional materials.—Making more adequate provision for textbooks, library books, audiovisual aids, supplies, laboratories.

It is apparent that many of these needs must be met to achieve the goal of an improved quality of education. Many more, however, result directly from an increasing pupil population.

TABLE 1.—Growth in pupil population, Dade County, Fla., public schools
(actual, 1950-51, 1964-65; estimate, 1965-66, 1969-70)

Year	Peak month membership	Increase	
		Number	Percent
1950-51	68,574	6,527	10.5
1951-52	73,822	5,248	7.7
1952-53	82,899	9,077	12.3
1953-54	91,738	8,839	10.7
1954-55	102,735	10,997	12.0
1955-56	114,560	11,825	11.5
1956-57	128,042	13,482	11.8
1957-58	140,463	12,421	9.7
1958-59	147,834	7,371	5.2
1959-60	156,038	8,204	5.5
1960-61	167,045	11,007	7.1
1961-62	179,522	12,477	7.5
1962-63	190,014	10,492	5.8
1963-64	194,270	4,256	2.2
1964-65	198,228	3,958	2.0
Estimate:			
1965-66	203,300	5,072	2.6
1966-67	208,300	5,000	2.5
1967-68	213,500	5,200	2.5
1968-69	219,000	5,500	2.6
1969-70	224,800	5,800	2.6

Source: Department of Welfare and Attendance, 1950-51, 1964-65; estimates, Department of Administrative Research and Statistics, Dade County Public Schools.

TABLE 2.—Live births, Dade County, Fla., 1944-63

Year:	Live births
1944	6,257
1945	6,904
1946	7,507
1947	8,048
1948	9,084
1949	9,503
1950	10,503
1951	11,381
1952	12,013
1953	13,169
1954	13,894
1955	15,400
1956	17,746
1957	18,672
1958	19,129
1959	19,217
1960	19,658
1961	19,545
1962	19,686
1963	19,355

NOTE.—Figures are shown for 6 years earlier than entry date for 1st grade (as compared to table 1, 1950-51, 1969-70).

Source: Live births (recorded births), Bureau of Vital Statistics, Dade County, Fla.

TABLE 3.—*New schools, classrooms, and cost of new schools, Dade County, Fla., public schools; 1950-51 to 1965-66*

Year	New Schools		Total	Classrooms	Cost
	Elementary	Secondary			
1950-51		2	2	111	\$2,371,131
1951-52	7	2	9	193	4,385,642
1952-53	6		6	123	2,960,745
1953-54	3	1	4	94	1,906,391
1954-55	8	2	10	266	4,004,555
1955-56	8	5	13	347	9,220,095
1956-57	17	3	20	449	9,936,404
1957-58	14	3	17	397	8,296,289
1958-59	8	4	12	410	8,700,195
1959-60	8	4	12	321	7,284,293
1960-61	9	3	12	317	6,927,463
1961-62	8	2	10	238	4,533,835
1962-63	2	1	3	94	2,054,214
1963-64	5	4	9	339	8,132,454
1964-65	1	2	3	141	3,920,529
1965-66	1		1	18	422,807
Total	105	38	143	3,858	85,057,042

Source: Architect's monthly reports.

Senator GRUENING. The public affairs department of the Chase Manhattan Bank of New York has issued an excellent bulletin on the population explosion. The responsibility that private business is evincing in recognizing "the greatest storm ever to sweep over the human race" is gratifying. James Reston of the New York Times has said: "... never in history has so obvious and significant a fact been so widely evaded." Perhaps the tide is turning and the rallying of private business with Government may still be able to minimize the mass starvation that the destructive power of our population explosion will create.

I direct that "The Population Explosion" be included in the printed record of this hearing at this point. I also direct that an article "Needed Research for Population Policy," by Robert Lamson, a sociologist and research analyst with the Postattack Research Division of the Office of Civil Defense, be included in this hearing record. Mr. Lamson considers population growth in the light of national security, resources, and welfare, and projects the goals of various types of needed research.

(The above-mentioned articles follow:)

EXHIBIT 171

THE POPULATION EXPLOSION

(Vol. VI, No. 1 of a series of reviews and comments on public affairs, issued by the Chase Manhattan Bank for members of the staff, 1 Chase Manhattan Plaza, New York, N.Y. Feb. 18, 1966.)

By the time you finish reading this bulletin, 1,000 babies will have been born into the world. In the same period, less than half that many people will die.

Every 24 hours world population is increasing by about 170,000, each year by nearly 65 million. Every 3 years, in other words, world population is growing by the equivalent of the entire population of the United States.

This is the population explosion—the greatest storm ever to sweep over the human race.

It is a rush toward potential disaster because population growth is outrunning food production. The chairman of the Freedom From Hunger Foundation said recently: "The catastrophe is not something that *may* happen; on the contrary it is a mathematical certainty that it *will* happen (unless action) is immediately forthcoming." Says James Reston of the New York Times: "* * * never in history has so obvious and significant a fact been so widely evaded."

It took man all of recorded time until the 1840's to reach a world population of 1 billion. It took less than a century to add the second billion, 30 years to add the third. At the present growth rate, another 3.5 billion people will be added in the remaining 34 years of this century, bringing the total to about 7 billion. World population, in short, will double up by the year 2000 and will double every 35 years thereafter if the current growth rate remains constant. But the rate is increasing.

THE PARADOX OF PROGRESS

What accounts for this sudden population explosion? There is tragic irony in the answer. The population explosion, which threatens every aspect of life as we know it, and perhaps our survival itself, is the result of progress.

Throughout most of man's precarious existence, the number of births did not significantly exceed the number of deaths. But, especially in the last few decades, the balance between births and deaths has been drastically altered by a drop in the death rate. The population equilibrium has been shattered.

Three factors, more or less in historical sequence, contributed to the drop in death rates.

(1) Higher living standards through technological advances and increased productivity. This was accompanied by the development of relatively powerful and stable central governments that made for longer periods of peace.

(2) Progress in sanitation, personal hygiene, and the purification of food and water, resulting in the virtual elimination of a number of parasitic, infectious, and contagious diseases.

(3) Recent great strides by medicine and science in the development of antibiotics, vaccines, disinfectants, and insecticides.

Initially these developments had their greatest impact in the more advanced countries. But population growth did not reach truly explosive proportions until recent years when the advances of medicine and science were made available in Asia, Africa, and Latin America.

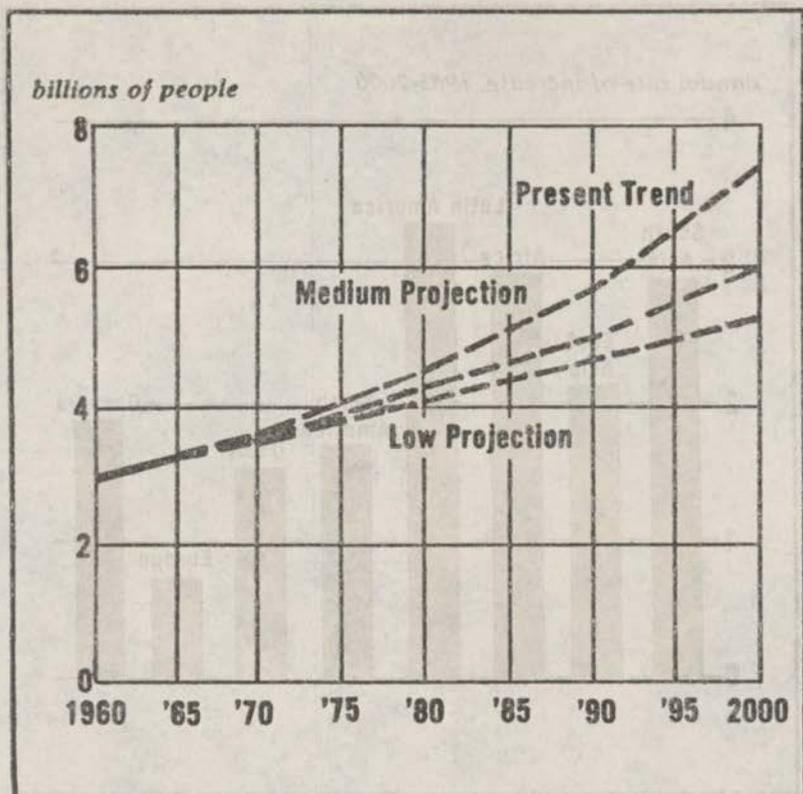
While death rates were plummeting, the birth rate in these areas has remained constant at about 40 per 1,000 persons (compared with between 17 and 23 per 1,000 in the more economically advanced areas). Thus by the year 2000, India may have 1 billion people; China perhaps 1.5 billion; Latin America more than 600 million.

THE PERIL IN THE YEARS AHEAD

Even in the United States, the most advanced country on earth, the prospect of 300 million people by the year 2000—100 million more than now—threatens serious strains on housing, transportation, and other facilities, and on educational, medical, and recreational resources.

How much greater is the problem for countries with a fraction of our wealth and productive capacity, with far greater population density already, and with populations growing at perhaps double the rate of our own?

Economic growth rates in such countries, often superficially impressive, are meaningless when measured against population increases. In some countries of Latin America, currently the area of most rapid population expansion, economic "growth" turns out actually to be a decline in per capita terms. India has managed to expand its gross national product, but with its population increasing by 10 million annually, the process may soon go into reverse.



If the trend continues, population will double by 2000.

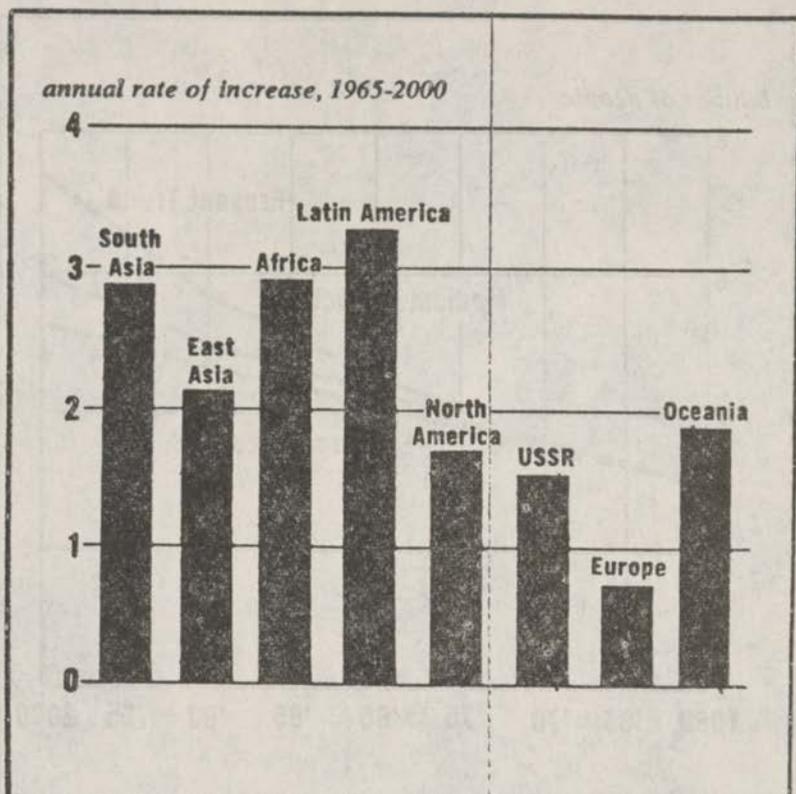
With world population increasing about 2 percent annually, world food production is increasing only 1 percent. While life expectancy is increasing, nutrition levels in many areas are actually declining. The National Council of Churches of Christ recently estimated that 2 billion people (two-thirds of the world's population) now live in areas of nutritional deficiency and that half of these people "suffer daily or recurrent crippling hunger."

The problem, minimally, is to redress the current imbalance in world population growth and food production rates. Short of deliberately permitting the death rate to go up again—hardly a "solution" that would recommend itself to any civilized person—there are only two possible approaches:

- (1) A marked decrease in the birth rate.
- (2) A major increase in food production.

POPULATION CONTROL

It is impossible to discuss population control without acknowledging that the issue is controversial. The Roman Catholic, Greek Orthodox, and Mormon Churches, and some Orthodox Jewish and Fundamentalist Protestant leaders have all expressed reservations or outright opposition to certain forms of birth control. Other groups in many lands and cultures have proscriptions and taboos—moral, religious, tribal—on the subject. Yet it should be borne in mind that most of them do not exclude any and all attempts to limit family size.



Data: United Nations, Population Reference Bureau

Latin America and Africa will gain by highest percentage.

The late Pope Pius XII said, "We affirm the legitimacy and, at the same time, the limits—in truth very wide—of a regulation of offspring which * * * is compatible with the law of God. One may even hope that science will succeed in providing this licit method with a sufficiently secure basis." The church accepts the "rhythm" method in marital relations that takes advantage of naturally recurring sterile periods. During the recent ecumenical council, Pope Paul VI charged a special commission to make a study, "as wide and profound as possible," of the "extremely grave" world population problem.

Moreover, religious and moral scruples are only one of the factors—and by no means the main one—that complicate the problem of population control. More important is the low level of education, or complete illiteracy, and the abysmal living standards in areas where the population problem is most acute.

Among the many ironies of the population problem is that birth rates tend to drop as the level of education and standard of living rise. The greater value and possibilities of life seem to strengthen the motivation for limiting offspring.

In the underdeveloped nations, such motivation is weak or nonexistent among much of the population. One specific problem, for example, is that the peoples in those areas have long been accustomed to bringing large numbers of children into the world because the high death rate meant only one or two might survive to contribute to the family welfare. Many cling to the same belief today. They recognize neither the fact of the sharp decline in death rate nor its consequences: namely, that additional children, far from representing economic security, may well guarantee destitution.

But even where the desire to limit family size presumably exists, and birth control information and devices have been made available, results often have been discouraging. There is usually too little understanding of the reproductive process, and living conditions are too primitive, for consistent and effective adoption of the prescribed measures.

Nevertheless, many persons are convinced that birth control programs—including intensive research into possible new and simpler methods that do not require repetitive procedures—offer the only real hope of averting a world population catastrophe. The attitude of the U.S. Government, in fact, has undergone a change on this question. Former President Dwight D. Eisenhower said recently:

"There is no real progress or security to a nation which, with outside help, raises its productive capacity by 2 percent a year while the population rises 3 percent. When I was President, I opposed the use of Federal funds to provide birth control information to countries we were aiding. * * * I still believe we should not make birth control programs a condition of our foreign aid but we should tell receiving nations how population growth threatens them and what can be done about it."

A similar view apparently led President Johnson to ask the United Nations last summer to "act on the fact that less than \$5 invested in population control is worth \$100 invested in economic growth," and to call in his last two state of the Union messages for cooperation with nations seeking to check population growth.

In a special message last week, the President asked Congress to authorize a food-for-freedom program and to finance it with a \$3.3 billion appropriation in each of the next 5 fiscal years. Under the program, food aid to needy nations would be stepped up and U.S. farm production increased to wage "a worldwide war on hunger."

Theoretically there are enough known and exploitable food resources on earth today to provide adequate diets for the 7 billion or so persons forecast for the year 2000. Improved agricultural techniques, intensive use of fertilizers, and the introduction of machinery in areas where agricultural practices are still primitive could greatly increase the yield of acreage already under cultivation. While the amount of potentially arable land has been constantly diminishing, there are still stretches of jungle, forest, and even desert throughout the world that could be brought under cultivation.

FOOD SUPPLY PROSPECTS

Moreover, there are untapped food resources in the sea. Recently, for example, U.S. Government scientists disclosed that they had developed a palatable and nutritious "fish flour" from parts and species of fish heretofore regarded as inedible. Studies indicate that if only the unharvested fish in U.S. coastal waters were transformed into flour it would provide the normal protein requirements for 1 billion persons for 300 days at a base production cost of half a cent a person a day.

But potential is one thing, realization another. Effective exploitation of the world's food resources to meet the needs in the years ahead will require huge investments of capital. Capital is produced only by economies in which savings and surplus are possible. In much of the world, as we have seen, population growth is undermining economic progress to the point where little or no disposable capital is available.

The conclusion is plain. There will have to be large infusions of capital in the underdeveloped areas from the developed nations. Whether in the form of private investment, government funds, or a combination of both, the infusion will be essential to prime the pump—in this case a "pump" on which millions of lives literally depend.

The challenge is not simply a humanitarian one. Long before the current imbalance between population growth and food supply reaches the point of mass starvation, social upheaval and cataclysm on a scale hitherto unimagined are inevitable. The population explosion packs far more potential destructive power than anything the nuclear physicists are ever likely to devise.

The reward for meeting the test may be new vistas for mankind. In the words of the late Adlai E. Stevenson:

"Perhaps the necessity of confronting the population dilemma will finally usher in the brotherhood of man."

EXHIBIT 172

NEEDED RESEARCH FOR POPULATION POLICY

(By Robert Lamson, sociologist and research analyst in the Postattack Research Division of the Office of Civil Defense; this article represents his views, and not those of the Office of Civil Defense or the Department of the Army; reprinted from the *American Behavioral Scientist*, February 1966, vol. IX, No. 6, pp. 23-25)

In his state of the Union message before Congress on January 4, 1965, President Johnson said:

"I will seek new ways to use our knowledge to help deal with the explosion in world population and the growing scarcity in world resources";¹ and in his state of the Union message on January 12, 1966, he proposed "to help countries trying to control population growth by increasing our research."²

The President's statements contain implications which are new for U.S. Government officials who are attempting to solve problems, define goals, and pursue programs in such areas as national security, resources, and welfare.

In the past, the U.S. Government has used knowledge to solve problems within the conditions set by such factors as population size and growth rates, geography, and climate. And although Government officials have attempted to modify some of these conditions through programs such as flood control and research in cloud seeding, they have tended to treat population size and growth rates as fundamental conditions or facts of nature which they must take into account in their planning, but which, in themselves, are not subject to conscious choice, change, and control.

What is new in the President's 1965 statement is that, for the first time in U.S. history, a President, in a state of the Union message, has referred to the "explosion in world population" as an object for the application of human knowledge rather than as merely a condition to which Government planning and action must adjust in order to achieve national goals. Both statements indicate that population size and growth rates now tend to be viewed, at the highest levels of government, as objects which can and should be altered through the application of human knowledge.

This new fact raises a series of questions:

1. What is the relation of the "population explosion"; that is, of rapid population growth rates, to such problems as national security, resources, and welfare?

2. If, as the President's messages indicate, we are to use our knowledge to help deal with the explosion in world population, what is the range of possible and desirable goals, means and programs for using our knowledge to deal with this problem, domestically and internationally?

3. What is the relation of these goals to current national problems in such fields as national security, resources, and welfare?

The asking of these questions reveals our lack of knowledge as well as our need for systematic study and analysis of the goals, means, and problems involved in using "our knowledge to help deal with the explosion in world population and the growing scarcity in the world resources" and in acting "to help countries trying to control population growth by increasing our research."

However, some tentative answers and suggestions may be offered with respect to (1) the relation of explosive population growth to problems of national security, resources, and welfare; (2) the range of goals and means for using our knowledge to help deal with the explosion in world population; (3) types of research needed to help answer these questions and to implement the President's statements of purpose.

1. POPULATION GROWTH AND PROBLEMS OF NATIONAL SECURITY, RESOURCES, AND WELFARE

National security.—In the area of strategic defense, planning, and programs for the protection of the population are based on assumptions about population

¹ Message from the President of the United States transmitting the state of the Union message (H. Doc. No. 1, 89th Cong., 1st sess., 1965), p. 4.

² Message from the President of the United States transmitting the state of the Union message (H. Doc. No. 321, 89th Cong., 2d sess., 1966), p. 7.

size, growth rates, composition, and distribution—basic elements involved in planning nationwide requirements for protection against nuclear attack. Planning for military manpower is based on similar assumptions.

Insofar as population size, composition, and growth are factors in national power and military capacity, these elements also enter into the calculus of U.S. power and capability with respect to other nations. Population growth rates are also crucial factors which affect the success of our programs to promote economic growth and political autonomy and stability in underdeveloped areas. Rapid population growth rates have made economic growth and political stability increasingly difficult to maintain in some parts of the world, thereby adding to the need for programs and forces to help maintain internal order and to defend against guerrilla warfare.

Resources.—With respect to problems of domestic and world resources, population size, and growth rates affect the ability of any society to conserve, to use efficiently or to expand such resources as land, pure air and water, fuel and power, timber, wildlife, wilderness, outdoor recreation areas, open spaces, natural beauty, and silence. Population growth rates also affect a nation's ability to provide adequately such functions as transportation, communications, housing, sanitation, and education.

Welfare.—Population size, composition, and growth rates are crucial elements in such problems as poverty, standards of living, health, employment, and automation, not only as part of the conditions within which these problems are solved, but also as causes of these welfare problems themselves—in the United States as well as in the rest of the world.

In addition to these problems of security, resources, and welfare, of great importance is the fact that such values as freedom, autonomy of personality, the nature of our democratic political system, and the extent of intrusion of government into the lives of citizens depend, to a certain extent, on the relation between population (size, composition, density, distribution) and availability of resources. These values may be jeopardized by rapid population growth before limits are reached in the availability of such economic resources as land, water, food, power, and fuel, or in our ability to provide such services as housing, schools, and transport.

Interaction.—The various parts of these problems of security, resources, welfare, and political value interact, on the domestic as well as international levels, and the solution of one part of a problem may depend eventually upon the solution of other parts. For instance, the eventual reduction of population growth rates in underdeveloped countries to the point which would allow for economic growth and political stability may possibly depend upon our success in reducing population growth within the United States. For other countries which we attempt to help and motivate to control their population growth may be less willing to do so if the United States does not provide an example, or if they are urged to limit their population growth and consumption of world resources while, at the same time, the United States doubles in size and increases its percentage and rate of consumption of world resources.

In the long run, our ability to solve our welfare problems of poverty, unemployment, automation, and health, to increase our domestic standards of living and to provide adequate housing, schools, and transportation may depend on whether and what level a balance is struck between population and resources within the United States, even granting the fact that technology can help us to expand and to make more efficient use of our resources.

In the long run also, solutions to our domestic welfare and resource problems may depend upon our success in encouraging other countries to reduce their rates of population growth, if it is granted that the domestic balance between population and resources is ultimately affected by the world population-resource balance.

2. THE RANGE OF GOALS AND MEANS

In order to implement the President's statement of purpose to use our knowledge to deal with the explosion in world population, various alternative goals (domestic and international) may be explored by assuming, for the sake of analysis, that it is within the power of the United States to attain any population policy goal which it sets for itself.

Many curves describing the hypothetical future population size of the United States and of the world can be drawn. The range of alternative goals includes (a) population growth increasing more rapidly than the predicted doubling of

the current United States and world population by the year 2000; (b) the predicted doubling of current United States and world population by the year 2000; (c) a somewhat reduced rate of growth so that the doubling of the United States and world population takes longer, for instance, 60, 75, or 100 years, instead of the predicted 35 years; (d) the stabilization of the United States and world population size at less than its present size, or double its present size, or greater by a factor of 2.5, 3, or 4. Here, the question arises: At what level and when should this stabilization occur, in 60, 75, 100, 200 years?

Given a range of population policy goals, which one(s) should the United States choose to pursue, domestically and internationally, and for what reasons? Which particular curve(s) should the United States take as its goal for domestic and international policy? And, what is the relation of these curves to problems of national security, resources and welfare, and to our political values?

To achieve whatever goal is chosen for dealing with the explosion in world population, there is a range of alternative means which differ with respect to effectiveness, religious, moral, and political acceptability, degree of individual choice, practicality, and cost. They include: (1) methods for controlling birth rates, for instance, infanticide, abortion, sterilization, pills, chemicals, various types of contraceptives, rhythm, abstinence, and delayed marriage; (2) methods for motivating people to limit family size, for instance, clinics, information and propaganda, and removal of incentives for having additional children beyond a given number; and (3) alternative government policies for combining elements of these two methods into a program for achieving a particular population policy goal.

Given such a range of possible alternatives for dealing with the explosion in world population, which should be used to pursue the goal chosen for population policy?

3. NEEDED RESEARCH

Various types of research are needed to help implement the President's statements of purpose and to answer the questions raised above. For if, as the President's statements suggest, we are moving toward acquiring the national capability as well as the intent to use human knowledge to alter population growth rates and to treat United States and world population growth as objects for government planning and action, then there is a great need for research on (1) the relation between population size, composition, and growth, and our problems and goals in fields such as national security, resources, and welfare; (2) the range of alternative domestic and international goals for U.S. application of human knowledge to the population explosion; (3) the relation of these alternative goals to such problems as national security, resources, and welfare; (4) the combination of means (medical, motivational, and policy) which would be required to achieve the goals; and (5) the costs and benefits—economic, political, social, and moral—of each alternative and combination.

Paramount in such research should be a concern with the effects on democratic political systems and on the values of freedom and autonomy of personality which are created, first, by rapid population growth and, second, by the goals and means which are chosen for applying human knowledge to the population explosion.

The following is an outline of the goals of various types of needed research.

1. *Medical-biological*.—To provide medical techniques for population control.

2. *Social-psychological*.—To provide the information and techniques for understanding and influencing individual decisions to limit births.

3. *Demographic*.—To provide basic information about the nature of the population problem as well as analytical techniques for evaluation of alternative population policies.

4. *Policy systems analysis, economic and legal*.—To outline and analyze the benefits, costs, risks, and requirements of various alternative population policy goals and programs.

5. *Theological philosophical*.—To reconcile effectiveness, moral acceptability and desirability of alternative population control techniques and programs.

Senator GRUENING. At the 50th anniversary banquet held on May 5, 1966, at the Shoreham Hotel in Washington, D.C., I was happy to see the presentation of the Margaret Sanger Award to the Reverend

Martin Luther King, Jr., accepted most graciously, because of his absence, by his wife. Mrs. Martin Luther King in receiving the Margaret Sanger Award in Human Rights, in behalf of her husband, from Planned Parenthood Leader Cass Canfield declared: "I am proud tonight to say a word in behalf of your mentor, and the person who symbolizes the ideals of this organization, Margaret Sanger. Because of her dedication, her deep convictions, and for her suffering for what she believed in, I would like to say that I am proud to be a woman tonight."

I now direct that the text of Dr. King's acceptance speech be included in the printed record of this hearing prefaced by the award statement.

(The above-mentioned statement and speech follow:)

EXHIBIT 173

THE MARGARET SANGER AWARD IN HUMAN RIGHTS TO THE REVEREND MARTIN LUTHER KING, JR.

(Presented at the 50th anniversary banquet of Planned Parenthood—World Population and Planned Parenthood of Metropolitan Washington, May 5, 1966, Shoreham Hotel, Washington, D.C.)

This award is presented to the Reverend Martin Luther King, Jr., for his courageous resistance to bigotry and his lifelong dedication to the advancement of social justice and human dignity.

Facing jail, abuse, and physical danger, Dr. King's unceasing efforts—in behalf of all Americans—to win freedom for the Negro people parallel closely Mrs. Sangers' fight over the last half century for the emancipation of women from the burdens of perpetual child-bearing and the emancipation of children from a future of poverty and hopelessness. Neither Mrs. Sanger nor Dr. King have hesitated to challenge unjust laws, cruel social customs and blind prejudice that hold people in ignorance and degradation. Our courts, our legislatures, and—most of all—the human heart and mind have been the crucible in which they have forged a nobler history for all mankind.

In the tradition of all great humanitarians who have seen that human life and progress are indeed indivisible, Dr. King has lent his eloquent voice to the cause of worldwide voluntary family planning.

For Martin Luther King's unique qualities of understanding, compassion, and bravery, and for his wise and unwavering leadership in securing for all people their basic human right to knowledge, dignity, and opportunity that are the fount and principle of Margaret Sanger's life, this award is presented.

FAMILY PLANNING—A SPECIAL AND URGENT CONCERN

(A speech, read by Mrs. Martin Luther King for Dr. Martin Luther King at the 50th anniversary banquet of Planned Parenthood-World Population and Planned Parenthood of Metropolitan Washington, May 5, 1966, Shoreham Hotel, Washington, D.C.)

Recently, the press has been filled with reports of sightings of flying saucers. While we need not give credence to these stories, they allow our imagination to speculate on how visitors from outer space would judge us. I am afraid they would be stupefied at our conduct. They would observe that for death planning we spend billions to create engines and strategies for war. They would also observe that we spend millions to prevent death by disease and other causes. Finally they would observe that we spend paltry sums for population planning, even though its spontaneous growth is an urgent threat to life on our planet. Our visitors from outer space could be forgiven if they reported home that our planet is inhabited by a race of insane men whose future is bleak and uncertain.

There is no human circumstance more tragic than the persisting existence of a harmful condition for which a remedy is readily available. Family planning, to

relate population to world resources, is possible, practicable, and necessary. Unlike plagues of the dark ages or contemporary diseases we do not yet understand, the modern plague of overpopulation is soluble by means we have discovered and with resources we possess.

What is lacking is not sufficient knowledge of the solution but universal consciousness of the gravity of the problem and education of the billions who are its victims.

It is easier for a Negro to understand a social paradox because he has lived so long with evils that could be eradicated but were perpetuated by indifference or ignorance. The Negro finally had to devise unique methods to deal with his problem and perhaps the measure of success he is realizing can be an inspiration to others coping with tenacious social problems.

In our struggle for equality we were confronted with the reality that many millions of people were essentially ignorant of our conditions or refused to face unpleasant truths. The hard-core bigot was merely one of our adversaries. The millions who were blind to our plight had to be compelled to face the social evil their indifference permitted to flourish.

After centuries of relative silence and enforced acceptance we adapted a technique of exposing the problem by direct and dramatic methods. We had confidence that when we awakened the Nation to the immorality and evil of inequality there would be an upsurge of conscience followed by remedial action.

We knew that there were solutions and that the majority of the Nation were ready for them. Yet we also knew that the existence of solutions would not automatically operate to alter conditions. We had to organize, not only arguments, but people in the millions for action. Finally we had to be prepared to accept all the consequences involved in dramatizing our grievances in the unique style we had devised.

There is a striking kinship between our movement and Margaret Sanger's early efforts. She, like we, saw the horrifying conditions of ghetto life. Like we, she knew that all of society is poisoned by cancerous slums. Like we, she was a direct actionist—a nonviolent resistor. She was willing to accept scorn and abuse until the truth she saw was revealed to the millions. At the turn of the century she went into the slums and set up a birth control clinic, and for this deed she went to jail because she was violating an unjust law. Yet the years have justified her actions. She launched a movement which is obeying a higher law to preserve human life under humane conditions. Margaret Sanger had to commit what was then called a crime in order to enrich humanity, and today we honor her courage and vision; for without them there would have been no beginning. Our sure beginning in the struggle for equality by nonviolent direct action may not have been so resolute without the tradition established by Margaret Sanger and people like her. Negroes have no mere academic nor ordinary interest in family planning. They have a special and urgent concern.

Recently the subject of Negro family life has received extensive attention. Unfortunately, studies have overemphasized the problem of the Negro male ego and almost entirely ignored the most serious element—Negro migration. During the past half century Negroes have migrated on a massive scale, transplanting millions from rural communities to crammed urban ghettos. In their migration, as with all migrants, they carried with them the folkways of the countryside into an inhospitable city slum. The size of family that may have been appropriate and tolerable on a manually cultivated farm was carried over to the jammed streets of the ghetto. In all respects Negroes were atomized, neglected, and discriminated against. Yet, the worst omission was the absence of institutions to acclimate them to their new environment. Margaret Sanger, who offered an important institutional remedy, was unfortunately ignored by social and political leaders in this period. In consequence, Negro folkways in family size persisted. The problem was compounded when unrestrained exploitation and discrimination accentuated the bewilderment of the newcomer, and high rates of illegitimacy and fragile family relationships resulted.

For the Negro, therefore, intelligent guides of family planning are a profoundly important ingredient in his quest for security and a decent life. There are mountainous obstacles still separating Negroes from a normal existence. Yet one element in stabilizing his life would be an understanding of and easy access to the means to develop a family related in size to his community environment and to the income potential he can command.

This is not to suggest that the Negro will solve all his problems through planned parenthood. His problems are far more complex, encompassing eco-

conomic security, education, freedom from discrimination, decent housing, and access to culture. Yet if family planning is sensible it can facilitate or at least not be an obstacle to the solution of the many profound problems that plague him.

The Negro constitutes half the poor of the Nation. Like all poor, Negro and white, they have many unwanted children. This is a cruel evil they urgently need to control. There is scarcely anything more tragic in human life than a child who is not wanted. That which should be a blessing becomes a curse for parent and child. There is nothing inherent in the Negro mentality which creates this condition. Their poverty causes it. When Negroes have been able to ascend economically, statistics reveal they plan their families with even greater care than whites. Negroes of higher economic and educational status actually have fewer children than white families in the same circumstances.

Some commentators point out that with present birth rates it will not be long before Negroes are a majority in many of the major cities of the Nation. As a consequence, they can be expected to take political control, and many people are apprehensive at this prospect. Negroes do not seek political control by this means. They seek only what they are entitled to and do not wish for domination purchased at a cost of human misery. Negroes were once bred by slave-owners to be sold as merchandise. They do not welcome any solution which involves population breeding as a weapon. They are instinctively sympathetic to all who offer methods that will improve their lives and offer them fair opportunity to develop and advance as all other people in our society.

For these reasons we are natural allies of those who seek to inject any form of planning in our society that enriches life and guarantees the right to exist in freedom and dignity.

For these constructive movements we are prepared to give our energies and consistent support; because in the need for family planning, Negro and white have a common bond; and together we can and should unite our strength for the wise preservation, not of races in general, but of the one race we all constitute—the human race.

Senator GRUENING. Thomas C. Lyons, Jr., analyst in world demography, Foreign Affairs Division of the Library of Congress Legislative Reference Service, has done a fine job in recapitulating the programs that the U.S. Government has progressively initiated in the area of population and family planning. He starts off with the initial State Department announcement in 1962 and carries through to April 1966. I direct that this all-inclusive treatise be included in the printed record of this hearing at this point.

I also direct that another paper by Mr. Lyons on "Maternity Benefits, Family Allowances, and Birth Grants Paid in Various Countries of the World," and "A Case Study of Northeast Brazil," by Julie Hawkins of the Foreign Affairs Division of the Library of Congress Legislative Reference Service, follow in this hearing record.

(The three above-mentioned articles follow:)

EXHIBIT 174

POPULATION AND FAMILY PLANNING PROGRAMS: U.S. GOVERNMENT ACTIVITIES AND ATTITUDES

(By Thomas C. Lyons, Jr., analyst in world demography, Foreign Affairs Division, the Library of Congress Legislative Reference Service)

EXECUTIVE BRANCH

Foreign

General.—In 1962 the State Department announced the U.S. Government would upon request help other countries find ways of dealing with their population problems.¹ Throughout 1962 and 1963 a number of Government officials

¹ Apparently such help was limited to census and demographic assessment since Manual Order No. 1018.2, dated Aug. 1, 1962, stated: "For the immediate future, reference might best be made to the United Nations; to governments with experience in the field of popu-

spoke forthrightly on the issues of world population growth; e.g., President John F. Kennedy (news conference of April 24, 1963); Ambassador Adlai Stevenson; Secretary of State Dean Rusk; Secretary of Health, Education, and Welfare Anthony Celebrezze; Under Secretary of State George Ball; Deputy Assistant Secretary of State Richard N. Gardner. Former Government officials to comment on the problems during the years 1962-63 included ex-President Harry Truman, former Vice President Richard M. Nixon, and former Secretary of State Christian Herter. In December 1962 the United States supported a United Nations resolution on "Population Growth and Economic Development," indicating that the world body had American support relative to world population problems, in information programs, health-social service programs, medical research, and other U.N.-sponsored programs designed to deal with population problems.

AID.—By the end of 1963 the Agency for International Development was actively engaged in helping other countries develop official statistics, (mostly census taking) in Asia, Africa, Latin America, and the Middle East. In addition the Agency was involved in training in the field of public health and maternal and child welfare, and was discussing with host countries the possibility of establishing birth control programs in the developing areas of the world.

By fiscal year 1965, AID was spending about \$2 million annually in population and related fields, of which about half was going to Latin America.² For the current fiscal year it is believed that AID is spending between \$4 and \$5.5 million in support of birth control and family planning programs conducted by other countries.³ In fiscal year 1967, perhaps as much as \$10 million of AID funds will be spent to assist the family planning and birth control programs of other countries. In Latin America, AID funds were supporting or helping to support between 75 and 100 studies under the Alliance for Progress. Furthermore, the Agency announced early in 1966 that within the next few years it would be spending close to \$20 million in support of foreign family planning and birth control programs.⁴ With this increased spending, the AID has begun to respond to requests for direct assistance to host country programs.

Direct assistance began to appear early in 1965 when AID policy appeared to be going beyond what some believed to be the limitations of the Fulbright amendment⁵ by including technical assistance, but not helping in the distribution of contraceptives or the equipment to manufacture contraceptives. Actually most AID help has, in the past, had little to do with contraceptives, but has centered primarily on education, training, and communications. In general, AID money has been and is being spent for financing meetings and seminars of private organizations; training courses in demography and family planning; foreign student training in this country and in the host country; supporting American and foreign universities who are developing population programs both in the United States and in the host countries; providing contracts with Latin American universities, the Pan American Health Organization, and other foreign agencies; providing consultant services to host countries through U.S. missions abroad; supporting American universities' programs abroad; providing the necessary research tools and experts for field research; conducting program evaluation investigations; providing liaison officers with international organizations and private groups; furnishing general training for family planning workers; assisting in census taking and interpretation of national statistics; and, finally, active participation

lation control such as Sweden and Japan; and to interested private foundations such as the Population Council, Inc., Planned Parenthood, and the Ford Foundation." (See "Special Programs and Policies: Problems of Population Growth," Manual Order No. 1018.2, Transmitting Letter No. Gen-1098, X-1, Aug. 1, 1962, p. 1; Agency for International Development, Program Guidance Manual, ch. 1000.) The more detailed "Population Program Guidelines," presented in Manual Order 1018.2.1, Circular No. 9:41, Aug. 30, 1965, obviously supersedes the 1962 instructions.

² New York Times, Jan. 14, 1966, p. 13.

³ New York Times, Jan. 14, 1966, p. 13 (\$4 million), and New York Times, Mar. 4, 1966, p. 1 (\$5.5 million). [The \$5.5 million figure was released by the Agency in hearings before the House Appropriations Committee, according to the New York Times.

⁴ New York Times, Mar. 4, 1961, p. 1, reported the disclosure was made through an unpublished report before the House Appropriation Committee.

⁵ Par. (b), sec. 241, title V, of the Foreign Assistance Act of 1961, as amended (commonly referred to as the Fulbright amendment) states: "Funds made available to carry out this section may be used to conduct research into the problems of population growth." However, a number of persons believe the amendment was never necessary on the grounds that AID already had the legislative authority under the general authority provisions of secs. 201, 211, 241, and 251. Others argue, however, that the amendment specifically mentions "research," and therefore is restrictive in nature.

in population, family planning and birth control conferences, meetings, symposiums, and seminars sponsored by both public and private international groups.

In a word then, AID does many things. It does not, however, officially advocate acceptance of family planning, advocate a particular method of contraception, give advice to governments who do not ask for it, or supply contraceptives or the machines to manufacture the contraceptives. In all cases of help, it appears that two conditions must be met: (1) Any activity, however minor, must be consistent with the cultural, social, religious, and political beliefs of the peoples and the governments; and (2) the request for help must be made through the appropriate channels in the host government to the appropriate channels in the U.S. Government.

That AID has changed, not so much its direction but its scope, is seen from this late 1965 statement by James Roosevelt, U.S. representative to the General Assembly of the United Nations before the Economic and Financial Committee of the U.N.: "The Agency for International Development has extended its assistance beyond statistical, demographic, and public health fields to direct support of family planning programs. I think it would be appropriate to mention that the Agency for International Development missions will, in accordance with a policy message directed to them last March [1965], now respond positively to requests for technical, financial, and commodity assistance in support of family planning programs."⁶ However, AID officials have made it clear from time to time that the Agency does not advocate "family planning or any method of family planning," and AID considers only those requests that reach this Government through the proper channels.⁷

At the present time South Korea and Taiwan are drawing on counterpart funds for their national population control programs, and Pakistan, Turkey, Honduras, and Tunisia are seeking direct U.S. financial assistance for their established population control programs. Similar U.S. assistance for India is presently in the discussion stages. In the cases of the seven countries just listed, two points should be made: (1) all of these countries have officially adopted national population policies, and (2) all have initiated requests for U.S. help through the proper Government agencies. In addition to refusing to supply contraceptives or equipment for their manufacture, as a condition of extending assistance AID requires the government of the developing nation to establish a national family planning program, with guarantees in the program that each person or family has freedom of choice to use or not use the program.⁸

In Washington, AID population activities are centered in (1) the Population and Research Branch of the Health Service in the Office of Technical Cooperation and Research, and/or (2) in the regional bureau offices. There are full-time staff positions and consultants in both TCR and in the regional bureaus.

AID attempts to work closely with many Government agencies in providing help to foreign countries, most notably the Children's Bureau of the Department of Health, Education, and Welfare; the National Center for Health Statistics; the National Institutes of Health; the Bureau of the Census in the Department of Commerce; the U.S. Public Health Service; the United Nations; and the Pan American Health Organization.

The Agency also disburses financial help to the Latin American Center for Demography and Statistical Studies (Chile); the National Center for Studies of Population and Development (Peru); the Central American Demographic Studies Unit (Guatemala); the Columbia Institute for Social Development; the International Federation of Institutes for Social and Socioeconomic Research.

AID supports research at the University of Pittsburgh and the University of Notre Dame, and has signed contracts with the University of North Carolina and Johns Hopkins University. The latter two schools will develop family planning training programs in the medical field. The Population Council also receives research support from AID.

International organizations.—U.S. attitudes and views toward world population growth were stated in the United Nations by then Deputy Assistant Secre-

⁶ Department of State bulletin, Jan. 31, 1966, p. 177. The policy message referred to by Representative Roosevelt, was Circular Airgram A-280, Mar. 2, 1965. Similar guidance for Latin American missions may be found in Circular Airgram LA-158, May 11, 1964, and Circular Airgram LA-225, Jan. 7, 1965. It may be noted that in January 1966, two population experts, Dr. Carl Taylor and Dr. James Maslowski, representing the U.S. Government went to Cairo to assist the United Arab Republic in its proposed population control programs (Washington Post, Jan. 24, 1966).

⁷ Dr. Phillip Lee, Director of Health, AID Office of Technical Cooperation and Research, quoted in Congressional Quarterly Weekly Report, June 18, 1965, p. 1183.

⁸ New York Times, Mar. 4, 1966, p. 1.

tary of State for International Organization Affairs, Richard N. Gardner in December 1962. Gardner told the General Assembly the United States was prepared to help the U.N. and its member nations who requested such help, in the field of population problems. He further commented that the United States hoped the U.N. would expand the population activities it had been engaged in since its founding.

In 1963 Ambassador Adlai Stevenson pointed out to the United Nations that in the 20 years that Organization had been involved in some aspect of world population problems, it had received the assistance and cooperation of the United States. The Ambassador reminded the world organization that the United States believed the U.N. must do more in this area and that his Government pledged its support if such an effort were forthcoming.⁹

In May 1963 the United States granted \$500,000 to the World Health Organization to enable that Organization to initiate research on family planning programs. Two years later, on May 12, 1965, U.S. Surgeon General Luther Terry asked the World Health Organization to take positive action toward a clearcut policy in the field of birth control, family planning, and world population growth. The Surgeon General said it was the view of the U.S. Government that it was important that WHO take such a stand "as rapidly as possible."¹⁰

The interests of the U.S. Government in multilateral international population programs has been explicitly stated on a number of occasions to a number of international organizations and conferences, especially in the past 3 years. The only conditions the United States attaches to its help through international bodies in population programs is the conditions it places on its own programs; namely, all assistance must be undertaken at the request of the host government, and no population policy may be forced on another nation.

Presidential statements.—President Lyndon B. Johnson has spoken about population growth and its attendant problems on nine different occasions, more than any other American President. It appears from his statements that the United States is maintaining a program of helping those countries that have identified and that seek to deal with their own problems of population growth. By and large the emphasis of the President's statements has been on foreign population growth and programs.¹¹

Domestic

HEW.—On January 24, 1966, Secretary of Health, Education, and Welfare John Gardner sent a memorandum to heads of the Department's operating agencies on the subject of "Departmental Policy on Population Dynamics, Fertility, Sterility, and Family Planning." The text of that memorandum follows:

"The policy of this Department is to conduct and support programs of basic and applied research on the above topics; to conduct and support training programs; to collect and make available such data as may be necessary to support, on request, health programs making family planning information and services available; and to provide family planning information and services, on request, to individuals who receive health services from operating agencies of the Department.

"The objectives of the departmental policy are to improve the health of the people, to strengthen the integrity of the family, and to provide families the freedom of choice to determine the spacing of their children and the size of their families.

"Programs conducted or supported by the Department shall guarantee freedom from coercion or pressure of mind or conscience. There shall be freedom of choice of method so that individuals can choose in accordance with the dictates of their consciences.

⁹ For an additional explanation of the late Ambassador Stevenson's views, see "Population and Our Shrinking World," a speech before the annual banquet of the Planned Parenthood-World Population, Plaza Hotel, New York City, Oct. 15, 1963.

¹⁰ Congressional Quarterly Weekly Report, June 18, 1965, p. 1183.

¹¹ Inasmuch as the substance of most of the President's remarks has dealt with world or foreign population problems, a mention of his statements is felt to be more appropriate in this section rather than in the following section on domestic activities and attitudes.

The President has made remarks on population on the following occasions: State of the Union message (Jan. 4, 1965); 20th anniversary of the United Nations, San Francisco (June 25, 1965); swearing-in ceremony of John W. Gardner, Secretary of the Department of HEW, the White House (Aug. 18, 1965); letter to U.N. Secretary General U Thant at the opening of the Second U.N. World Population Conference, Belgrade (Aug. 30, 1965); state of the Union message (Jan. 13, 1966); remarks at the ceremony held at the Harry Truman Center for the Advancement of Peace, Independence, Mo. (Jan. 20, 1966); foreign aid message to Congress (Feb. 1, 1966); International Education and Health Act message (Feb. 2, 1966); war against hunger message (Feb. 10, 1966).

"The Department will make known to State and local agencies that funds are available for programs of the sort described above, but it will bring no pressure upon them to participate in such programs.

"Each agency shall assure the effective carrying out of this policy, the regular evaluation of programs and the reporting of information on programs to this office."

In his April 7, 1966, appearance before the Senate Subcommittee on Foreign Aid Expenditures, Secretary Gardner reported that HEW is spending about \$3.1 million in fiscal year 1966 exclusively for identifiable family planning programs.

Bureau of State Services.—The Community Health Services Division of the Bureau of State Services (HEW) makes general health grants in aid to individual States who undertake at their own option general health programs. Some of these programs include family planning and birth control information and services.

NIH.—The National Institute of Child Health and Human Development (NICHD) directs almost all of the National Institutes of Health's research in family planning, birth control, and population dynamics. These research projects, generally classified as clinical, biomedical, and behavioral, are carried out in one or more of the nine Institutes of NIH, at universities, medical schools, and hospitals through direct grants, training programs, and fellowships for independent study. Most of the basic research supported by NIH is in the areas of reproductive biology and human reproduction, which includes sterility, fertility, and safe, acceptable, efficient means of family planning.

NIH currently supports more than 300 extramural research projects in the various aspects of reproduction (not limited to human reproduction) and population research costing about \$8 million. By 1966, the National Institute of Child Health and Human Development (NICHD) was sponsoring research and training grants costing about \$5.4 million. This compares with research and training grants costing \$3.7 million in mid-1965.¹²

The role of the NIH in supporting these programs was stated in recommendations by the National Advisory Council on Child Health and Human Development on June 8, 1965. The Council's recommendations were accepted by the Surgeon General of the Public Health Service. Part of the recommendations on "Research on Fertility, Sterility, and Population Dynamics" follows:

"One of the paradoxes of this era of progress in scientific knowledge is the relatively limited understanding which has been achieved in the area of human reproduction. While medical advances have dramatically improved the level of health care and have sharply reduced the death rate, human fertility and sterility remain shrouded in mystery. Further research is urgently needed to develop fully effective, safe, and acceptable methods of family planning. Substantial numbers of married persons are unable to have the number of children they want, or to control when they will have them. In short, our medical knowledge has not made it possible for our citizens to exercise freedom of choice in one of the most important aspects of human life.

"The role of the National Institutes of Health in general, and of the National Institute of Child Health and Human Development in particular, in overcoming this problem is clear. There is a compelling need for research on the basic phenomena of reproductive biology and of human reproduction on which can be based safe, acceptable, and efficient methods of family planning. Every effort must be made to acquire new knowledge which when applied will improve the quality of births so that each newborn will be able to develop into adulthood without handicaps. We must look forward to the day when each child is wanted, when parents will be able to exercise free choice as to the number of children they wish to have, when each fertilized egg will have the greatest possible chance to develop into an infant that will be born physically and mentally normal, and when each newborn infant will have the greatest possible opportunity for surviving and developing to productive adulthood.

"The major focus of our efforts should relate to questions of fertility, sterility and population dynamics in the United States, but scientific information, when obtained, should be made available to all parts of the world. It is clear that to gain information basic to the solving of these problems it may be necessary to support research outside this country.

¹² NICHD, Program Statistics Branch, Mar. 2 and Mar. 9, 1966. The \$8 million total NIH extramural population funding was broken down to \$6.5 million for research and \$1.5 million for training. NICHD activities in population research for fiscal year 1966 includes \$4.9 million in total grants (research grants; fellowships, research career grants; training grants are the major categories), and \$500,000 for total direct operations (research contracts, other direct operations), for the total NICHD funding of \$5.4 million.

"The NIH must openly and forthrightly express its readiness to explore all the significant scientific questions relating to human reproduction, without being pressured into assuming responsibility for the development of service functions in this field. It is the responsibility of the reproductive biology program of NICHD to initiate, expand, and improve research in reproduction.

"The legislative mandate for NICHD to undertake such research is stated in section 441 of the Public Health Service Act and in the report of the House Interstate and Foreign Commerce Committee. It is most urgent that NICHD take steps to stimulate and support increased research on problems of human fertility, sterility, and family planning. This effort should be appropriate to the magnitude of the problem."

Children's Bureau.—Katherine B. Oettinger, Chief, Children's Bureau, stated in an address in New York City, September 9, 1965, the role of the Children's Bureau in the following words:¹³

"The Children's Bureau is in a key position in the involvement of the U.S. Department of Health, Education, and Welfare in helping to support family planning service programs. Our basic concern has always been, and always will be, to improve the social and physical health of mothers and children throughout the country. Our obligation under the Social Security Act is to assist the States in promoting these services."

Mrs. Oettinger said she believed that family planning information "should be available on a universal basis as a right to parents, without coercion, but with a genuine and sympathetic attention to the needs of each human being."¹⁴ According to the Bureau Chief, the Children's Bureau had recently expanded its activities in the field of family planning by adding a professional staff member who would seek information from each of the states relative to family planning services at the local level.

PHS.—Early in 1965 Surgeon General Luther B. Terry, Public Health Service, stated that both domestic and international family planning assistance were proper functions of the U.S. Government,¹⁵ but it was not until April 1965 that the role of the PHS was spelled out by Dr. David E. Price, Deputy Surgeon General, PHS, in a paper presented to the symposium on population growth and birth control at Boston University. In his speech, Dr. Price said the role of the PHS was "to continue to help States and localities make family planning available based on existing knowledge; to speed up research in all aspects of human reproduction and population dynamics so that knowledge may be improved; and to increase greatly our training of personnel so that the inevitably heavy demand for their services may be met."¹⁶

In 1965, the PHS reportedly made \$50,000 in grants to be used specifically for family planning programs.¹⁷

Interior Department.—Secretary of the Interior Stewart L. Udall announced on June 19, 1965, that he had directed three agencies of the Department to offer "birth control information and family planning services comparable to those generally available in other communities throughout the Nation." These services would be made available to American Indians living on Government reservations; to Indians, Eskimos and Aleuts living in Alaska; and to natives of Pacific island trust territories. The Secretary said such services would be "entirely voluntary" and that under no conditions would family planning services be a precondition to receipt of Government benefits.¹⁸

O.E.O.—The Office of Economic Opportunity makes funds available to communities for the establishment and maintenance of family planning programs through the community action program but is restricted to providing no more than 10 percent of such projects. The OEO, which directs the war on poverty programs, began approving funds involving birth control in late 1964, with a small grant to Corpus Christi, Tex. planned parenthood clinics. In the House Appropriations Subcommittee hearings for OEO supplemental appropriations for fiscal year 1966, the OEO reported it had funded 11 birth control projects through community action agencies.¹⁹ It is believed that dozens of similar

¹³ "Children," vol. 12, November-December 1965. The Oettinger speech mentions that the Children's Bureau and the States are doing in this area. Prior to the Oettinger speech, Dr. Murry Grant, Director of the District of Columbia's Public Health, announced for the first time in early 1965, that the Children's Bureau permitted States to fund family planning services in maternal care programs. *New York Times*, Jan. 22, 1965, p. 13.

¹⁴ *Washington Post*, Sept. 10, 1965, p. 1.

¹⁵ Memorandum on Population Field—Extramural Program Guide, Jan. 6, 1965.

¹⁶ The paper was presented Apr. 23, 1965.

¹⁷ *Congressional Record*, Feb. 28, 1966, p. 4102.

¹⁸ *New York Times*, June 20, 1965, p. 1.

¹⁹ Oakland, Calif.; Corpus Christi, Tex.; Austin-Travis Counties, Tex.; Buffalo, N.Y.; Nashville, Tenn.; Albuquerque, N. Mex.; Boone, N.C.; Rochester, N.Y.; St. Louis, Mo.; Tufts University; Detroit, Mich.

projects are presently pending in OEO, and that the number of approved family planning projects now approaches 20.²⁰ Estimates for the funding of these projects vary from \$750,000 to \$900,000. Of the 11 projects mentioned above, 6 were outright grants for birth control services, costing \$292,000. Unlike foreign aid assistance for birth control programs, OEO money may be spent for birth control devices and drugs.

The OEO Community Action Program Guide states:²¹

"(7) Providing information on family planning. Activities of this type will be approved only if conducted in conformity with State and local laws and under the supervision of medical authorities. The use of the information service must be wholly voluntary on the part of the recipients and must not be a prerequisite to any other form of aid. Information must be made available on a variety of techniques, so that individuals can obtain information which is consistent with their ethical, moral, or religious beliefs. OEO has special conditions applicable to any program which contains family planning activities."

Bureau of the Census.—Foreign countries may receive through AID the help of the Census Bureau (Department of Commerce) in all aspects of census taking (e.g., machine tabulation, sampling techniques, etc.) and demographic analysis. In addition to maintaining its own Foreign Demographic Analysis Division the Bureau also provides consultation and field work to foreign governments.

Other executive.—In addition to those executive agencies already mentioned, a number of other instrumentalities in the executive branch are apparently involved in some aspect of population programs, at the national and local levels. In 1965 the following additional executive departments were supporting research on fertility, sterility, and population dynamics: Department of Agriculture (11 projects funded at \$55,257); Department of Defense (1 project costing \$5,000); Department of the Interior (3 projects costing \$9,000); The National Science Foundation (2 projects funded at \$23,400).²²

LEGISLATIVE BRANCH²³

Senate

S. 1676.—On April 1, 1965, Senator Ernest Gruening, Democrat, of Alaska, introduced S. 1676, a bill designed to create the positions of Assistant Secretary for Population Problems in the Departments of State and of Health, Education, and Welfare, and to ask the President to call a White House Conference on Population in January 1967. Initial cosponsors of the bill were the following Senators: Joseph D. Tydings, Democrat, of Maryland; Ross Bass, Democrat, of Tennessee; E. L. (Bob) Bartlett, Democrat, of Alaska; Paul H. Douglas, Democrat, of Illinois; Frank E. Moss, Democrat, of Utah; Ralph Yarborough, Democrat, of Texas; and Stephen M. Young, Democrat, of Ohio. Joining later as cosponsors were the following Senators: Robert C. Byrd, Democrat, of West Virginia; Peter Dominick, Republican, of Colorado; Philip A. Hart, Democrat, of Michigan; Milward Simpson, Republican, of Wyoming; and George McGovern, Democrat, of South Dakota.

Hearings on S. 1676.—On June 22, 1965, hearings on S. 1676 began before the Senate Government Operations Subcommittee on Foreign Aid Expenditures. Upon opening the hearings, Senator Gruening read a letter from President Dwight D. Eisenhower supporting governmental action in the field of population and birth control. The final and 15th hearing on S. 1676 in the 1st session, 89th Congress, was held September 22. During the 3 months of hearings, 56 witnesses appeared before the subcommittee. Hearings reopened in the 2d session on January 19, 1966, and as of March 31, 1966, a total of 22 hearings have been held, and 78 witnesses have appeared. On March 7, Senator Gruening said the hearings would "continue for some time to explore fully the problems connected with the population explosion and means of solving them."²⁴

²⁰ Wall Street Journal, Oct. 11, 1965, p. 1. Washington Post, Oct. 17, 1965, p. 3. Wall Street Journal, Oct. 21, 1965, p. 1. New York Times, Jan. 21, 1966, p. 32. Because programs of all kinds are being approved and reviewed almost daily in OEO, any figure given at this moment would immediately be out of date. For example, on Mar. 29 it was announced that in the past 15 months the OEO had funded \$1,250,000 for birth control programs in 24 communities (see New York Times, Mar. 30, 1966).

²¹ Vol. 1: Instruction for Applicants, February 1965. At the end of March 1966, it was announced that new guidelines were being sent to the field. New York Times, Mar. 30, 1966.

²² Table 1. List of agencies reporting research projects. A Survey of Current Research on Fertility, Sterility, and Population Dynamics, NIH. Draft version, Aug. 15, 1965.

²³ This section deals only with the 89th Cong. to date.

²⁴ Press release, Monday, Mar. 7, 1966, p. 2.

Additional Senate bills.—On February 28, 1966, Senator Joseph D. Tydings, Democrat, of Maryland, introduced two bills dealing with the subject of family planning both in this country and abroad:

(1) S. 2992 (to the Committee on Foreign Relations): "A bill to authorize the use of foreign currencies to finance family planning programs in friendly foreign nations, and for other purposes."

(2) S. 2993 (to the Committee on Labor and Public Welfare): "A bill to provide Federal financial assistance to public agencies and to private, nonprofit organizations to enable them to carry on comprehensive family planning programs."

Census.—Senator George A. Smathers, Democrat, of Florida, introduced S. 2917, a bill designed to provide for a U.S. census every 5 years rather than every 10 years presently required by the Constitution. The bill was referred to the Committee on Post Office and Civil Service.²⁵

Foreign Aid.—On April 6, 1966, Senator J. William Fulbright, Democrat, of Arkansas, introduced amendment No. 524 (S. 2859) which would further amend the Foreign Assistance Act of 1961, as amended, to include the following new section: "SEC. 462. ASSISTANCE FOR POPULATION CONTROL.—Funds made available for use under this part may be used, when so requested by the recipient country, to furnish technical and other assistance for the control of population growth." The amendment was referred to the Committee on Foreign Relations.

House of Representatives

House Bills.—Bills similar or identical to S. 1676 were introduced in the House of Representatives during the 1st session, 89th Congress. Those bills and their sponsors are: H.R. 7072 by Representative Paul H. Todd, Jr., Democrat, of Michigan; H.R. 7073 by Representative Morris K. Udall, Democrat, of Arizona; H.R. 8052 by Representative Charles C. Diggs, Jr., Democrat, of Michigan; H.R. 8403 by Representative John E. Moss, Democrat, of California; H.R. 8430 by Representative John Conyers, Jr., Democrat, of Michigan; H.R. 8435 by Representative James A. Mackay, Democrat, of Georgia; H.R. 8464 by Representative George E. Brown, Jr., Democrat, of California; H.R. 9065 by Representative Benjamin S. Rosenthal, Democrat, of New York; H.R. 10707 by Representative Clarence D. Long, Democrat, of Maryland; House Concurrent Resolution 419 by Representative Chet Holifield, Democrat, of California.

H.R. 7072 and H.R. 9065 are identical bills and H.R. 7073, 8403 and 8435 are identical bills. H.R. 7073 and S. 1676 are companion bills.

Additional House Bills.—On May 27, 1965 Representative James H. Scheuer, Democrat, of New York, introduced two bills to repeal the archaic Federal laws restricting importation, interstate transportation, and transportation through the mails, of contraceptive devices, information, and advertisements.²⁶ The two bills H.R. 8451 (in Ways and Means) and H.R. 8440 (in Judiciary) are currently awaiting reports from the executive departments concerned.

GENERAL

House and Senate

Food for Freedom Act of 1966.—Several amendments to the administration's proposed Food for Freedom Act which include provisions for family planning services have been introduced in both Houses of Congress.²⁷

H.R. 13441 introduced by Representative Paul H. Todd, Jr., Democrat, of Michigan, and Senate amendment No. 488 introduced by Senator Ralph Yarborough, Democrat, of Texas, would amend the administration bill to include "(i) For financing a program emphasizing maternal welfare, child health and nutrition, and family planning services, and research activities related to the problems of population growth, for which purpose not less than 15 percent of the currencies received in any country shall be reserved to be made available, at the request of such country, under procedures established by the President to carry out the provisions of this paragraph through any agency of the United States, or through any international agency or organization of which the United

²⁵ For Senator Smathers' remarks at the time of introduction, see Congressional Record, Feb. 10, 1966, p. 2795.

²⁶ Congressional Record, May 25, 1965, p. 11186.

²⁷ H.R. 12785 introduced in the House of Representatives, Feb. 14, 1966, by Representative Harold D. Cooley, Democrat, of North Carolina, was sent to the Committee on Agriculture. S. 2933 introduced in the Senate by Senator Allen J. Ellender, Democrat, of Louisiana, on Feb. 17, 1966, was referred to the Committee on Agriculture and Forestry.

States is a member and which he determines is qualified to administer such activities."

Amendment No. 489 introduced by Senator Joseph D. Tydings, Democrat, of Maryland, would change S. 2933 to include the following language: "authorize the use of foreign currencies accumulated through future sales of agricultural commodities to finance voluntary family planning programs in friendly foreign nations."

Immigration.—In considering the Immigration and Nationality Act during the 1st session, the 89th Congress authorized a Select Commission on Western Hemisphere Immigration, one of whose duties would be to study "prevailing and projected demographic, technological, and economic trends, particularly as they pertain to Western Hemisphere nations."²⁸

Judicial Branch

On June 7, 1965, the U.S. Supreme Court is a 7-to-2 decision struck down the 1879 Connecticut anti-birth-control law, which in effect prohibited the use of contraceptives, their distribution, and information about them. *Griswold v. Connecticut*, 381 U.S. 479 (1965), was the first case in this subject area to reach the U.S. Supreme Court since 1961 when the Court dismissed appeals based on the same Connecticut law in *Poe, et al. v. Ullman*, 367 U.S. 497 (1961).²⁹

State and Local Governments

Several public and private agencies are presently attempting to gather information on the number of public facilities in State and local communities disseminating birth control information and devices. Estimates of the number of States offering family planning assistance ranges from 23 to as high as 40, and the number of birth control clinics in the United States is estimated variously from 500 to 700.

In July 1965, Katherine B. Oettinger, Chief of the Children's Bureau, HEW, estimated that in the year 1965 \$1.7 million would be spent by 24 States and territories for family planning services, including birth control, under a program of matching Federal and State funds.³⁰ In September 1965, Oettinger reported that for fiscal year 1965, 27 States would spend an estimated \$1.8 million for "family planning services in relation to maternal health programs."³¹ In December 1965, it was reported that whereas in 1960, 12 States were supporting family planning programs in public health clinics, the number had risen to 26 in 1965.³²

In January 1966, the Population Council estimated that whereas in 1964 there were 450 public birth control clinics in the United States, that figure today was believed to be closer to 700 clinics operating in 33 States and the District of Columbia.³³

Probably the most reliable estimates, however, come from the American Public Health Association which has for the past several years sent questionnaires to State health officers in an effort to determine the status of family planning services at the State and local level. According to the association's most recent findings, the number of States involved in family planning activities had risen from 15 in 1963 to 30 in 1965 plus the District of Columbia and Puerto Rico, while the total number of local health departments involved in such services increased from 591 to 843 during the same period of time. Of those States with more than six local health department family planning programs, only two (Virginia and South Carolina) were operating such programs on State funds alone. Apparently the remaining programs were receiving Federal funds.³⁴

National Academy of Sciences

In April 1963, the National Academy of Sciences issued a report calling for immediate and substantial Federal Government support both in this country and

²⁸ Public Law 89-236; Oct. 3, 1965; to amend the Immigration and Nationality Act (79 Stat. 911).

²⁹ This paper makes no accounting of cases that might have reached inferior Federal courts or State supreme courts.

³⁰ New York World Telegram, July 12, 1965.

³¹ Children, vol. 12, November-December 1965.

³² White House Conference on International Cooperation (Report on Population), Nov. 28-Dec. 1, 1965, p. 9.

³³ Studies in Family Planning (No. 9), the Population Council, January 1966, p. 4.

³⁴ American Journal of Public Health and the Nation's Health, "Public Health Programs in Family Planning," vol. 56, No. 1, January 1966. Those States which reported no local health departments sponsoring family planning services in 1965 were Alaska, Connecticut, Hawaii, Idaho, Indiana, Iowa, Louisiana, Massachusetts, Minnesota, Montana, Nebraska, New Hampshire, Ohio, Pennsylvania, Rhode Island, South Dakota, Utah, Vermont, Wisconsin, Wyoming.

abroad in the fields of fertility control research and other programs designed to deal with population problems.³⁵

On the assumption that universal acceptance of family planning is desirable, and that objectives must be set up to achieve worldwide awareness of the seriousness of world population growth, the report made the following recommendations:

1. Support of graduate and postdoctoral training in demography and in social and biomedical sciences concerned with population problems should be increased.
2. Research laboratories for scientific investigation of the biomedical aspects of human reproduction should be expanded.
3. International cooperation in studies concerned with voluntary fertility regulation and family planning is highly desirable, and the U.S. Government should actively participate in fostering such cooperation, working in coordination with appropriate agencies of the United Nations system whenever possible, and with other intergovernmental and nongovernmental organizations whenever appropriate.
4. Programs in the United States for the training of family planning administrators should be improved and enlarged.
5. A committee should be established by the National Academy of Sciences for the purpose of stimulating and coordinating programs directed toward the solution of problems of uncontrolled growth of populations.

In their summary statement, the Panel said:

"We believe that the implementation of the recommendations in this report will lead to substantial increases in our effective knowledge and will also encourage the use of this increased knowledge in a successful attack on the many problems of rapid and uncontrolled population growth."

EXHIBIT 175

MATERNITY BENEFITS, FAMILY ALLOWANCES, AND BIRTH GRANTS PAID IN VARIOUS COUNTRIES OF THE WORLD

(By Thomas C. Lyons, Jr., analyst in world demography, Foreign Affairs Division, April 18, 1966, the Library of Congress Legislative Reference Service, Washington, D.C.)

SUMMARY

This paper is a tabular summary of maternity benefits, family allowances, and birth grants paid by various countries of the world, and is extracted and synthesized from information in "Social Security Programs Throughout the World, 1964" (U.S. Department of HEW, Social Security Administration, Division of Research and Statistics, Washington, D.C., GPO, 1964, 223 pages).

More than 100 countries of the world presently have some kind of social security program, under or through which almost all social and welfare benefits are administered. It is through these social security programs, almost all of which began between 1945 and 1960, that maternity benefits, family allowances, and birth grants are paid, although in a modicum of countries, legislation requires the employer to pay such benefits. Only countries whose benefits are administered through social security programs are included in this tabular summary.

Several points should be noted which are not included in this paper: namely (1) eligibility for maternity benefits is usually incident to employment of the mother; (2) percentages paid range from 15 to 100 percent of earnings, but in some countries length of employment or size of earnings determines that percentage; (3) in family allowance programs, size of the family is very often a precondition for either the amount of the assistance or when the assistance begins; and (4) the usual ages for cessation of allowance for the child is between 15 and 18 years of age, although many countries attach qualifications to the age, such as student status, invalid status, and so on.

This tabular summary shows that 85 countries of the world in 1964 had either a maternity benefit or family allowance program; 56 countries had both kinds

³⁵ The Growth of World Population, NAS Publication No. 1091, National Academy of Sciences, Washington, D.C. Chairman of the Panel on Population Problems was William D. McElroy (the Johns Hopkins University). Other members were Willard Allen (the Washington University); Bernard Berelson (the Population Council); Ansley Coale (Princeton University); Harold Dorn (National Institutes of Health); Clement L. Markert (the Johns Hopkins University); Warren Nelson (the Population Council); Albert Tylor (California Institute of Technology).

of programs. In the separate categories, 59 countries had a family allowance program, and 81 had a maternity benefits program, including the United States, which is listed here on the grounds that 2 States provide such benefits.

Outright lump-sum birth grants are provided by 29 countries; 28 under family allowance programs, and 1 under maternity benefits. Several countries provide outright maternity grants, which might have the same effect as birth grants. On a geographical basis, outright birth grants are given in 13 countries in Europe, 14 countries in Africa, and 1 country in Latin America.

Country	Maternity benefits	Family allowances
Albania	Percentage of earnings if employed for period of 12 to 15 weeks. Birth grant: Lump sum for layette and food.	Assistance paid for each child.
Algeria	Percentage of earnings received up to 8 weeks.	Percentage of earnings paid for each child, with maximum according to age.
Argentina	Percentage of earnings, plus a delivery grant and layette.	Allowance paid for each child.
Austria	Percentage of earnings for 12 weeks. Also nursing benefits. Maternity grant: Lump sum for each birth.	Money received for each child on monthly basis with a special supplement if more than 3 children. Birth grant: Lump sum of 500 schillings, plus other special (infant) grants.
Belgium	Percentage of earnings for certain individuals.	Allowance paid for each child. Birth grant: 7,250 francs for 1st child; 5,000 francs for 2d; 2,690 francs for all others.
Bolivia	Percentage of earnings for up to 12 weeks.	Allowance for each child. Birth grant: Lump sum of 80 pesos, plus layette and nursing allowance, plus special grant for 11 months.
Brazil	Lump sum of wages for either 1 or 2 months.	Percentage of minimum wage per child. Special large family allowances also paid.
Bulgaria	Percentage of earnings for up to 120 days.	Special monthly allowance for each child. Birth grant: Ranges from 16 leva for 1st child to 120 leva 6th and additional children.
Burma	Percentage of earnings paid, according to wage class, for 12 weeks.	
Cambodia		Percent of base wage for children 1 through 10, plus percent of base wage for wife.
Cameroon	Percentage of earnings. Percentage goes up if more than 2 children. Payable up to 14 weeks.	Payment monthly for each child, plus prenatal allowances. Birth grant: 6,000 francs per birth.
Canada		Allowance paid for each child.
Central African Republic	Percentage of earnings for 14 weeks, but can be expanded 9 more weeks for complications.	Allowance for each child, plus prenatal allowance. Birth grant: 1,800 francs for 1st 3 births.
Chad	Percentage of earnings up to 14 weeks, but additional 9 weeks available for complications.	Allowance for each child, plus prenatal allowance. Birth grant: 3,600 francs for 1st 3 children.
Chile	Percentage of earnings for wage earners only for 12 weeks plus a nursing allowance.	Allowance paid per child calculated on days wage earner works. Salaried also received allowance per child.
Taiwan (Nationalist China)	Percentage of earnings. Maternity grant: 15 days' earnings.	
Colombia	Percent of earnings according to wage class for up to 8 weeks.	Allowances vary greatly.
Congo (Brazzaville)	Percent of earnings up to 14 weeks.	Allowances for each child, plus prenatal allowance. Birth grant: Lump sum for each of 1st 3 months.
Congo (Léopoldville)		Allowances fixed by provincial governments and thus varies throughout country.
Costa Rica	Percent of earnings paid up to 60 days, plus milk allowance.	
Cuba	Percent of earnings up to 12 weeks with minimum and maximum daily benefits.	
Cyprus	Some grants made.	
Czechoslovakia	Percent of earnings according to employment time, with maximum and minimum benefits, up to 18 weeks.	Allowances vary according to order of birth (70 crowns per month to 260 crowns for 3d and other children). Birth grant: Lump sum for each birth.
Dahomey	Percentage of earnings, received up to 14 weeks.	Allowance for each child, plus prenatal allowance. Birth grants: Lump sum, which covers only 3 births.
Denmark	Various sums paid per day up to 14 weeks, depending upon employment.	Allowances paid per year ranging from 400 crowns for 1st child to 500 crowns for 5th and additional children.

Country	Maternity benefits	Family allowances
Dominican Republic	Percent of earnings paid up to 12 weeks plus a nursing allowance.	
Ecuador	Percent of earnings up to 7 weeks.	
El Salvador	Percent of earnings up to 12 weeks, free milk and layette.	
Finland	Percent of annual income per day up to 9 weeks.	Allowance for each child per month, plus special allowances for large families. Birth grant: Lump sum paid in cash or in layette.
France	Percent of earnings paid up to 14 weeks. Amount paid is raised if mother has 3 or more children. Nursing and milk benefits also paid.	Allowance is a percentage of base wage paid according to number of children. Prenatal allowance also paid. Birth grant: 200 percent of base wage for each birth.
Gabon	Percent of earnings up to 14 weeks.	Allowance for each child, plus prenatal allowance. Birth grant: Lump sum for each birth, plus layette. Allowance starts with 2d child.
Germany (Federal Republic)	Percentage of earnings varies, and is paid from 4 to 10 weeks, plus a nursing allowance. Maternity grant: Varies.	
Germany (People's Republic)	Percentage of earnings up to 11 weeks with a maximum. Nursing allowance and layette also provided.	Allowance paid according to number of children. Birth grant: Varies from 500 marks for 1st child up to 1,000 marks for 5th child and all additional births.
Greece	Percentage of earnings according to wage class, with maximum benefits, paid up to 84 days.	Allowance paid for 1st 2 children according to days parent is employed.
Guatemala	Percentage of earnings paid up to 75 days plus additional funds for illness caused by pregnancy.	
Guinea	Percentage of earnings up to 14 weeks.	Allowance is percentage of minimum wage and varies according to number of children. Also prenatal allowance. Birth grant: Lump Sum based on percentage of minimum wage.
Honduras	Percentage of earnings up to 12 weeks.	
Hungary	Percentage of earnings paid up to 12 weeks. Maternity grant: Lump sum paid for each birth.	Allowance paid for all children after 1st child and varies from 75 to 120 forints per month.
Iceland	Maternity grant: Lump sum for each birth.	Allowance for each child.
India	Percentage of earnings paid up to 12 weeks.	
Iran	Percentage of earnings paid up to 12 weeks, plus layette.	Allowance for each child after the 1st child.
Iraq	Maternity grant: Varies.	
Ireland	Set sum payable up to 12 weeks. Maternity grant: Lump sum.	Allowance for each child.
Israel	Percentage of earnings up to 12 weeks with a maximum weekly allowance. Maternity grant: Set sum for hospitalization cost and for layette.	Allowance begins with 4th child.
Italy	Percentage of earnings up to 21 weeks.	Allowance for each child.
Ivory Coast	Percent of earnings up to 14 weeks.	Allowance for each child, plus prenatal allowance. Birth grant: Lump sum for 1st 3 births.
Japan	Percent of earnings for 12 weeks, plus nursing grant. Maternity grant: Lump sum of 1/2 of 1 month's wage.	
Lebanon	Percent of earnings paid up to 10 weeks.	Rates are fixed by decree.
Libya	Percentage of earnings paid according to wage class up to 12 week. Maternity grant: Lump sum.	
Luxembourg	Percentage of earnings paid up to 12 weeks, plus nursing allowance.	Allowance paid for each child, increasing after 4th child. Birth grant: Lump sum which decreases after 1st child.
Malagasy Republic	Percentage of earnings paid up to 14 weeks.	Allowance paid for each child according to age of child, plus prenatal allowance. Birth grant: Lump sum for each birth.
Mali	do	Allowance for each child, plus prenatal allowance.
Mauritania	Percentage of earnings up to 14 weeks.	Allowance for each child, plus prenatal allowance. Birth grant: Lump sum for 1st 3 births.
Mexico	Percentage of earnings paid according to class, plus nursing allowance and layette.	

Country	Maternity benefits	Family allowances
Morocco.....	Percentage of earnings up to 10 weeks.	Allowance begins at 2d child and ends with 7th child.
Netherlands.....	Percentage of earnings up to 12 weeks.	Allowance for each child, rising significantly with 6th child.
New Zealand.....	Sickness benefit during maternity leave.	Allowance for each child.
Nicaragua.....	Percentage of earnings paid according to wage class up to 12 weeks.	
Niger.....	Percent of earnings paid up to 14 weeks.	Allowance for each child, plus prenatal allowance. Birth grant: Lump sum for 1st 3 births.
Nigeria.....	Sickness benefits paid.	
Norway.....	Sum paid according to income class, plus sum for dependents, up to 12 weeks.	Allowance for each child after 1st child.
Pakistan.....	Sickness benefits paid up to 12 weeks.	
Panama.....	Percentage of earnings paid up to 14 weeks.	
Paraguay.....	Percentage of earnings paid up to 9 weeks, plus milk vouchers.	
Peru.....	Percentage of earnings paid according to wage class, plus nursing allowance.	
Poland.....	Percentage of earnings paid up to 12 weeks, plus nursing allowance and layette.	Allowance for each child and for non-working wife.
Portugal.....	Percentage of earnings up to 60 days.	Allowances paid according to earnings of parent. Birth grant: Lump sum for each birth.
Rumania.....	Percentage of earnings paid according to length of employment up to 112 days.	Allowance paid according to monthly earnings of parent and number of children. Birth grant: Lump sum for 10th and all additional children.
Senegal.....	Percentage of earnings paid up to 14 weeks.	Allowance paid for all children, plus prenatal allowance. Birth grant: Lump sum for 1st 3 births.
South Africa.....		Certain limitations. Paid to whites beginning with 3d child; paid to colored for all children if income does not exceed set amount.
Spain.....	Percentage of earnings paid up to 12 weeks, plus a nursing allowance.	Allowances based on a point system. Birth grant: Special sums for large families.
Sweden.....	Set sum paid according to wage class. Maternity grant: Lump sum for each child.	Allowances paid for each child.
Switzerland.....	Rates and benefits vary, with a federal minimum. Nursing allowance also paid.	Both cantonal and federal programs. Birth grants: Paid only by some cantons.
Togo.....	Percentage of earnings paid up to 14 weeks.	Allowance paid for each child, plus prenatal allowance. Birth grant: Lump sum for 1st 3 births.
Tunisia.....	Percentage of earnings up to 12 weeks with a maximum.	Allowance paid for 1st 4 children according to earnings of parent.
Turkey.....	Percentage of earnings paid up to 12 weeks, plus nursing grants.	
U.S.S.R.....	Percentage of earnings according to employment time, with a set maximum, for 16 weeks.	Allowance begins with 4th child; increases after 11th child. Birth grant: Lump sum beginning with 3d child.
United Kingdom.....	Set sum according to number of children in family. Maternity grant: Lump sum for each child.	Allowance begins with 2d child.
United States.....	No Federal grants, but New Jersey and Rhode Island pay percentage of earnings.	
Upper Volta.....	Percentage of earnings paid up to 14 weeks.	Allowance paid for each child, plus prenatal allowance. Birth grant: Lump sum for each birth.
Uruguay.....	Percentage of earnings paid up to 12 weeks.	Allowance paid for each child, according to number of children in family.
Venezuela.....	do.	
Vietnam (Republic of).....	Percentage of earnings paid up to 8 weeks.	Percentage of base wage, which decreases with 6th child. Additional rice allowance for agricultural workers.
Vietnam (Democratic Republic).....	Percentage of earnings up to 65 days, plus flat rate nursing and layette allowance.	
Yugoslavia.....	Percentage of earnings up to 105 days. Maternity grant: Either lump sum or layette.	Percentage allowance, according to taxable income, for each child.

EXHIBIT 176

LATIN AMERICAN POPULATION PROBLEMS: A CASE STUDY OF NORTHEAST BRAZIL
(By Julie Hawkins, Foreign Affairs Division, the Library of Congress Legislative Reference Service, Mar. 29, 1966)

The potentially dangerous proportions of the population explosion in Latin America have been outlined by numerous observers. For the past 5 years Latin America's population increased an average of 2.8 percent per year. And the consequences of this increase have been far more serious than the figure itself indicates. One consequence has been that per capita agricultural production has declined, largely because the yearly increase in agricultural production averaged only 1.6 percent between 1960 and 1964.¹ Although the population density of Latin America is about half that of the United States only 2 percent of the land in Latin America is cultivated. In any case it is the speed with which the population explosion is occurring rather than any inherent limit upon the extent to which agricultural production can be increased which is mainly causing the crisis. Because Latin America has not yet completed the transition from high birth and death rates to low birth and death rates the per capita economic gains which can result from industrialization have been seriously limited. The Latin American death rate has been gradually diminishing since the 1920's, when government first realized that public health measures are relatively inexpensive. Finally the population explosion has created an increasingly high ratio of dependents to earners. Except for Argentina and Uruguay about 40 percent of the Latin American population is under 15. Educational needs have skyrocketed correspondingly.

What would be the advantage of significantly reducing the birth rate in Latin America? Ansley Coale and Edgar Hoover point out that in a less developed country a 50-percent reduction in fertility in 25 years provides in three decades an income per capita 38 to 50 percent higher than would occur without the reduction. A nation with a population growth rate of 3 percent per year must invest 9 to 15 percent of its national income simply to maintain a constant supply of equipment per worker.²

The Latin Americans themselves are becoming concerned with the issue of population growth, not only because of its economic implications, but also because of the serious social and political problems it may create. It is estimated that in Brazil alone over 2 million abortions were performed in 1964.³ One result of the agricultural crisis in Latin America has been the substantial shift of population to urban areas. But the Barriada dwellers still maintain a high birth rate and the cities are ill equipped to receive masses of unskilled people. Latin American concern was dramatically exposed at the conference on Latin American population problems held at Cali, Colombia, in August of 1965.

One of the principal results of the growing concern over the population explosion has been the realization that population problems need to be discussed in connection with the broad question of manpower development. This is one of the conclusions of Stefan Robock's, "Brazil's Developing Northeast," published by the Brookings Institution in 1963. Since northeast Brazil is the largest depressed area in the Western Hemisphere the solution of its human resource problems could be of great importance to the rest of the hemisphere.

Brazil is one of the six countries and three dependencies which comprise the tropical zone of Latin America.⁴ Tropical Latin America's population is growing over 3 percent per year and Brazil's rate of increase is 3 percent. If this rate should continue Brazil's population will exceed 120 million by 1980.⁵ The northeast does not have the highest rate of population growth of the Brazilian regions, but its relatively moderate increase is potentially more disruptive than the higher rates of the industrially developing south.

If the northeast were a separate nation it would rank third in area and second in population in Latin America. (See chart.)

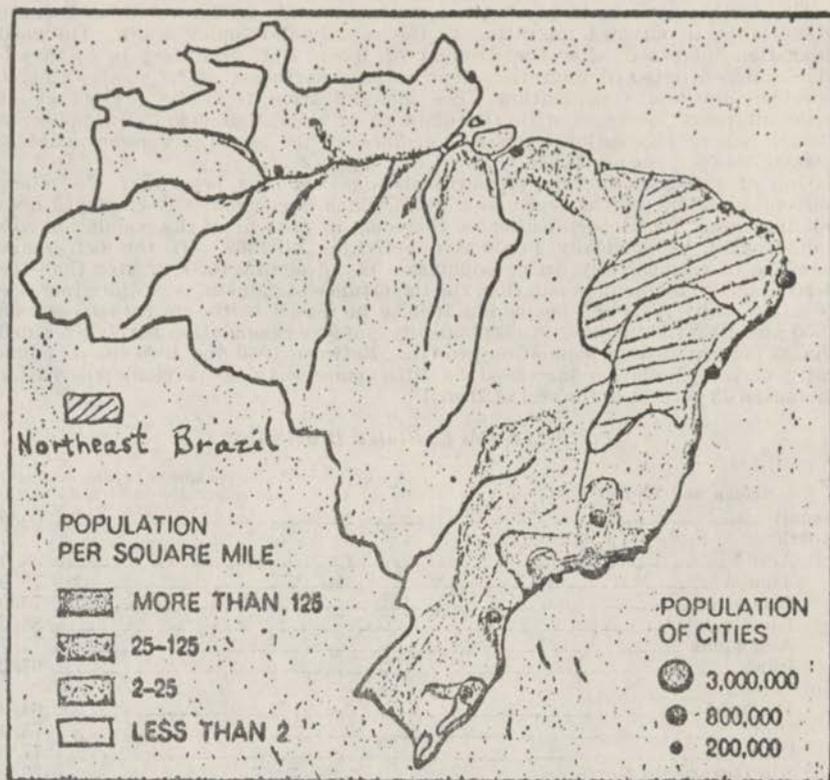
¹ Inter-American Development Bank, Social Progress Trust Fund, Fourth Annual Report (1964), pp. 107-108.

² Ansley Coale and Edgar Hoover, "Population Growth and Economic Development in Low Income Countries," Princeton University Press, 1958, p. 334.

³ Time, Aug. 20, 1965, p. 34.

⁴ Also included in the tropical area are Bolivia, Colombia, Ecuador, Peru, Venezuela, and the Gulanas.

⁵ Information Service, Population Reference Bureau, 1755 Massachusetts Avenue NW., Washington, D.C.



States	1960 (thousands)	Percent of change, 1950-60	1965 (estimate)	1970 (projected)
Maranhao.....	2,492	57.4	3,097	3,849
Piauí.....	1,263	20.8	1,374	1,494
Ceará.....	3,338	23.8	3,682	4,062
Rio Grande do Norte.....	1,157	19.6	1,254	1,358
Paraíba.....	2,018	17.8	2,177	1,358
Pernambuco.....	4,137	21.8	4,536	4,973
Alagoas.....	1,271	16.3	1,362	1,458
Sergipe.....	760	18.0	821	887
Bahia.....	5,991	23.9	6,617	7,309
Minas Gerais (area of Drought Polygon).....	518			
Total of Northeast.....	22,945	24.8	24,920	27,739
Brazil.....	70,967	36.6	82,222	95,262

Source: "Northeast Brazil," Industrial Development and Manufacturer's Record, August 1965, p. 71.

Thirty-two percent of Brazil's population lives in the northeast, but the region has only 15.9 percent of Brazil's total income and only 8.8 percent of the nation's electric power capacity.⁶ Between 1950 and 1960 the population of the northeast increased 24.8 percent or approximately 2.5 percent per year. Per capita income increased slightly from about 48 percent of the national level in 1950 to 51 percent in 1960.

⁶ Stefan H. Robock, op. cit., p. 21.

The northeast's rate of population growth was only moderately high because of substantial outward migration to the rapidly developing south. Outward migration increased after the drought of 1958. But, according to all available sources, outward migration deprived the northeast of its more valuable economically active population. The generalization that the percentage of male migrants increases with the distance of migration definitely applies to Brazil, where the major industrial centers of the south are approximately 1,000 miles from the northeast.⁷

One of the consequences of outward migration has been that the minor percentage of the northeastern population which is economically employed does not increase. Dr. Robock estimates that only 31 percent of the population was employed in economically productive activities in 1960.⁸ If the percentage increase of economically active population is not significantly greater than the percentage increases in population, the importance of gains in per capita increase is minimized. Although per capita income increased in the northeast between 1950 and 1960 the increase in economically employed population barely exceeded the 25 percent rate of population growth. Between 1950 and 1960 the economically active population increased by little more than 30 percent, whereas it increased 43 percent in the rest of Brazil.⁹

Fertility ratios by States, Brazil, 1950

<i>Region and State</i>	<i>Number of children 0 to 4 per 100 women 15 to 49</i>
Brazil	65.3
North:	
Acre ¹	90.0
Amapá ¹	73.5
Guaporé ¹	73.0
Rio Branco ¹	83.6
Amazonas	73.7
Pará	67.2
Northeast:	
Maranhão	64.6
Piauí	75.9
Ceará	77.0
Rio Grande do Norte	73.2
Paraíba	70.0
Pernambuco	65.2
Alagoas	68.6
East:	
Sergipe	69.2
Bahia	65.4
Minas Gerais	67.5
Espírito Santo	74.5
Rio de Janeiro	66.9
Distrito Federal	27.2
South:	
São Paulo	57.4
Paraná	72.9
Santa Catarina	80.5
Rio Grande do Sul	66.0
West Central:	
Goiás	72.0
Mato Grosso	76.7

¹ Territory.

Source: Compiled and computed from data in I.B.G.E., Conselho Nacional de Estatística, Serviço Nacional de Recenseamento, VI Recenseamento Geral do Brasil, Censo Demográfico (1 de julho de 1950), Seleção dos Principais Dados (Rio de Janeiro: Serviço Gráfico do I.B.G.E., 1951, 1952, 1953), *passim*.

In J. V. D. Saunders, "Differential Fertility in Brazil," University of Florida Press, 1958, p. 64.

⁷ Estanislau Fischlowitz, *Revista Mexicana de Sociologia*, September-December 1962, pp. 705-732.

⁸ Robock, *op. cit.*, p. 61.

⁹ Industrial Development and Manufacturer's Record, *op cit.*, p. 85.

Without manpower training programs the ratio of dependents to earners could become more unfavorable in the future, since the northeastern birth rate is higher than the overall population increase would indicate. Forty-three percent of the northeastern population was under 14 in 1960, a relatively high percentage for an area with a growth rate of 2.5 percent a year.

According to one expert the fertility ratio has been consistently higher than the national average in five of the seven northeastern States.¹⁰

The average crude birth rate for Brazil as a whole, 43.6 live births per thousand inhabitants per year, was extremely high for Latin America, at least in 1950. "Only 3 of the 53 areas of the world for which reliable birth rates were available in 1950 had a higher birth rate than that of Brazil."¹¹ By 1964 the differential between Brazil and the other Latin American countries had lessened, but the birth rate continued high at 43.47 per thousand.¹² Dr. Robock calls the northeast birth rate "extremely high" in relation to its stage of economic development.¹³

Whether or not the northeast population will continue to be characterized by a high ratio of dependents to earners will also depend on the death rate. And here the problem of prediction is complicated by incomplete statistics. For Brazil as a whole the death rate was reduced from 19.2 per thousand in 1955 to 11.16 per thousand in 1964.¹⁴ Since one of the principal purposes of U.S. foreign aid to the northeast has been the improvement of public health, we can probably assume that similar reductions in the death rate were accomplished in that area, with inevitable effects on both the population growth rate and on the proportion of elderly dependent population.

But experts do not agree on the long-term effects on population of a reduction in infant mortality. Herbert J. Walker, of the U.S. Agency for International Development mission to Brazil has been quoted as saying that in countries with food shortages and inadequate public health facilities a high rate of mortality among children prompts parents to have 10 in the hopes that some will survive. When food is plentiful and medical care is available a motive exists to restrict the growth of population. Second, the death of a child of two or three is an economic as well as a human loss, since society will not reap an eventual productive return on its investment. Infant mortality is 20 percent in the northeast generally and in parts of the large city of Recife it is 60 percent.¹⁵ However, according to most sources infant mortality in the northeast has gone down since the 1940's.¹⁶

It seems evident that population growth will continue to be an economic liability despite the high rate of outward migration from the northeast. Unless new economic programs are undertaken it seems unlikely that the percentage of wage earners among the population will be much higher when the present generation under 15 reaches maturity. Of the 4.5 million children of primary school age in northeast only one-third are in school. Whether national and international action will be taken to reduce the birth rate and help train and educate the northeastern population remains in doubt.

The Brazilian Government has no birth control program or family planning policy and Brazil has a shortage of demographers. Public alarm over the high rate of abortion has led to the formation of several private organizations which promote family planning, but they operate mainly in the cities of São Paulo and Rio de Janeiro. Several priests have set up birth control clinics in the northeast, and the church hierarchy has preferred to remain silent about their activities.¹⁷

¹⁰ The fertility ratio includes a broader consideration of infant mortality and is therefore more valuable than crude birth rate statistics for purposes of prediction.

¹¹ J. V. D. Saunders, "Differential Fertility in Brazil," University of Florida, 1958, p. 64.

¹² Information Service, Population Reference Bureau, 1755 Massachusetts Ave. N.W., Washington, D.C.

¹³ Robock, *op. cit.*, p. 67. (Recent regional statistics for either fertility ratios or birth rates are not available.)

¹⁴ Charles G. McClintock, *The Demography of Latin America: 1975*, General Electric Corp., 1959, and Population Reference Bureau, *op. cit.*

¹⁵ Belden Paulson, "Difficulties and Prospects for Community Development in Northeast Brazil," *Inter-American Economic Affairs*, spring 1964, p. 39.

¹⁶ In the United States the infant mortality rate is 2.5 percent.

¹⁷ Time, *op. cit.*, p. 34.

A Vatican decision liberalizing the Catholic position on birth control would probably have profound effects in Brazil since the Brazilian church is considered by most authorities to be one of the least conservative in the hemisphere.

Stefan Robock concludes that a manpower plan to increase the flow of persons entering the industrial sector is essential for the northeast.¹⁸ Dr. Robock argues that the scarcest economic factor in the northeast is not capital, but trained labor. SUDENE, the autonomous government agency concerned with the development of the northeast, has concentrated mainly on physical infrastructure investment, to the detriment of investment in the human resources of the area. The U.S. Agency for International Development has begun to make up for this deficiency with the creation of FUNDINOR. FUNDINOR is a clearinghouse for investment activities in the northeast which also operates a vocational training program.

Perhaps the most important conclusion which can be drawn from the case of the Brazilian northeast is that quantitative and qualitative population problems are closely interrelated. The gross national product of a country may be increasing faster than its population, but if its educational system is inadequate and underemployment in the agricultural sector is combined with a shortage of trained labor in the industrial sector it is unlikely that its real standard of living will improve. Conversely, a skyrocketing rate of population growth may necessitate concentration on economic sectors which do not contribute to the long-term growth potential of an economy. The example of northeastern Brazil is illustrative of the need for joint planning of expanded programs of population control, education, and vocational training.

Senator GRUENING. The excellence of the report on the findings of the Phelps-Stokes Intercollegiate Assembly on the Population Dilemma prompted me to send out an individual copy to each Member of the Congress. I now direct that my accompanying letter and the report—in toto—be included in the record of this hearing.

(The two items above mentioned follow:)

EXHIBIT 177-

LETTER SENT TO EACH MEMBER OF CONGRESS BY SENATOR GRUENING, REGARDING REPORT OF INTERCOLLEGIATE ASSEMBLY ON THE POPULATION DILEMMA

JUNE 23, 1966.

Hon. _____,
U.S. Senate, Washington, D.C.

DEAR _____: On November 12-14, 1965, an Intercollegiate Assembly on the Population Dilemma was sponsored by a joint effort of the American Assembly of Columbia University, the Tuskegee Institute, and the Phelps-Stokes Fund. The Phelps-Stokes Fund is concerned primarily with the enrichment of education, especially at those institutions in the South serving the majority of Negro college students. The fund has sent me copies of the report of the assembly to make available to each Member of the Congress and I am happy to do this.

The intercollegiate assembly was comprised of students from predominantly Negro colleges, together with faculty members. They discussed the problems arising from the rapid growth in the world's population. Following a keynote address by Dr. Bernard Berelson, vice president of the population council, the agenda focused on the domestic and international aspects of population. Participants explored the economic, cultural, and political significance, as well as moral, religious, political, and social factors involved in any effort to solve population problems.

In summing up Dr. Berelson said the world's greatest problem, second only to that of keeping the peace, is that of population. The issue, he said, is "to keep the quantity of human life from diminishing the quality of human life."

Assembly participants drafted statements and resolutions emphasizing the deterioration in the quality of American life, especially in areas of the country

¹⁸ Dr. Robock says that increasing productivity and increasing the percentage of employed persons may be in conflict in the agricultural sector, with the introduction of mechanization. He, therefore believes that manpower training should be designed for the industrial sector. Op. cit.

where population density is highest. They made positive recommendations for U.S. policy with respect to family planning.

I welcome the opportunity to send you this excellent report which is evidence of the growing concern of college students in a problem which affects present and future generations.

With best wishes, I am,
Cordially yours,

ERNEST GRUENING,
U.S. Senator.

EXHIBIT 178

A REPORT ON THE FINDINGS OF THE PHELPS-STOKES INTERCOLLEGIATE ASSEMBLY ON THE POPULATION DILEMMA

(A joint effort of the American Assembly of Columbia University, Tuskegee Institute, the Phelps-Stokes Fund; published by the Phelps-Stokes Fund, 297 Park Avenue South, New York, N.Y., Nov. 12-14, 1965)

FOREWORD

(By Dr. Frederick D. Patterson, president, the Phelps-Stokes Fund)

The enrichment of education, especially for Negro students, has been a major objective of the Phelps-Stokes Fund for more than half a century. The institutions of higher learning which have traditionally served the majority of Negro college students in the South have been a special concern of the fund.

For this reason we have been especially pleased to have the cooperation of the American Assembly in the sponsorship of a series of annual intercollegiate meetings on topics of current interest. The current Assembly, on the Population Dilemma, is the third in the series, and the enthusiastic response from the students and faculty persons who have attended one or more of them has adequately demonstrated the worthwhileness of the endeavor. We wish to thank the American Assembly and the New World Foundation for making these meetings possible, and we also wish to thank President Foster and the staff of Tuskegee Institute for so graciously making their facilities and services available to us for holding the conference.

INTRODUCTION

(By Robert S. Browne, leader of the Phelps-Stokes Fund Intercollegiate Assembly)

The Phelps-Stokes Intercollegiate Assembly on the Population Dilemma, jointly sponsored by the Phelps-Stokes Fund, Tuskegee Institute and the American Assembly of Columbia University, met from November 12 to 14, 1965 at Dorothy Hall of Tuskegee Institute, Alabama. For 3 days, students from predominately Negro colleges, together with a few of their faculty members, discussed various aspects of the problems centering around the rapid growth in the world's population. A stimulating address by Mr. Bernard Berelson, vice president of the Population Council, provided a high point of the conference.

The agenda focused on both domestic and international aspects of the population problem and explored in detail the economic, cultural, and political significance of an exploding population as well as the moral, religious, political, and social factors entering into any effort designed to regulate or control population growth in any fashion.

After 2 days of discussion the assembly participants drafted the statements and resolutions appearing later in this report. Although these resolutions summarize the group's thinking, it is not the practice of such assemblies for participants to affix their signatures; and it should not be assumed that every participant necessarily subscribes to every recommendation. Neither the American Assembly nor the Phelps-Stokes Fund takes a position on the issues discussed in the report.

The benefits of this assembly were not limited to the persons who directly participated in it, for many of these participants undertook to organize discussion groups or intramural assemblies on their own campuses. A brief summary of these campus meetings will be found following the statement and resolutions of the parent group.

THE WORLD'S SECOND PROBLEM

(Address (excerpts) delivered at the Phelps-Stokes Intercollegiate Assembly by Bernard Berelson, vice president, the Population Council)

The world's first problem in the rest of the 20th century is peace: to keep the nuclear cold war from heating up. The world's second problem is population: to keep the quantity of human life from diminishing the quality of human life. If the first problem is adequately handled—and we now have some right to believe it will be—the second remains as a genuine threat to at least two-thirds of the world's people and, indirectly, to the advantaged one-third.

Anyone who has given even cursory attention to public affairs in the past several years cannot fail to know that there is a population problem in the world. But just what is the problem, how did it emerge so suddenly, what are its likely consequences, and what, if anything, is being done about it?

The problem is undue population growth: the enemy is not a number, however large, but a rate. According to the latest United Nations figures, the population of the world is now growing at just over 2 percent a year. That rate may seem small. The fact is that the world's population has never before grown at such a rate for any extended period of time, and the consequences can be severe. It is literally true that this is a unique situation in human history.

The world now has a population of about 3.3 billion and is adding people at the rate of over 65 million a year, or about the population of England, plus the Netherlands plus Switzerland, or 1,250,000 a week. At 2 percent a year a number doubles in about 35 years, so that at the next turn of the century the population of the world will be about 7 billion if the present growth rate continues. Actually, the rate itself is still increasing, so that figure may be reached even sooner.

The current situation can be put into some perspective by the following figures. It took all of human history up to about 1850 to produce a world population of 1 billion; it took only 75 years for the second billion, and 35 years for the third; at the present rate it is taking only about 15 years for the fourth and it will take only 10 years for the fifth billion. Or take another example: if the human race had begun with a single couple at the time of Christ and had grown steadily at 2 percent a year since then, there would now be 20 million people for every one now alive, or 100 people per square foot of the earth's surface.

These are striking, perhaps wryly amusing figures. What they indicate is that the world cannot sustain such a growth rate for very long. Over the long run, as a report by the National Academy of Sciences recently said, "either the birth rate of the world must come down or the death rate must go back up."

This simple arithmetic of birth rate minus death rate leads to the source of the present situation. Since the world's growth in population is measured by the excess of births over deaths, mankind could now be experiencing a higher birth rate or a lower death rate or both. The very term "population explosion" suggests that an increased birth rate is the culprit, but that is not the case. The current unprecedented growth rate is caused by a decline in the death rate—a decline greatly accelerated since the end of World War II. In the modern world the death rate has responded much more rapidly than the birth rate to the development of science and technology, notably in the medical sphere.

The decline in the death rate has come primarily in what are called the developing countries—those countries of low per capita income with economies typically based on subsistence agriculture. It is due to improved food production and distribution and a more effective social organization, and perhaps particularly to the mass application since World War II of modern public health measures—vaccines, antibiotics, sulfa drugs, the new insecticides. Up to the beginning of the 19th century the average life expectancy at birth was never better than 30-35 years anywhere. Today in the developing countries it is often 50 years or so, and still lengthening. Indeed, because of the high birth rates in such countries and the consequent young population, the lowest death rates in the world today are not in the United States or Western Europe, but in such areas as Taiwan, Malaysia, Hong Kong, and Puerto Rico.

Since the death rate has already come down in the developed countries, and the birth rate too, the rate population growth is now much higher in the developing countries. The third of the world's population that lives in the developed countries—Europe, North America, the U.S.S.R., Australia, and New Zealand, Japan—has a birth rate of about 21 (births per 1,000 population per year) and

a death rate of 9, or a growth rate of 1.2 percent. The other two-thirds—Africa, Asia except Japan, Latin America—has a birth rate of at least 40 to 45 (or double the others) and a death rate of 15 to 20, or a growth rate of about 2.5 percent. Hence the burden of population growth falls where it can least be accommodated. And the politically dangerous differentials between the have and have-not nations are thus sharpened by the most basic of life processes. It is no exaggeration to say that in the most fundamental terms, there are two kinds of countries in the current world: those with a high standard of living and low fertility and those with a low standard of living and high fertility.

The population problem is often oversimplified to its dramatic numerical character, but that is only prelude to what really matters. What differences do such figures make?

The first two consequences usually attributed to rapid population growth are those associated with high density and insufficient food. As for density, there are health questions involved as well as esthetic considerations. Moreover, for populations living in a closed, extractive economy (like agriculture, forestry, or mining) and on limited land, the number of people per square mile can present a serious barrier to a better standard of living. Under other conditions, however, density is not so closely involved as is illustrated, for example, by the relative prosperity of crowded Hong Kong, or, for that matter, of our own large cities. In this regard, it is salutatory for Americans to remember that the most densely populated areas in the world today include not only Japan and Java and East Pakistan and the Netherlands, but the eastern seaboard of the United States from Boston to Washington.

Food is a more serious matter. Here the experts differ: some predict that the world will soon be in bad trouble on this score but others believe that we shall be able to get by. Actually, the range of informed expectation is not a comfortable one: from occasional famine to bare subsistence. As a recent report on world prospects for natural resources concluded: "For some less developed but heavily populated countries the race between food and people apparently will be a close one." Perhaps it is fair to summarize this complicated matter by saying that modern improvements in technology, notably in agriculture but also in communications and transportation, will probably enable us to feed the projected increase in world population—not feed them well but at least keep large numbers from starving to death as in the recent past.

Large-scale famines, like large-scale epidemics, are now more amenable to control. People will not get a healthy diet and many will go to sleep hungry; here and there some will die of malnutrition and some major countries will have to depend upon imported food. But more people will survive. So food itself, though obviously an important matter, is probably not the main problem, nor the first to become apparent.

The issue is rather broader. It has to do with the entire social and economic development of the poorer countries. Such countries, many of them only recently independent and proudly nationalistic, are struggling to build up their industrial establishment, to secure the benefits of modern technology, to modernize their health and educational facilities—in short, to break through from the traditional agrarian subsistence society into the 20th century. At best that is not an easy task: if nothing else the inertia of centuries weighs against it. But it is made all the more difficult, perhaps prohibitively difficult, when it must be done with the additional burden of a heavy population growth.

For if the population is growing at the rate of 2.5 percent or 3 percent a year, it takes that rate of economic growth simply to stay even. According to informed economists, the rough ratio between new capital investment and added income flow in developing countries may be as low as 3 to 1—that is, it takes about three units of investment in productive equipment to return one unit of per capita income. So it requires 9 percent of capital investment to produce the 3 percent increase in income that simply maintains at steady levels a population growing at 3 percent. Where is the necessary capital investment to come from? In such countries a very large part of the output must be consumed daily in the struggle for immediate survival, and they are doing well if they can set aside 10 to 12 percent of their income for the factories, roads, fertilizer plants, irrigation networks, and machinery that will yield a better life tomorrow. That is where the population pressure rubs: the very effort to build a better life is weighted down by a too rapidly growing population.

There is another factor that is seldom appreciated but is important in the total situation. By virtue of their high birth rates, the developing countries have larger proportions of their population in the dependent years, where they

consume but do not produce. In many countries, more than 40 percent of the population is under 15 years of age, as against 25 to 30 percent in the developed nations. They have not only a large overall growth rate to contend with, but a large ratio of youth dependency as well. Thus they are disadvantaged on both scores in the struggle for a higher standard of living and such accompanying values as health and education. These are virtually impossible for the traditional self-sufficient agrarian societies to provide at the same time that their peoples, drawn into the modern world, are beginning to expect and demand them, and quickly.

Over the next years, the populations of the developing countries will surely grow. There is hardly a realistic alternative. The populations of India and Pakistan, for example, will almost certainly double; the question is whether those countries can have 60 years in which to do so instead of 25. And similarly for other developing nations; short of major catastrophe, none of them will have fewer people than they have today. So the question is not whether there will be growth, but rather whether the growth will be very fast or only moderately fast.

So far I have been speaking mainly of the developing countries, for that is where the problem is greatest, but within the United States too there are problems arising from population growth and population mobility. The current concern over legislative reapportionment, for example, derives directly from the rural-to-urban movement that has characterized recent decades in this country, and that has also led to urban congestion, urban sprawl, and the ills of mass transportation. (This is one of the few respects in which we are behind our ancestors of 100 years ago: it takes us much longer to get to and from work today than it took them.) Furthermore, the so-called baby boom of the postwar years has brought pressures on our educational system that have not been easy to accommodate.

Beyond that, differential fertility by income and race is still a reminder of the unequal status of some groups within the society, in this as in other regards. The poor have somewhat more children on the average than the well-to-do; and Negroes more than whites. However, this differential—which has all sorts of consequences for the rearing and education of the children—appears to result not so much from differential desire for children as from differential access to information and services. For example, the fertility of Negroes with high school education and above is actually less than that of their white counterparts whereas it is substantially more among the lower educated strata.

What all of this means, across the world, is that the burden of population growth falls unequally upon the poor: the poor within our own country, the poor countries abroad. In the past 20 years, then, man has demonstrated his skill at enabling large numbers of people to survive who would not have survived in the past—but to survive in poverty, in ignorance, in sickness, often in degradation. This is at heart what the population problem is about: not about numbers but about the quality of human life throughout the world.

What can be done about this state of affairs? There are two directions in which solutions for the population problems of the developing countries will not be found. Once death control is available it will not willingly be given up. The prospect is quite the contrary: as better public health measures are developed and applied, the death rates of the developing countries can be expected to fall even further and thus to accelerate population growth. At the same time, the improvements in health will tend to promote an even higher birth rate.

Nor is emigration an answer: unlike the historical case of Europe there are no facilities or funds for such mass movements, no place to go for the far greater numbers involved, no atmosphere for the forced migration that would be needed, no time for such movement to take effect. The conclusion is that the birth rate must come down. Throughout most of man's history a high birth rate was necessary for survival because the death rate was so high. Today a high birth rate is contraindicated wherever people are reaching out for the benefits of modernization—which means in most of the developing world.

What does all this have to do with you? This assembly is devoted, I suppose, to that question. As citizens of the world, you should be informed and concerned about the world's great problems. As Negroes, you should be concerned about differential fertility and its effect upon the realization of full American opportunities for your people and full world opportunities for nonwhite people everywhere. As students, you should appreciate the role of knowledge in attack-

ing this great problem, as against exhortation. And as young people, you are naturally interested in the future—and your future is going to be largely affected by what this generation does about this problem.

STATEMENT OF THE PHELPS-STOKES INTERCOLLEGIATE ASSEMBLY ON
"THE POPULATION DILEMMA"

The Phelps-Stokes Intercollegiate Assembly, having devoted itself to an intensive study and analysis of various aspects of the advancing rate of population increase in the contemporary world, has concluded that further population growth constitutes a problem of major proportions. We recognize that the size of the world's population is likely to continue to increase and we feel that serious thought need be given at once to ways to reduce this rate of growth as well as to insure that these increasing numbers of people be adequately provided for.

We appreciate the contribution which the possession of a large and expanding population has made to the growth of U.S. economic strength, political influence, and national prestige. At the same time, we are dubious of the value of maintaining into the future a rate of increase similar to that which has benefited us in the past. A deterioration in the quality of American life, especially in areas of the country where population density is highest, seems directly related to this high density. Crime and delinquency, poorer education and inadequate educational facilities, tension, less freedom, insufficient employment opportunities, are just a few of the undesirable consequences of overly dense population. We feel that a judicious path must be chosen between an unwarranted restricting of the individual's right to choose freely the size family he wishes and the society's right to maintain a satisfactory ratio between population and natural resources, including esthetic as well as materialistic considerations in this determination.

Internationally, we feel that the increasing gap between the industrialized and the so-called underdeveloped countries constitutes a threat to international peace and we therefore note with dismay the difficulty to achieve a minimally satisfactory rate of economic growth in the face of rates of population increase sometimes in excess of 2.5 percent per year. Here, too, we recognize the individual's right to free choice in so personal a matter as family size and taking note of the cultural individualities of every nation, we would refrain from imposing an American or even a western value system upon other areas of the world. At the same time we feel that the statistical realities of the population trends should be widely disseminated and discussed in all countries, and when American expertise and assistance is clearly requested by other nations, it should be made available as freely as seems feasible.

As a contribution toward the easing of these problems we recommend the following:

1. A more careful husbanding of our natural resources, both by individuals and by the government, in recognition of the exhaustibility of these resources.

2. Concerted efforts to reverse the tendency toward excessive population concentration in certain regions of our country by dispersing employment opportunities and insuring that standards of living are more clearly equalized throughout the country.

3. The intensive dissemination of birth control information and services to all elements of our population, with special emphasis on directing such efforts toward the poor and the poorly educated. Imaginative mass publicity techniques should be used in getting across the "why" and the "how" of birth control. The introduction of sex education in the high schools is strongly urged. Public as well as private agencies should participate in such birth control programs, and a significant number of our assembly participants favored a greatly expanded advisory and supportive role for the Federal Government with respect to population control. There was not general agreement on the specific techniques which the Government should employ, but merely on the desirability of there being a Government policy with respect to family planning.

4. Accelerated efforts to raise the educational levels, skills, and achievement aspirations of the lower economic classes, and to assure employment opportunities for them so as to hasten their entrance into the American middle-class. This, it is believed, will automatically lead to a lowering of their birth rate as well as to better trained subsequent generations.

5. The admission of immigrants be kept at moderate levels and efforts be made to plan for the immigrants so as to prevent the further development of ghettos and slums. Immigration should be based on humanitarian and equalitarian considerations and be divorced from considerations of race, religion, or national origins of the applicant.

6. In light of the great need for skilled persons in developing nations, we propose a policy of equitable placement of skilled persons in places of greatest need. Therefore, we recommend—

- (a) a moderation of immigration of skilled persons into the United States.
- (b) the encouragement of skilled workers from this country to serve in developing nations.

7. Birth control information and services be made generously available to countries requesting such aid. To minimize the political ramifications of such aid, it should be funneled through the United Nations and financed through American private, rather than through government organizations to the extent possible. As representative of 25 percent of the world's population and the largest single annual contributor to the world's population increase, we urge that mainland China should be offered a seat in all deliberative bodies capable of dealing with the problem of population.

8. The taking of steps to see that the type of assistance offered to other countries does not violate their basic cultural values. It is less clear whether such a restriction should be extended to rule out aid which would injure general American sensitivities. U.S. association with such controversial measures as the legalization of abortion, infanticide, and homosexuality were discussed but left unresolved by the Assembly.

9. Expansion of the research which is taking place in the field of population and of birth control so that we may have the benefits of the best possible techniques and maximum knowledge with which to approach this awesome problem.

10. To encourage other industrialized countries to assist in this endeavor so that the United States does not develop an image or unilateralness on this delicate issue.

INTRACOLLEGIATE ACTIVITY

In the months which followed the Tuskegee assembly, a substantial number of the participants took the initiative in organizing little assemblies or discussion sessions on their own campuses in which the population dilemma was examined with interested fellow students who had been unable to come to Tuskegee.

Among the schools submitting reports of such meetings were: Morris Brown College, Jackson State College, Johnson C. Smith University, Hampton Institute, Central State College, Grambling College, St. Augustine's College and Bennett College.

At Johnson C. Smith University, following an open forum on population and thorough discussion of the resolutions issued by the Tuskegee meeting, the campus newspaper decided to print the Tuskegee statement in its entirety.

Grambling reported that their delegates had been called upon to speak on population problems before several classes.

Bennett College reported that its student body displayed great interest in the problem and was impatient to see solutions agreed upon and implemented. It is perhaps significant that although Bennett is a woman's college, little objection was expressed there to a policy of government intervention for the control of family size.

The Morris Brown students passed formal resolutions embodying specific actions to be undertaken by appropriate national and international bodies.

In general, it is fair to conclude that the problems posed by the current rate of populations growth are better understood and appreciated as a result of the Phelps-Stokes Fund assembly. We feel that this is a splendid example of dynamic education for constructive objectives.

STATEMENT RECEIVED FROM MORRIS BROWN COLLEGE

We the members of the foreign affairs forum at Morris Brown College, being aware of the frightening and awesome problems created by the rapid growth in the world's population and the part the quest for Lebensraum played in the last horrible war, believe that the United States and other capable nations, regardless of ideological differences, should work together to help the less-developed nations solve their population problems, resolved:

1. That the United States and the Soviet Union working through the United Nations should offer to institute a truly large-scale program to train persons from overpopulated areas in the method of birth control; that such a program will consist of a central headquarters in an area of the United Nations' choosing, and aided by regional offices in Asia, Africa, and Latin America.

2. That the United Nations through its present agencies that deal with world population growth should make its knowledge and services concerning birth con-

trol readily available to all nations regardless of political ideology or nonmembership in the United Nations.

3. That the Federal Government should create an agency to deal with population growth within this country.

4. That the above-mentioned agency should work with State and local governments to create their own agencies in order to disseminate and make available to as many Americans as possible, information and the necessary training required to make such programs effective.

PARTICIPANTS AT PHELPS-STOKES
INTERCOLLEGIATE ASSEMBLY

Bennett College

Mr. Sim E. Williams (F)
Miss Margaret Peter (F)
Eleanor A. Mitchell
Debra Morris

Bethune-Cookman College

Mr. Robert Scheinwald (F)
Johnnie M. Baldwin
Ellistine Hart
Morris W. Milton

Central State College

Dr. David W. Hazel (F)
David H. Dobbs
Henrietta Smith

Clark College

Mr. Andre Moore (F)
Josephine Linda Harris
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Mr. Roy G. Smith (F)
Marian Allman
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Grambling College

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Dr. Samuel E. Warren (F)
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Mr. C. DuPont Rippy (F)
Cynthia Flamer
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Mr. Carl L. Jones (F)
Jerry B. Driver
James Gilyard

James Ervin Glover
Joe Hornbeak
William Huling

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Mrs. Corrie Spencer (F)
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Morris Brown College

Julius W. Dudley
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Mr. E. C. Powell (F)
Betty J. Beard
William Hamilton Harris
Jacqueline L. Stripling

St. Augustine's College

Dr. William A. Gaines (F)
Norman Mitchell
Elnora M. Wilson

Savannah State College

Whittington B. Johnson (F)
Ruby Jean Beal
Daniel Brantley

Talladega College

Dr. Bruce Hunn (F)
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Helen Martin
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Dr. Lois C. McDougald (F)
David E. Rutledge
Rudolph Smith

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Anthony Laying (F)
Walter L. Davis
Nancie C. Freeman

Tuskegee Institute

Dr. John Eubanks (F)
Doris E. Bryant
Doris Nell Cooper
Nicholas Xavier

Virginia Union University

Mrs. Pearle M. Mankins (F)
Myra Dawn Parrish
James R. Roebuck, Jr.

(F) denotes faculty member

"There is room in the world, no doubt, and even in old countries, for a great increase of population, supposing the arts of life to go on improving, and capital to increase. But even if innocuous, I confess I see very little reason for desiring it. The density of population necessary to enable mankind to obtain, in the greatest degree, all the advantages both of cooperation and of social intercourse, has, in all the most populous countries, been attained. A population may be too crowded, though all be amply supplied with food and raiment. It is not good for man to be kept perforce at all times in the presence of his species. A world from which solitude is extirpated, is a very poor ideal. Solitude, in the sense of being often alone, is essential to any depth of meditation or of character; and solitude in the presence of natural beauty and grandeur, is the cradle of thoughts and aspirations which are not only good for the individual, but which society could ill do without. Nor is there much satisfaction in contemplating the world with nothing left to the spontaneous activity of nature; with every rood of land brought into cultivation, which is capable of growing food for human beings; every flowery waste or natural pasture ploughed up, all quadrupeds or birds which are not domesticated for man's use exterminated as his rivals for food, every hedgerow or superfluous tree rooted out, and scarcely a place left where a wild shrub or flower could grow without being eradicated as a weed in the name of improved agriculture. If the earth must lose that great portion of its pleasantness which it owes to things that the unlimited increase of wealth and population would extirpate from it, for the mere purpose of enabling it to support a larger, but not a better or a happier population, I sincerely hope, for the sake of posterity, that they will be content to be stationary, long before necessity compels them to it."

JOHN STUART MILL,

Principles of Political Economy (1848).

In 1961, the Phelps-Stokes Fund began its second half century of working toward a broad objective: stimulating further use of human talent and potential in the United States and Africa.

Established in 1911 under the will of Miss Caroline Phelps Stokes (1854-1909), the Fund currently focuses its major interest on the education of Negroes in the United States and Africa. In pursuing this interest the Fund utilizes a variety of approaches and cooperates intimately with private and public agencies on both continents. It is an operating foundation, conducting research, providing consultation and liaison services, sponsoring conferences, seminars, lectures and publications, and administering scholarship and fellowship programs.

Senator GRUENING. The brilliant newspaper artist, Corky Trinidad, editorial cartoonist for the Philippines Herald in Manila, has recently come to my attention. I direct that his cartoon, so pertinent to our own concern, be included in the printed record of this hearing.

(The above-mentioned cartoon follows:)

EXHIBIT 179

"I HAVE MY OWN DOVES AND HAWKS"

(By Corky, © 1966, the Philippines Herald, reprinted with permission of the Los Angeles Times Syndicate)



"I have my own doves and hawks."

Senator GRUENING. Steven M. Spencer has written a comprehensive evaluation of the birth control revolution in a recent issue of the Saturday Evening Post. I now direct that this article be included in the printed record of this hearing.

I also direct that a news release by Henry M. Hanson in the Chicago Daily News back in 1962—back when the birth control revolution was really getting its impetus—be included in this hearing record. At this time, "For the first time, an Illinois legislative group * * * voted that women receiving public aid should be told where to get birth control information if they want it"—by a 6-to-0 vote.

To follow Henry Hanson's article in the hearing record, I direct the inclusion of a series of five articles by Lois Wille, September 15-18, 1962, in the Chicago Daily News. Prior to that date there had been much discussion and subsequent agitation to include birth control services both in the city of Chicago and in the Cook County public health programs. It was felt that offering these services would reduce the rolls of those receiving public aid. Chicago did a good job of pioneering in this field. This series of articles reviews the 5-year-old problems, and may clarify some of the problems remaining today.

(The above-mentioned items follow:)

EXHIBIT 180

THE BIRTH CONTROL REVOLUTION

(By Steven M. Spencer, the Saturday Evening Post, vol. 239, Jan. 15, 1966, pp. 21-25, 64, 67-90)

BARRIERS FELL IN THE YEAR JUST ENDED, AND BIRTH CONTROL BECAME A NATIONAL POLICY: HERE IS HOW THE "PILL" AND THE "LOOP" ARE TRANSFORMING LAWS AND LOVE IN AMERICA AND OFFERING WOMEN NEW FREEDOM AND NEW RESPONSIBILITIES

"Oh, I know I've put on a little weight since I started on the pill," said a Chicago housewife in her late twenties, "but I think it's just from contentment. I used to worry a lot about having another baby, and that kept me thinner, but I never have to worry anymore. We have three children, from 3 years to 6 months, but with two still in diapers I'd prefer to wait for the next until the youngest is at least 2 years old. And now I know I can wait." This young mother is typical of the millions of American women who today are leading a new kind of life, for they have gained what for eons was denied the daughters of Eve—a secure means of planning the birth of their children. They are the beneficiaries of one of the most dramatic sociomedical revolutions the world has ever known.

The revolutionaries are the small band of determined men and women who for more than half a century have promoted planned parenthood. Scorned and despised at first, they gradually caught up doctors and lawmakers, millionaires and presidents in their endeavor, until their goals became socially acceptable and almost the entire Nation changed its mind.

The implements of the revolution are "the pill"—the oral contraceptive tablet the woman of 1966 takes 20 days of each month—and the increasingly popular intra-uterine device, a coil or loop of plastic or metal worn in the womb for as long as a woman wishes to avoid pregnancy. With the pill and the loop, in spite of possible side effects and rare hazards, the science of birth control has now reached a degree of effectiveness and convenience undreamed of even a decade ago.

These technical advances, combined with a growing concern about the world population crisis, brought the birth-control revolution to a historic turning point in the year just closed, for 1965 marked the fall of most of the last important barriers against general distribution of family-planning information and services.

It was the year that the U.S. Supreme Court threw out as an unconstitutional violation of privacy the 86-year-old Connecticut law that had forbidden the use of contraceptives and forced the closing of birth-control clinics.

Positive legislative steps were taken in 10 other States, including New York.

It was the year the Federal Government, taking its cue from President Johnson, became more directly involved in birth-control activities than ever before. Early in the year the President had pledged he would seek new ways to help deal with the explosion in world population, a problem he rated second in importance only to achieving peace. In his June address to the United Nations he urged that we act on the fact that less than \$5 invested in population control is worth \$100 invested in economic growth. Appropriately, as the year closed, the Ford Foundation announced it was granting \$14.5 million for research on human reproduction and fertility control. "Only birth control on a massive scale," Gen. William Draper, Jr., national chairman of the Population Crisis Committee, said in December, the day after the Ford Foundation announcement,

"coupled with rapidly increased food production in the developing countries, can prevent the greatest catastrophe of modern times."

As Draper spoke, the Ecumenical Council of the Roman Catholic Church was drafting a text on birth control. The traditional foe of all contraceptive techniques except periodic abstinence, the church during the past several years was shaken from parish to papacy by disagreement and debate on the topic. Many Catholic couples, including the estimated 35 percent in America who use methods not approved by their church, hoped the Ecumenical Council would modify the ban, but no such change was forthcoming. According to some observers, however, including Dr. John T. Noonan, Jr., an American professor of law at Notre Dame University who is a consultant to the Pope's commission on marriage problems, the council's final document lays the groundwork for eventual change. If so, 1965 will indeed be remembered as a revolutionary turning point.

One cannot be sure that the birth-control revolution will move fast enough for the nations to avert the starvation and overcrowding of runaway population growth. Hundreds of millions of human beings are already on the brink of famine. Recently a special panel for the White House Conference on International Cooperation declared that "the rate of growth of world population is so great—and its consequences so grave—that this may be the last generation which has the opportunity to cope with the problem on the basis of free choice." But although the effect of the birth-control revolution upon the nations remains in doubt, there is no question that it will have an enormous impact upon marriage in America and the American family. Birth-control advocates speak of a strengthening of love between husband and wife once the fear of unwanted pregnancy disappears from sexual relations; they predict an easing of family financial strain and warmer relationships between parents and children as other stresses are removed. Already many of the 5 million American women taking the pill are enjoying at least partial relief from the menstrual tensions and pains that have always been considered their inescapable lot. Scientists are perfecting an injection that not only prevents conception but suppresses menstruation for months. This and other prospective developments reported here—including a morning-after pill—promise the American woman, already the freest in the world, still vaster freedom.

The freedom, however, extends not only to wives but to unmarried girls, and the choices that the latter make can mean a widening of the rift between the generations. There are indications that a majority of unmarried young women still observe the standards of sexual behavior taught by their parents or their religion. But many seek in sexual activity the confirmation of their identity as free adults, and, whether by legitimate or underground routes, the pill has found its way to college campuses and even to the high school hallways. Dr. Mary Steichen Calderone, an eminent planned-parenthood expert, tells of an encounter with a girl in a New York City junior high school during a break between classes. The girl had dropped her handbag in the crowded corridor, and its contents spilled on the floor. "I stopped to help her pick the things up," Dr. Calderone said, "and was astonished to see a package of birth-control pills. I asked the child, 'Do you really know about these things?' 'Oh, yes,' she replied, 'I take them every Saturday night when I go on a date.' She had gotten the pills from her married sister—apparently without benefit of instructions. If it weren't so funny, it would be tragic." In fact, it probably will be tragic. One pill alone is quite ineffective. They must be taken daily for 5 to 7 days before any protection is built up.

"WE WERE THE BEST CATHOLICS YOU EVER SAW," SAYS ONE MOTHER, "UNTIL OUR BABIES BEGAN COMING SO CLOSE TOGETHER; THEN WE FELT THAT WE HAD TO DO SOMETHING"

Many of birth control's most ardent supporters candidly admit that the new freedom provided by the better methods carries with it—as does any freedom—corresponding dangers. While for the first time in history men and women have the ability to make an absolute and free choice as to the purpose and result of their sexual actions, good choices still require intelligence. "We now have the means of separating our sexual and our reproductive lives," says Dr. Calderone, "and we have a great responsibility to make proper use of both of them."

THE SCIENTIFIC REVOLUTION

In her efforts to control the number and spacing of her children, woman down through the centuries has resorted to many recipes, often more strange than effective. She was advised in an Egyptian papyrus of 1500 B.C. to use a concoction of acacia tips, bitter cucumber and dates, mixed with honey. Dioscorides, the famous Greek medical scientist of the first century, prescribed willow leaves in water (willow because it was thought to have no seeds) or the leaves of barrenwort finely ground and taken in wine. Other Greek medical writers offered a choice of powerful amulets, including one made of henbane seed diluted in mare's milk and carried around the neck in a piece of stag's skin.

The woman of today takes nothing more exotic than a pink pill (or a white or peach-colored one). Or she wears a small device within the womb, a hidden amulet, so to speak. Although these intrauterine devices are fast gaining acceptance in foreign countries, they are far less used than are the pills. In addition to the 5 million American women taking the pills on doctors' prescriptions, there are some 2.5 million abroad, mostly in Latin America, Europe, and Australia. And the market continues to expand.

Not since the sulfa tablets emerged in the 1930's to conquer pneumonia and a host of other infections, has a little tablet exerted such far-reaching influence upon the world's people. It may, in fact, be the most popular pill since aspirin. It is certainly relieving bigger headaches—both family and global. And all at a cost of about \$1.75 for a month's supply. The pill is big business, produced by seven firms, advertised in the medical journals in two- and three-page spreads with lace-and-roses borders and sold in feminine and fashionable dispensers. Some resemble powder compacts, others, telephone dials, marked off to help the woman keep track of the days she should take them.

From the very outset the pill's stability to prevent ovulation, and therefore pregnancy, has been virtually 100 percent when taken faithfully as directed. This is usually for 20 days beginning with the fifth day of menstruation. Only total abstinence or surgical sterilization can equal or surpass their record. When pregnancies have occurred, it has been because the woman was unknowingly pregnant before she started taking pills, or because she forgot them for one or more days.

The "mother" of the pill is Mrs. Margaret Sanger, the famous founder of the birth-control movement in America who today at 87 is living in Tucson, Ariz. Physically infirm, she is still sharp of mind and can look back on a half century of hard-won achievements and a life struggle marked by arrests, jailings, and verbal abuse. Many years ago Mrs. Sanger recognized the limitations of the principal methods offered by the birth-control clinics—diaphragms and spermicidal jellies—and she suggested to Dr. Gregory Pincus of the Worcester Foundation for Experimental Biology, in Massachusetts, that he try to develop something better.

"Then one day in 1951," Dr. Pincus recalls, "Mrs. Sanger approached me again. She was especially disappointed by the failure of conventional methods in India. She said, 'Gregory, can't you devise some sort of pill for this purpose?' I said I'd try." With a grant of \$2,500 from Mrs. Sanger's Planned Parenthood Federation, he and his associates went to work on it.

Pincus was not starting blind. Scientists had known since 1900 the fundamental bodily chemistry that the birth-control pill exploits. They knew that chemicals called hormones, secreted by a woman's pituitary gland, cause her ovary to release a ripened egg each month—the process is called ovulation. They also knew that if the egg becomes fertilized and attaches itself to the lining of her uterus (the beginning of pregnancy), still another hormone cancels out the pituitary hormones and prevents ovulation, keeping her ovary from secreting more eggs during the 9 months that the fertilized egg is growing into an infant. It was this anti-ovulation hormone, identified in 1934 as progesterone, that Dr. Pincus sought to imitate in an oral birth-control tablet.

Researchers at the University of Rochester had used progesterone in 1937 to prevent ovulation in rabbits, but efforts to apply the rabbit findings to humans had been discouraging until Dr. Pincus and his associate, Dr. Min Chueh Chang, took up the problem. Dr. John Rock, then clinical professor of gynecology at Harvard, independently tackled the same problem, and soon he and Pincus' group joined forces.

As director of the Reproductive Study Center in Brookline, Dr. Rock was originally trying to induce ovulation in women unable to have babies. Pincus and Chang were seeking an oral method of preventing ovulation. By a curious

physiological paradox, both goals were achieved, in differing degrees, with the same hormones. When Dr. Rock gave progesterone and another sex hormone, estrogen, to 80 previously infertile women daily for 3 months, and then stopped, 13 of the women became pregnant within the next 4 months, apparently because the hormones had improved the condition of the uterus and tubes. This became known as the "Rock rebound effect." At almost the same time the Pincus-Rock team demonstrated the value of the hormones in preventing ovulation, when taken for 20 days.

But since the natural hormones had to be given in large oral doses or by painful injections, Dr. Pincus' group sought a more convenient synthetic substitute. They screened some 200 chemical relatives of progesterone and found three that looked promising. The first medical use of the synthetic hormones was in the treatment of menstrual irregularities. Then, in December 1954, Dr. Rock began administering them as a contraceptive to a group of women in Brookline. In April 1956 large-scale tests began in Puerto Rico and later in Haiti and a number of U.S. cities.

At first the Food and Drug Administration approved the pills for only 2 years of continuous use. But under careful observation by research doctors, many women continued them without harm for much longer periods. Some have taken them for as long as 10 years, and certain of the pills are now approved for 4 years of use. When women have stopped the pills to have a baby, there has been no impairment of their fertility.

Tests over the years have shown that the amount of hormone in each pill need not be as large as originally believed. On the principle that the less hormone you take the better, so long as the effect is achieved, manufacturers have steadily reduced the concentration. One company's pill, which began as a 10-milligram tablet several years ago, is now down to 2.5 milligrams, and a new 1-milligram tablet may soon be introduced to the market.

In addition to the pill's clear superiority in effectiveness, women like its neatness and its complete dissociation from the sexual act. "I simply take a pill every evening," one young suburban mother remarked, "and, my God, it's wonderful not to have to worry." Another plus for the pill is that it has brought into the birth-control clinics thousands of women who would not otherwise have come, or who, discouraged by less easy and reliable methods, would have dropped out. Dr. Richard Frank, medical director of the Planned Parenthood affiliate in Chicago, says that up through 1961 not more than 30 or 40 percent of the women stayed with the methods then offered—usually the diaphragm. But a recent count showed that 75 percent of those introduced to the pills were still using them after several years.

No one claims, in spite of the generally favorable experience, that the pill is perfect. There are side effects, most of which resemble the familiar symptoms of early pregnancy—nausea, some swelling and tenderness of the breasts, headaches, or fatigue. There is often some weight gain and occasional "spotting" during the month. But only a small minority of women experience the side effects—figures range from 2 to 15 percent, depending on the specific symptom. The problems tend to disappear after the first 2 or 3 months, especially with the newer low-concentration pills. And if one variety of pill is troublesome, the doctor may prescribe another. Although weight gain is a frequent complaint, doctors believe it may be only a physical reflection of the pill's psychological benefits—the freedom from worry that it brings to many women.

MANY GIRLS ALREADY HAVE THE PILLS WHEN THEY ARRIVE AT SCHOOL, OR THEY BORROW FROM EACH OTHER OR USE THE PRESCRIPTION OF A MARRIED SISTER

Of graver concern are the still unsettled questions about whether or not, in rare instances, the pills produce serious illnesses. Cancer, for example, has caused moments of alarm. Here a key point is the difference between causing a new cancer and stimulating the growth of an already existing one. The estrogen component of the pills is believed capable of causing the enlargement of an existing cancer of the breast or pelvic area, and if the doctor suspects such a malignancy, he will not prescribe the pills. "For this reason it is important for women taking the pills to have periodic breast and pelvic examinations," says Dr. Robert W. Kistner, assistant professor of obstetrics and gynecology at Harvard. "I think that they should be examined as often as every 6 months."

There is absolutely no evidence, however, that the oral contraceptives will initiate cancer. Early uneasiness on this point was stirred up by research on inbred strains of laboratory rats already prone to breast cancer. Careful anal-

ysis of the medical histories of thousands of women on the pills has revealed nothing to indicate the pills can produce a cancer that was not already there.

As a matter of fact, there is now well-founded opinion that the pills may actually prevent cancer of the uterus. Dr. Pincus and his associates discovered a definitely lower rate of positive "Pap smears" among women, taking the pills in Haiti and Puerto Rico. And at Harvard, Dr. Kistner was able to protect rats from the known cancer-inducing effect of certain chemicals by feeding them contraceptive pills. "It may well be that cancer of the uterus is a preventable disease," he says.

Another illness that some have linked to birth-control pills is thrombophlebitis. This is an inflammatory and sometimes fatal clotting in the veins. A number of cases, and a few deaths, have been reported among women taking the pills, in both the United States and England. The reports have received wide publicity, but the cause-and-effect relationship has been clouded by the fact that thrombophlebitis has always been rather common among women of childbearing age, the very group now taking the pill. Among millions on the pill it would not be surprising if a few women coincidentally suffered from blood-clotting complications. The verdict at present: neither proven nor unproven. But to be safe the Food and Drug Administration requires the manufacturers to advise the doctors not to prescribe the pills for women with a history of thrombophlebitis, pulmonary embolism, stroke, or liver disease.

Just last November the FDA added one more precautionary note, a warning to watch for any blurring or loss of vision among women on the pill. Here again, the cause-and-effect has not been established, as the FDA points out. But a Johns Hopkins eye specialist, noting a few suspicious cases of eye trouble and other neurological complications, asked for reports from other doctors and received 73. Many of the women affected had histories of high blood pressure or other conditions that might have accounted for the eye symptoms.

For women who have medical difficulty with the pill, the answer may be the intrauterine devices, particularly the Lippes loop, named for its designer, Dr. Jack Lippes of Buffalo, N.Y. Originally hailed mainly as a method for those who couldn't afford the pills or who were too ignorant to count the days, the intrauterine devices (IUD's) are now gaining favor among wealthy women on Park Avenue and in fashionable suburbs.

"Members of some of our most prominent families have been using IUD's for as long as 3 years," a New York obstetrician revealed, "and are very well satisfied." A Boston doctor had to install a second telephone to help handle calls from women wanting IUD's. More than 200,000 women in the United States have been fitted with them.

Family-planning experts have repeatedly emphasized that the effectiveness of any method depends to a large extent on the motivation of the woman, or the couple. To have a free choice is one thing. To exercise it through deliberate decisions is another. With the pill, the need to make the decision is at least removed in time from the moments of rushing passion. But as Dr. Sheldon J. Segal of the Population Council points out, "Once a woman has the IUD successfully installed, she makes her next decision only when she wants to have a baby; then she goes to her doctor and has the device removed."

The loop, coil, or bow is soft and elastic enough to be squeezed into a hollow plastic tube for insertion into the uterus, where it springs back into its original shape. To avoid infection or accidental perforation of the uterine wall (which has occurred a few times), the device must be inserted with care by a physician, preferably one with some training in gynecology. Most doctors insert the IUD for a reasonable fee—that for a regular office visit. But some have charged as high as \$100, \$200, or even \$400, reports a New York obstetrician who has been speaking out against such exorbitant prices. Last September the American College of Obstetricians and Gynecologists cracked down on the high-fee practice and suggested in its newsletter that the charge be "not in excess of \$25." The devices themselves, as sold to the doctors, range in price from \$1 for the loop to \$1.80 for the steel ring, with a small additional charge for the instruments needed for insertion and removal. In large quantities, for use in clinics, the cost is only a few cents apiece.

No one is yet certain just how the intrauterine device interferes with conception. The currently favored theory is based on meticulous research carried out at the University of California at Los Angeles. Investigators there, after artificially inducing ovulation in monkeys and then artificially inseminating them, found that the IUD causes the egg to hurry down the Fallopian tubes before it is mature enough to be fertilized.

Doctors do not usually advise IUD's for women who have never had a baby. The devices have the added disadvantage that only about 75 percent of women who do try them find them acceptable. An estimated 15 percent must have them removed because of pain, excessive bleeding, or other medical reasons, and 10 percent accidentally expel them, sometimes without knowing it. But about 97 percent of those who can retain the IUD are protected against pregnancy, a lower score than the pill's but still better than that of older methods.

Even with its imperfections the IUD is regarded as one of the most practical methods of coping with the world-population crisis. The Population Council, supported mainly by Rockefeller and Ford money, has sponsored extensive worldwide trials, focusing especially on India, Taiwan, and Korea. India, now launched on a \$400 million birth-control program, has received 1.2 million IUD's from the Population Council. And last summer it started a factory to turn out 14,000 loops a day, distributing small gold-plated loops as souvenirs of the opening-day ceremonies.

In the IUD and the pill, the birth-control revolution has formidable weapons against the world-population explosion. The science of birth control, however, is pushing on toward new techniques that may make birth control even easier. Several drug companies, for example, are developing an injection that will prevent ovulation for 1 to 3 months, depending on the formula. One compound produces its effect so gradually yet so powerfully that a single shot will suppress both ovulation and menstruation for 6 months to a year.

The injectables are still in the trial stage and won't be on the market until completion of tests on more than 5,000 women in several States, but preliminary reports are promising. Menstruation occurs normally with the once-a-month injection, as it does with the daily pills. But it can be suppressed by the longer acting injectables or by taking certain types of contraceptive pills through the full month, without interruption. Dr. Charles Flowers, professor of obstetrics at the University of North Carolina, finds that women suffering from painful or excessive menses, or from the irritability and "witchiness" of premenstrual tension, are delighted to be relieved of these troubles for several months at a time.

But the injection is just the beginning. Among the new advances promised for the future is a vaccine against pregnancy, now being worked on by several groups. One approach involves extracts from the egg and the sperm. Dr. Albert Tyler of the California Institute of Technology has found that a sperm extract injected into the female rabbit will coat the rabbit ova so that a live sperm from the male rabbit cannot attach itself to fertilize the egg. Anticonception vaccines suitable for human use have not yet been perfected, however. Dr. Tyler, though optimistic about the future, points out that such vaccines "must not make wives allergic to their husbands."

Such allergic tragedies would be avoided by a vaccine for the husband, which would work by suppressing his own sperm production. Dr. Kenneth Laurence, of the Population Council's research unit at the Rockefeller Institute in New York, thinks this goal may be reached in 3 or 4 years. He and his associates have been injecting male guinea pigs with extracts of guinea pig testes or sperm, and within 6 or 7 weeks the animals become sterile. Their sperm production comes to a stop. While a single injection renders the animal sterile for 4 to 11 months, his sex-hormone output is not interfered with. He retains a normal sex drive and will mate if allowed to.

When the effect of the vaccine wears off, the glands resume the manufacture of sperm, at first with minor variations in sperm size. Eventually the sperm are normal in size and number, and the guinea pigs are able to father normal offspring. They have also had normal "grandchildren." There has been one drawback, however, to the practical application of the male-vaccine method of birth control. The vaccine must contain an oil ingredient (called an adjuvant) for it to work efficiently. And the adjuvant makes such a sore at the point of injection that Dr. Laurence doubts most men would want to put up with that much discomfort. "But we are now working with another adjuvant that doesn't produce a lesion," he said. "Two injections would be necessary with this material, instead of one, and we haven't yet tried it on humans, but we think we'll be ready for this in a few years."

A number of efforts are being made to produce something a woman could swallow following intercourse—the so-called morning-after pill. Dr. M. C. Shelesnyak, of the Weizmann Institute in Rehovoth, Israel, has found that a single dose of an alkaloid known as ergocornine, given to rats within 6 days after intercourse, will prevent the implantation of the fertilized ovum on the wall of the uterus. Dr. Shelesnyak has made preliminary studies with women

patients, giving them 2-milligram tablets of ergocornine. The results were encouraging, but more work is necessary, he reported, to determine whether the method will prevent pregnancy without toxic side effects.

An American pharmaceutical firm has been experimenting with another morning-after pill that appears to destroy the fertilized ovum. But on one of the first field trials, women who had taken the pill unexpectedly became photosensitive. As soon as they went out in the sun, they got a sunburn. If these difficulties can be solved, "the morning-after pill may become the ideal contraceptive.

THE MORAL ISSUE

As the scientific revolution in birth control continues, solving human problems of many sorts, it also creates problems in morality. The new techniques eliminate fears that formerly deterred men and women from sex outside of marriage. With the deterrents reduced or gone, many people believe that the foundations of contemporary sexual morality may be threatened, especially the morals of the young. Newspaper headlines and book titles have cited "the new promiscuity" facilitated by the pill. "Sex on the campus" has been a popular topic on television discussion programs, and college health officers have shocked parents across the country by publicly reporting that coeds come to them for prescriptions for pills. One said that when a girl at a midwestern college recently made such a request, she was asked, "How old are you?"

"Twenty-one," the girl replied.

"You have a particular man in mind?"

"Well, yes, I do."

"Have you ever stopped to think that you might someday want to marry a man who holds virginity in high regard?" the doctor then asked.

"Yes," she said, candidly. "But I'm not at all sure I want to marry a man like that."

Indisputably, the revolution is making an impact on the lives and sex standards of the young, from teenagers on up. Some authorities hope that the pill, prescribed for "the girl in trouble," the youngster whose sex impulses cannot be controlled, will at least prevent the tragedy of the illegitimate, unwanted child. Dr. Edward Tyler, president of the American Association of Planned Parenthood Physicians, says his clinic in Los Angeles follows the principle of giving birth-control help to girls who have had a baby or who are brought in by mothers saying they are afraid the daughters will become pregnant. In New York the Planned Parenthood clinics follow a similar rule, and if parents or guardians are not available, the girls are accepted for help on referral by a social or health agency, a clergyman or a physician.

As for the controversial issue of sex on the college campus, some college officials doubt the pill is really encouraging freer sex activity there. Though ministers and moralists are highly vocal about "the rapid breakdown of sexual moral standards" among the young, many administrators insist that the situation today is no different from what it has always been.

"We have about 5 percent whom I would call sexually active," observes Dr. Richard Moy, young head of the Student Health Service at the University of Chicago. "But that's the same 5 percent we've always had. As for the pills, many girls have them when they come to school. Their family doctors at home have prescribed them. Or they borrow from each other or use the prescription of a married sister. Or they put on an engagement ring and get them as part of preparation for marriage. It's not a very formidable task to obtain the pills." A doctor on the west coast says, "I'm sure many are sold in the drugstores without prescriptions, and there is certainly a lot of pill swapping, like sugar or eggs."

Some investigators and many students insist that promiscuity is no more acceptable today than it was 40 years ago. Nevitt Sanford, professor of education and psychology at Stanford University, reports in the National Education Association Journal that on the basis of 12 years of studies at three schools—an eastern women's college, a Western State university, and a private college in the West, "there has been no revolutionary change in the status of premarital intercourse since the 1920's." He finds that between 20 and 30 percent of the women in his samples were not virgins at the time of graduation, and he thinks this is about the same percentage that existed in the 1920's.

A number of college girls interviewed on these questions believe there has been an increase in premarital intercourse, but not in the direction of promiscuity. "There is a more sensible assessment of the problem than our parents used to make," one girl explained. "I don't think that promiscuity is condoned

any more today than it ever was. But sex between people in love, people who hope or expect their relationship to grow into marriage, is much more common." Nor do the girls think the rise in premarital sex is due to the pill.

Mrs. Mary-jane Snyder, of the Chicago Planned Parenthood staff, had a discussion on several topics with girls from a half-dozen colleges. On the subject of the pills, one of them said, "A lot of girls who were using other precautions have changed to the pills, I think—in fact, I know. But that's just like changing from the horse and buggy to the automobile—it's progress." Another agreed. "No, I don't think the pill has changed campus morals. The change was there. The pills just make it easier." A third girl remarked, "Just think what the automobile did to increase sex activity. Don't forget, though, there are still a lot of girls left with strong old moral fiber."

"I wish it didn't seem so old-fashioned to have high moral values," one coed commented. "So many girls would just love to be able to say out loud that they think too much is being made of the importance of sex. The silly thing is that it's sort of embarrassing to admit that you disapprove. It's 'the thing' to sound modern and blase even if you aren't. For this reason, one can get a false impression of the percentage of girls who indulge."

A faculty member at a big eastern university also doubts the pill has been a factor in changing campus morals, although he notes that "a great many girls are taking the pills, girls whose mothers send them to school all informed and ready."

LAST JUNE THE SUPREME COURT STRUCK DOWN CONNECTICUT'S OLD ANTI-CONTRACEPTION LAWS; SOON AFTERWARD 10 OTHER STATES MOVED TO SUPPORT BIRTH CONTROL.

"It seems to me that the changed circumstances between the sexes is the crucial factor," observes John Munro, dean of Harvard University. "The independence of women, for example. Going steady—the steady companionship of individual couples—is another aspect. Boys and girls are so much more companionable than ever before. Girls can do so much more, too. Families will send a couple of girls to Europe unchaperoned, for example. Or boys and girls start off together on some idealistic mission. But the young people, depending much on each other, become sexually entangled. Then one of them gets tired of the situation and the other suffers emotionally, and what you have is divorce before marriage, which can be pretty hard on these people." But one girl asks: "So long as we have no child—thanks to the pill—our relationship affects only ourselves. Why is this so wrong, when no one else gets hurt?"

A controversy over birth-control pills recently flared on the campus of Pembroke College, the women's division of Brown University, in Providence, R.I. A 19-year-old reporter for the *Pembroke Record*, a campus paper, called on Dr. Roswell D. Johnson, the Pembroke College health director, without identifying herself as a reporter, and asked for a prescription for the pills. In her article she wrote that she had "obtained a tentative prescription," though she went on to say she was "refused a prescription for the time being on the grounds that she was under age." Her story claimed Dr. Johnson did not mention any need for parental permission.

Dr. Johnson flatly contradicted the reporter on this point, saying he couldn't even begin to talk to her about prescribing pills for her because she was under 21. "I also told her the only way she could get them was for her parents to write and request me to prescribe them," he said, "and when I added, 'I assume you're not in the mood to write to them?' she replied, 'Oh-h-h, no-o-o.'"

"Anyone over 21, however, is a free agent," Dr. Johnson remarked, although he said he had actually prescribed the pills for only two unmarried students, and both of them were planning to be married. He added that if a girl asked him for a pill prescription he wanted to know why she wanted it. "I want to feel I'm contributing to a good solid relationship and not to promiscuity," he said.

Mrs. Annabelle Cooper, executive director of the Washtenaw County League for Planned Parenthood, in Ann Arbor, Mich., finds no perceptible increase in the number of unmarried college girls under 21 applying to the clinic for contraceptives. "Those who want contraceptives can get them so easily at the corner drugstore," she says, "that they usually don't come to us. The pills aren't available there without prescription, of course, nor the intrauterine devices nor the diaphragms. But foams and condoms are."

The Washtenaw Clinic's policy statement on services to unmarried women is clear and decisive:

Contraceptive services are given to all women 21 years or older, all married women under 21, and all unmarried mothers 21 or under "upon consideration." "All women under 21 who are definitely engaged are given contraceptive service prior to marriage," the statement continues. "All others are counseled, but given contraceptive service only with their parents' permission."

The premarital counseling and examination will be given as long as 3 months before marriage. "We have trained social workers who try to determine if a young girl is really going to be married," Mrs. Cooper explained. "Occasionally we see a girl who is 'premarital' for as long as 2 years."

Among young couples who have premarital intercourse, many actually refuse to use contraceptives. In addition to those who observe a religious prohibition, there are couples who believe that the use of any contraceptive is "too premeditated," or is "not sincere." "Some felt 'planned intercourse' was not romantic, and was too great a transgression of standards," says Dr. Joseph Katz of Stanford. "I believe this is one of the biggest factors in unwanted pregnancies."

Occasionally one finds a lonely, unloved girl who wants to become pregnant, even though she has no hope of marrying the baby's father. And there is always the girl who tries to snare a boy by this means. In contrast with these girls is the one whose story a university official said he had every reason to believe. Even though she was not having intercourse, she still was taking the pills, she told him, because when she turned down a man she wanted it to be a matter of her own free choice and not because she was scared.

With her bewildering reasoning, the girl had touched upon what may be the only inarguable conclusion that can be drawn about the impact of the birth-control revolution on sex behavior: In cases where fear of pregnancy was the sole deterrent, the reliability of the new contraceptives has removed that fear.

THE RELIGIOUS CONTROVERSY

Nearly all religious denominations opposed birth control until a few decades ago, when one after another began to modify their positions. The Roman Catholic Church, almost alone, remained firm in its opposition. What the church is now involved in is a struggle to extricate itself—without confusing the faithful—from a thick doctrinal web spun around the subject of marriage and sex in the early centuries of the Christian era.

Neither the Old Testament nor the New specifically forbade contraception. The web of prohibition was purely an interpretation, woven by Popes and bishops and strengthened by the authoritarian tradition of the church.

A penetrating study of this process—"Contraception: A History of Its Treatment by the Catholic Theologians and Canonists"—has been written by John T. Noonan, Jr., of Notre Dame. Professor Noonan notes that contraception had been permitted by the Greek, Roman, and early Jewish cultures and that the Christian teaching against it was mainly a reaction to the excesses of the Romans, who added to their licentiousness not only contraception but abortion. The Christian doctrine also reflected a new emphasis on the sanctity of all human life, including the seeds of life to be.

But there was a peculiar ambivalence toward sex in marriage, even in the Old Testament, and this, says Professor Noonan, is basic to an understanding of the development of the Christian ethic. On the one hand is the familiar glorification of procreation: " * * * and God said unto them, Be fruitful and multiply, and replenish the earth, and subdue it." Yet over against this are such strange verses as that in the Psalms, in which David, though the child of a lawful marriage, cries: "In guilt was I born and in sin my mother conceived me." This and other passages, says Noonan, "furnish support to one stand of Christian thought, mistrustful of sex."

Puritanical hostility to pleasure in sex, and to contraception, reached its peak with Augustine, in the fourth century. A former believer in Manichaeism, he bitterly attacked the sex practices of that group, including its use of the sterile period. Ironically this was the original rhythm method, the only one now approved by the Catholic Church. As Noonan observes, "History has made doctrine take a topsy-turvy course."

The pill was, of course, the catalyst that started the ferment of rethinking in the Catholic Church, for it was obviously less "artificial" than jellies, foams and mechanical contraceptives. And in mimicking the action of nature's hor-

mones, the pill could be said to "regularize" the cycle and thus make the rhythm method more acceptable.

One of the first Catholic scholars to argue that the pill was licit on the basis that it did simulate normal physiology was the Reverend Louis Janssens, of the University of Louvain, Belgium. But within 3 months after his article appeared, in 1958, the late Pope Pius XII rejected this view. While Pius condemned the use of the pills to prevent conception, he nevertheless approved them when used for therapeutic purposes, even if "temporary sterility" was an indirect result.

This opened the door to more debate, a torrent of spoken and written words from priests and laymen alike, representing all shades of opinion and discussing female physiology and marital love with amazing frankness. Seldom in the history of the church, which now claims a world membership of about half a billion, has an issue produced such sharp and vocal division among its leaders.

At the heart of most of the liberal argument was a pastoral concern for the dilemma of married parishioners. The Belgian cardinal, Leon Joseph Suenens, was moved to declare before the Ecumenical Council in Rome: "We are faced with the problem, not because the Christian faithful are attempting to satisfy their passions and their egoism, but because the best among them are attempting with anguish to live a double loyalty, to the church's doctrines and the needs of conjugal and parental love."

The cleavage among the priests left millions of Catholic couples confused. Many made their own decisions and chose the pills, with or without a twinge of conscience or a confession. Others had a tougher struggle. There was the girl of 18 who knocked one evening on the door of the Chicago Planned Parenthood headquarters. Mrs. Snyder, a warm and understanding staff member, let her in. "The poor girl was in tears," Mrs. Snyder recalls. "She told me she and her fiance were to be married during his 3-week leave from the Navy, and since both were Catholics she had asked her parish priest for a dispensation to permit them to use a contraceptive. She had a job and didn't want to become pregnant until her husband came home again in a year. But her priest had refused, although, as she said, a friend's priest in the next parish would have given the dispensation.

"This girl said she didn't mind if they had 12 children, once her husband was home to stay, but right now she didn't want to take a chance because it was so necessary for her to keep her job. I really felt sorry for her. I was in tears myself before she left. But I didn't want to advise her to go against her priest when she so plainly thought it would be the wrong thing to do."

For another midwestern woman, an accountant's wife with three children under 3 years of age, there was a different outcome, Mrs. Jarvis, as we shall call her, had met her husband at a Catholic college, they had been married in the church and were "the best Catholics you ever saw until our babies began to come along so close together. Then we felt we had to do something.

"Our house has five bedrooms, but my husband said he didn't want me to fill them up right away," she said. "And when I'm pregnant, I'm in a bad mood most of the time. However, he didn't think we could receive communion if we used ordinary contraceptives, because we'd have to confess each time as a sin." Mrs. Jarvis, a young woman with delicate, sensitive features, leaned forward in her chair. "But for a thing to be a sin," she said, "there are three things about it: First, you must think it's a sin; second, it must be a grievous thing against God; and third, you must have done it voluntarily. Well, we don't think the pills are a sin, and our young priest said he saw nothing wrong with them either. So we don't confess them, and we can go to church and take communion. We didn't learn about this until just a few weeks ago when the young priest told us. Young priests seem to be more understanding.

"The best time to be a Catholic," Mrs. Jarvis concluded, "is when you're very young or very old. In between is this problem. They say the Catholic Church is hard to live in and easy to die in, and it's true. But the pills, which so many in the church are beginning to approve, will be a great help."

Hopes for liberalization of the church's position appeared to suffer a setback last October, when Pope Paul spoke to the United Nations in New York. Three quarters of the way through his eloquent plea for world peace, he sounded what to many seemed a discordant and disappointing note. "You must strive to multiply bread so that it suffices for the tables of mankind," he said, "and not rather favor an artificial control of birth, which would be irrational, in order to diminish the number of guests at the banquet of life."

The pontiff's remark was open to instant and differing interpretations, as papal utterances often are. Some observers said its import hinged on the Pope's own

definition of "artificial." Others thought he simply wanted to discourage an international campaign for contraception.

One of the official bodies studying the problem is a special papal commission on problems of marriage set up by Pope John XXII. Pope Paul enlarged the commission to 56 members, including clergymen, scientists, doctors, and a few married couples. The commission failed to agree on a recommendation during the Ecumenical Council, but the council's final declaration on marriage, which reflected intervention by the Pope, indicated that he had asked the commission to continue its study of the birth control question.

The pertinent passages in the council's report on "The Church in the Modern World" were ambiguous, however. They said the faithful "may not undertake methods of birth control which are found blameworthy by the teaching authority of the church in its unfolding of the divine law." At present this rules out all but abstinence and rhythm. At the same time they made a significant change by placing conjugal love for its own sake on an equal plane with procreation. Some observers think this opens the way to eventual approval of many forms of birth control.

THE BENEVOLENT CONSPIRATORS

While the Catholic Church has not significantly modified its official stand on the birth control issue, the fact that the Pope and his advisers have been considering changes has had an effect. For one thing, the possibility of future change has served to inhibit many of the Catholic politicians who have traditionally fought the operation of birth control clinics. "The Catholic Church found what the Pope was going to decide," said Dr. Alan F. Guttmacher, the eminent obstetrician, gynecologist, and president of the Planned Parenthood Federation. "They didn't want to hold the line against birth control and then discover that the Pope will say the sky's the limit." Several States repealed their anti-birth-control laws last year, and Connecticut's law was declared unconstitutional, with almost no opposition from church groups. Richard Cardinal Cushing, of Boston, whose autographed photo hangs in Guttmacher's office, has actually said he favors the legalizing of birth control. He reflects the new attitude of many Catholic prelates in saying that "Catholics do not need the support of civil law to be faithful to their religious convictions, and they do not seek to impose by law their moral views on other members of society."

The revolution in birth control is far more, of course, than a rebellion against rigid church teachings. It is a wave of human thought and emotion which was channeled into worldwide action by a group of what might be called benevolent conspirators. They are industrialists, physicians, scholars, publishers, retired generals—men and women who are convinced of the urgency of the cause and are highly persuasive in advancing it.

Dr. Guttmacher recalls a routine mail appeal of several years ago which brought a \$100 check from the president of a large corporation. "We followed this up with a personal contact," he said, "and now this man contributes \$100,000 a year to the Planned Parenthood funds and is one of our most effective leaders. The movement also gained much momentum when Cass Canfield of Harper's became chairman of our executive committee 6 years ago. He is one of the most respected publishers in the United States, and his influence has been great."

Some years ago Mrs. John D. Rockefeller, Jr., became interested. She enlisted her husband, and their son, John D. III, continued the family's involvement. Dr. Guttmacher recalls that John D. III was distressed by the poverty and acute overcrowding he saw during a trip to the Far East in 1952. "He conceived the idea of the Population Council, and with Gen. Fred Osborn, then one of his advisers, set it up. It is now one of the strongest forces we have, especially for carrying on research."

Although the birth control organizations operate no lobbies, their officers often inspire important moves by other groups, and they make frequent calls on members of State and Federal Governments. Last spring a large group of Nobel Prize winners of America and Europe addressed a statement to the Pope, urging him to "give due weight to the ever-growing opinion" in the world that unwanted children are a source of unhappiness and distress and that parents should be able to limit their families to the number of children "which can be cared for and cherished." Dr. Edward L. Tatum, a biologist of the Rockefeller Institute, and Dr. Peter B. Medawar, a British biologist, were the two Nobel laureates who moved the idea ahead and got 81 signers to the letter.

Dr. Guttmacher, when not touring the world on behalf of foreign birth control programs, gets to Washington once or twice a month. There he may confer about family planning services for the wives of military personnel or American Indians (both groups are entitled to such services under current Government policies), or push for wider use of antipoverty funds for birth control. (A total of \$766,000 has gone to 13 birth control projects.)

A change in Government attitude at the White House level has had much to do with speeding up the antipoverty clinics, Dr. Guttmacher believes. "President Johnson sent up a trial balloon early last year, saying he would 'seek new ways to use our knowledge to help deal with the explosion of world population.' I guess the balloon didn't burst because he sent up an even bigger one 6 months later when he said at the United Nations in June that \$5 spent on population control is worth \$100 in economic aid. What else do you need for a green light?"

The turnaround in Government policy can be credited in large part to Gen. William H. Draper, Jr., now a vice chairman of Planned Parenthood, and a famous report he wrote in 1959. He was then Chairman of the President's Committee to Study the U.S. Military Assistance Program.

General Draper had first come into contact with a major population problem during a trip to Japan in 1948, where he saw the tremendous congestion caused by the repatriation of millions of Japanese from Manchuria and the Chinese mainland. "In 1958, members of our committee—a high-level group of responsible citizens—visited all the countries receiving aid from us," General Draper recalled recently, "and in some we found the standard of living was actually going down because of the high birth rate. We agreed unanimously in our recommendation, that 'the United States should assist those Countries with which it is cooperating in economic aid programs, on request, in the formulation of their plans designed to deal with the problem of rapid population growth.'

"Of course, the recommendation was carefully worded," General Draper pointed out, "and there were two words—'on request'—which saved it."

But at the time the Draper report was submitted, even those two words didn't save it—a fact that schocked its authors. "We never thought the recommendations would not be accepted," General Draper said, "and then I picked up the paper one morning and read that President Eisenhower had said that the last thing he wanted our Government to do was to give birth control advice to foreign countries." Even before Eisenhower spoke, Draper said, "the Catholic bishops blasted the report, and that was the worst thing they could have done, because it did become a big issue, and all the candidates were asked how they stood on it, Kennedy coming off very well."

THE POPULATION EXPLOSION HAS MOVED HUNDREDS OF MILLIONS TO THE BRINK OF STARVATION; "ONLY MASSIVE BIRTH CONTROL," SAYS AN EXPERT, "WILL PREVENT WORLD CATASTROPHE"

The idea had been planted, and it took root. Though Eisenhower refused to involve the Government in foreign birth control programs, he approved of private organizations in this field. Later he changed his mind on Government participation. In a Saturday Evening Post article of October 26, 1963, he explained he had rejected the Draper recommendations because he felt that using Federal funds on population control problems abroad "would violate the deepest religious convictions of large groups of taxpayers." But, he wrote, "As I now look back, it may be that I was carrying that conviction too far." In 1964 General Draper persuaded Mr. Eisenhower and another former President, Harry S. Truman, to be honorary cochairmen of Planned Parenthood-World Population, thus lending their influence to foreign as well as American phases of the program. All this made it easier for President Lyndon Johnson to make birth control a national policy.

BIRTH CONTROL AND THE LAW

While the "benevolent conspirators" were slowly changing our attitudes toward birth control, there remained a vast network of restrictive laws, the principal effect of which has been to deprive low-income families of birth control information and services. This legislation began with the Federal law of 1873, instigated by the busy New England antice crusader, Anthony Comstock. Some 30 States soon passed "little Comstock laws," most calling birth control "obscene and immoral."

These were the statutes under which Mrs. Sanger's pioneer meetings were raided, her clinics closed, and she herself jailed. In 1936 another famous birth control figure, the late Dr. Hannah Stone, of New York, was involved in a case known as *The United States v. One Package*. The package contained diaphragms sent to her from Japan and seized by U.S. customs. Mrs. Harriet Pilpel, a New York lawyer, argued the *Package* case for Dr. Stone and won. In the fall of 1963 Mrs. Pilpel was called again when the St. Louis postmaster held up the mailing of 50,000 samples of an aerosol foam contraceptive on the grounds that they were not addressed to doctors. The product, Emko, is made as a crusading and semiphilanthropic sideline by a gregarious white-haired St. Louis manufacturer, Joseph Sunnen. Sunnen, who has donated thousands of bottles of Emko and hundreds of thousands of dollars to birth control programs, always carries a few Emko packages in his pocket, passing them out to friends and casual acquaintances after asking them how many children they have. The samples were being sent to women who had clipped coupons from Emko ads appearing in 19 magazines. Again Mrs. Pilpel obtained a favorable ruling, one that said unless the postmaster could prove the packages were being mailed for unlawful purposes, they could go through.

The toughest Comstock law in the land was Connecticut's 1879 statute making the use of any drug, medical article, or instrument to prevent conception an offense punishable by a fine and up to a year in prison. Anyone who "assists, abets, causes, hires, or commands another to commit any offense" could be similarly prosecuted.

The law was enacted by a Protestant Puritan legislature and was kept on the books, in the face of 28 legislative repeal efforts in the past 40 years, by what has been described as "a small but very articulate and well-organized group of Roman Catholic extremists." Connecticut doctors were not barred from giving birth control advice to private patients in their offices, but the State law blocked welfare clinics from giving such advice to their clients. Eight or nine birth control clinics were closed under the law in 1939 and many of the doctors and nurses in attendance were arrested.

When Dr. C. Lee Buxton arrived from New York in 1954 to head the department of obstetrics at Yale's School of Medicine, he was both amused by the law's silliness and distressed by its social injustice. To prohibit individual couples from using contraceptives would, he observed, "require police power as a third party on the connubial couch," a thought whose "farceful implications have all kinds of possibilities."

But what sharpened his determination to do something about the law was the death of several women patients and the permanent incapacitation of another from medical problems seriously aggravated by unwanted pregnancies. All these women had sought contraceptive advice and been unable to get it. "I was brooding about these patients at a cocktail party one evening," Dr. Buxton recalls, "when I met Fowler Harper, then professor of law at Yale. I asked what he thought about the Connecticut law, which was actually preventing us from giving birth control information to ward patients in the hospital. He said he thought it was a hell of a law. So I got some cases worked up for legal trial, and Harper filed suit to challenge the law's constitutionality, on the ground that it violated the 14th amendment assuring citizens the basic civil and human rights of personal liberty. Professor Harper died last year, but Miss Catherine Roraback, one of his former students, masterminded the case for us."

This case was lost in the lower courts, and the Supreme Court refused to consider the constitutionality on the grounds that the law was in fact a dead issue and was not enforced. Well, if the law was a dead issue, the thing to do was to open a contraceptive clinic at once, and Mrs. Estelle Griswold, executive director of the Planned Parenthood League of Connecticut, in cooperation with Dr. Buxton as director, prepared to do so. On November 1, 1961, the clinic opened its doors to the public. On November 10 it was closed, by order of the prosecutor, Julius Maretz.

In closing the clinic, New Haven authorities had to contend with a small, white-haired woman in her 60s with a lively sense of humor and a relish for a good fight. The shutting down of Mrs. Griswold's clinic on that November day was a challenge she met with delight.

"My real concern had been that we were only fighting feathers," she said, "that no one might oppose us. This bothered me because birth control services would still have been illegal. But when we announced the clinic was open, we were swamped with phone calls, and our appointments were soon set up for 2 or 3 months ahead."

What forced the legal move against the New Haven clinic was a series of accusations by a man who went to one official after the other demanding that the clinic be closed. "He made a lot of wild statements about me on the radio," said Mrs. Griswold, "and said that every minute the clinic was open a baby wasn't being born. Shortly after one of his radio broadcasts he went to the prosecutor with what was almost an accusation, and there was nothing for the prosecutor to do but send the detectives over to the clinic to see what was going on."

In the course of appealing the case from the lower courts, where he and Mrs. Griswold were fined \$100 each and released on \$250 bond, Dr. Buxton wrote to experts at every medical college in the country, asking for written support. He got it, even from many Catholic medical schools. Finally, on June 7, 1965, the U.S. Supreme Court handed down its historic 7-to-2 decision. Justice William O. Douglas, in writing the majority opinion, declared the case concerned "a relationship lying within the zone of privacy created by several fundamental constitutional guarantees" and said the Connecticut law "in forbidding the use of contraceptives rather than regulating their manufacture or sale, seeks to achieve its goals by means having a maximum destructive impact upon that relationship."

"We deal with a right of privacy older than the Bill of Rights—older than our political parties, older than our school system," he concluded. "Marriage is a coming together for better or worse, hopefully enduring and intimate to the degree of being sacred."

The two dissenting Justices, Stewart and Black, both thought the Connecticut law offensive but constitutional.

Within days after the Supreme Court decision the New York Legislature modified its 84-year-old "Comstock law" to remove all restrictions on the dissemination of birth control information and to permit sale of contraceptives to everyone over the age of 16. Although the law had not been enforced for years, it had been resurrected by the Catholic Welfare Conference in an effort to stop birth control activities by the State board of social welfare.

Later in the summer the Massachusetts Legislature defeated a similar repeal move, but this was the one exception to last year's general easing of legal and administrative restraints. Ohio and Minnesota joined New York in clearing away restrictions from their statutes. Seven states—California, Colorado, Illinois, Iowa, Kansas, Michigan, and Nevada—adopted positive legislation to authorize or encourage public family-planning services. And according to a Planned Parenthood survey more than 40 States have made administrative decisions favorable to such programs over the past 4 or 5 years.

The long and bitter political battle in Chicago and Illinois ended last June when the State legislature passed a resolution authorizing State agencies to provide birth control services. And the Chicago Board of Health, under the adroit persuasion of its president, Dr. Eric Oldberg, a prominent neurosurgeon, cautiously began family planning services in 9 of its 39 city health centers. His viewpoint conflicts sharply with that of Dr. Karl A. Meyer, 79-year-old medical superintendent of the huge Cook County Hospital, which still has no birth control clinics even though its annual delivery of 18,000 babies is the largest of any hospital in the country. "Birth control," Meyer has remarked, "is a socio-economic problem, not a medical one."

However you define it, birth control information has been denied to the many women who have sought it at Cook County. In an interview on CBS-TV, one woman said she asked a doctor at Cook County if he could help her stop having children. "He told me no, I was too young," she said, "and was good for 20 more."

THE WORLD CRISIS

Spectacular and incisive as its 1965 battles have been, the birth control revolution has just begun on those troubled frontiers of the world where the population has outraced the supply of food, housing, and jobs. Humanity, now numbering almost three and a half billion and expected to reach over 6 billion by the end of the century, has not yet filled up all the earth's living space. But in many countries the conquest of diseases that used to hold the population in check has been so rapid that the economy has not been able to keep up, and living standards have steadily fallen. "The world population crisis is no longer a future fear—it is already with us," General Draper warned last month. "One half of the world's population and two-thirds of its children do not have enough to eat. The stark fact is that if the population continues to increase faster than food production, hundreds of millions will starve in the next decade."

India, her chronic food shortages worsened by the lack of normal monsoon rains, "is experiencing semistarvation today," General Draper commented, "and may see full-scale famine this coming year." Prime Minister Shastri has asked his people to observe "supperless Mondays" and food rationing has been ordered in New Delhi. Reports from Orissa, a State in eastern India on the Bay of Bengal, say that some farmers, unable to feed their families, are selling not only their possessions but their children as well.

Latin America's living standards have declined as its swelling population crowds from the country into the cities. Less food is produced and eaten there per capita than before World War II, says General Draper, and there has been a shocking 10 percent decline since 1960.

Dr. Alberto Lleras, a former President of Colombia, told Senator Ernest Gruening's committee on population control that South America's problem has been greatly aggravated by mechanization on the farms and automation in industry. "Millions of peasants, thrown out of work in the country, become a bedraggled army of nomads," he said, "flocking to the cities and finding no work, or grossly inadequate employment there.

"Worst yet," Lleras added, "economic development is not achieving its purpose—to create jobs. * * * Latin America is breeding misery, revolutionary pressures, famine, and many other potentially disastrous problems in proportions that exceed our imagination."

Both Lleras and General Draper insist that population problems in Latin America and other crowded parts of the world cannot be solved without birth control. Unfortunately, the revolution has not yet touched the great majority of the world's people. According to George N. Lindsay Jr., brother of New York's mayor and the new chairman of the board of Planned Parenthood, "Modern contraceptives are still largely unavailable among three-fourths of the world's people. Even in the United States, where family planning is now a deep-rooted tradition among the more fortunate, 9 out of 10 impoverished women still lack birth control information and assistance."

Where the new weapons of the birth control revolution have been given a fair test, the signs are encouraging. Under the Korean national health program, doctors have been fitting women with intrauterine devices at the rate of 15,000 a month. Their aim is to cut the birth rate in half in the next 3 years, and in one test area a 20-percent reduction was achieved in just 1 year. In Taiwan the program is under non-Government sponsorship, with Population Council assistance. The goal is to install 600,000 loops by 1969 and slow the island's population growth rate from 3.2 to 1.8 percent. In selected areas the birth rate has already declined 60 percent.

U.S. Ambassador to India Chester Bowles has said that India expects to reduce its annual birth rate from the present 42 per 1,000 of population to 25 over the next decade. Mr. Bowles displayed a New Delhi newspaper with a Ministry of Health ad that read: "A small family is a happy family. Plan your family the loop way."

At this point no one can say what the ultimate in conception control will be—a loop, a better pill, a longer lasting injectable, a safe vaccine. What is important is that the human family and the human race have at last a means for determining, with unprecedented reliability, their increase. "By placing the creation of life under the guidance of man's ethics and intellect," says Donald B. Straus, former chairman of Planned Parenthood, "we can achieve a reverence for life which assures that every baby shall be a wanted baby and shall have room in the family for love."

We live in a finite world, with finite resources. Yet we are endowed with a brain of almost infinite inventiveness and capacity, and it has given us the birth control revolution. We can reasonably expect that in time we shall be able to occupy our world without crowding and exhausting it.

EXHIBIT 181

GIVE WOMEN DATA, AID ADVISERS VOTE

(By Henry M. Hanson, Springfield Bureau, Chicago Daily News, Sept. 14, 1962)

IPAC TOLD: SEND AID MOTHERS TO BIRTH CONTROL AGENCIES

For the first time, an Illinois legislative group has voted that women receiving public aid should be told where to get birth control information if they want it.

The legislative advisory committee to the Illinois Public Aid Commission voted to direct the IPAC that its staff must direct the women to organization dispensing birth control information if the women request it.

Chairman John W. Carroll, Republican, Park Ridge, said, "If the IPAC chooses to ignore the directive, we will seek legislation forcing them to comply."

The vote was 6 to 0, with two members abstaining. The morality of the controversial birth control question was discussed at the meeting.

Carroll said, "This matter will not be allowed to become a religious issue."

Members of the committee noted that the committee was made up of four Roman Catholics and four Protestants.

Voting "present" were Sen. Anthony De Tolve, Democrat, Chicago, and Rep. John J. Hill, Democrat, Aurora, both Catholics.

The resolution on the matter was proposed by Sen. Philip J. Carey, Democrat, Chicago, a Catholic.

Carey said the intent of the resolution was that the IPAC would not supply birth control information but would direct public aid recipients to such organizations as the Planned Parenthood Association and Citizens for the Extension of Birth Control Services.

Voting for the resolution were Carey, Carroll, also a Catholic, and Robert R. Canfield, Republican, Rockford, T. MacDowning, Republican, Macomb, Joseph R. Peterson, Republican, Princeton, and Rep. Rae Heiple, Republican, Washington, all Protestants. Peterson is vice chairman of the committee.

Carroll and other members of the committee had queried IPAC caseworkers and Chicago mothers on aid to dependent children rolls about birth control information.

Carroll said, "Caseworkers objected that they had orders not to tell the people where to go for the information."

"Many mothers said they hadn't heard of birth control."

Carey, in explaining his view, said, "There are vast differences of morality involved."

"People who want the information—if they feel in their own conscience it is all right—then as far as I'm concerned it's all right for the caseworker to tell the recipient where to get the information."

Carey noted that some mothers on aid to dependent children rolls had been told to see their physician or clergyman about birth control information. "In most cases, they don't have either," he said.

De Tolve predicted that Raymond Hilliard, director of the Cook County Public Aid Department, and Arnold Maremont, new IPAC chairman, would oppose the committee's directive.

Carroll said, "We, the legislators, set the policy of the state, not them."

Members of the committee said they had been influenced in their decision by testimony at a committee meeting early this summer at which representatives of the Planned Parenthood Association and the Citizens for the Extension of Birth Control Services testified.

No public funds would be spent on birth control information. Caseworkers would merely tell women the name and address of agencies where it is available.

Mounting ADC costs, especially in Cook County, helped bring the issue to a head, Carroll said.

EXHIBIT 182

THE TUG OF WAR ON BIRTH CONTROL: WHAT IT'S ABOUT

(By Lois Wille, Chicago Daily News, Sept. 13-18, 1962)

A MORAL QUESTION—KEY ISSUE: SHOULD EQUAL PUBLIC FUNDS SUPPORT PROGRAM?

In the last 4 years there has been agitation to include birth control services in city and county public health programs. Both economic and social reasons have been advanced by the proponents. Offering these services would reduce the rolls of those who receive public aid and rely on public funds for medical care, they say.

Also, they maintain that those Chicago families who can least afford to provide for children are reproducing at high rates, thus contributing to delinquency and other social ills.

But overshadowing these arguments is a moral issue: Should public funds be used for purposes considered immoral by a large number of taxpayers? Because the matter is one of deep public concern—and because recent developments may force opposing viewpoints into public debate—the Daily News presents the first of a series of stories on the birth control battle as it now stands.

On a hot Saturday morning in August, Mrs. Sandra Allmon, 26, walked into Newberry Settlement House just off Maxwell Street, waited in line with about 100 other women and poured out her story:

"I asked about it at County Hospital when my youngest was born, and everybody shut up like a clam.

"I've got seven now," I told the doctor. And he said, 'Well, you're healthy enough for seven more.'

"I asked my ADC man, and he just says he didn't know anything about it.

"When I took my baby to the welfare station, I asked them—and when you bring that up, why, they act like they don't know you.

"I heard about you people from a neighbor. It was just like a miracle. I couldn't believe it. You're the only ones who will talk to me about it."

It was a story that was told in scores of different ways that morning to Mrs. Virginia Hackmer, social worker.

"The faces change," she said, "but what they tell me is essentially the same—nobody else will help them."

But last week somebody else said he may take on the problems of the Newberry women—husky Harold (Hap) Swank, new executive secretary of the Illinois Public Aid Commission.

And if he does, a stew that has been simmering for a long time could broil over.

What Mrs. Allmon wanted was this: Information and supplies to prevent her from having more babies.

She got it—as did 5,470 other women in the first 8 months of 1962—from one of the dozen clinics in churches and settlement houses operated by Planned Parenthood Association.

Of these 5,470 at least 1,370 are supported by the Cook County Public Aid Department.

They pay nothing for the services they receive at the clinic unless they choose a contraceptive pill, which costs them \$2.50 a month.

It is these free services for relief recipients that may break open the silent tug-of-war over birth control.

PUBLIC FUNDS IS KEY ISSUE

The key issue is: Should Planned Parenthood, a private agency with a \$249,000 annual budget, be reimbursed with public funds for its services to welfare patients?

Or, stated another way: Should public funds be used for a purpose considered immoral by at least 40 percent of the population of Cook County? Of these the greatest numbers by far are the members of the Roman Catholic Church, joined in their views by the Greek and Jewish Orthodox churches.

The most vocal proponents of the use of public funds for birth control service are members of the Planned Parenthood board of directors, an array of 48 civic and social leaders, rabbis, Protestant clergymen and physicians.

They are seconded by the Church Federation of Greater Chicago, representing 27 denominations, the Chicago Gynecological Society and the Chicago Institute of Medicine.

"The proper prescription of child-spacing measures is an essential aspect of preventive medicine," the Gynecological Society said in a resolution 2 years ago.

"It should be available to all who desire it, whether they obtain their medical care through private physicians or tax-supported health services."

But so far Raymond Hilliard, director of the Cook County Public Aid Department, has not offered to pay the \$15,070 Planned Parenthood says he owes them for the first 8 months of 1962.

"The medical advisory committee of the Illinois Public Aid Commission decides what kind of services can be covered," he said.

"Preventive medicine—including birth control services—is not on that list."

THEN ALONG CAME HAROLD SWANK . . .

And there the matter has rested, until the arrival in Chicago of Harold Swank. Before he was named executive secretary of the IPAC last month, Swank was never shy about discussing his views on birth control and public funds.

As IPAC assistant executive secretary in charge of Downstate, Swank often told his regional directors that he considered birth control services a legitimate public aid medical expense.

"I made no bones about it," he said.

Now, after several weeks in the executive secretary's chair, Swank told the Daily News:

"I want to do some further exploring, to find out what other States offer. Assuming the facts I gather don't alter my position, I will go to the commission and ask them to authorize referrals to Planned Parenthood or any other private facility offering these services."

And what about reimbursement for the care of welfare recipients?

"I would classify this as an appropriate medical cost," Swank said.

A GIANT BOOST TO PROPONENTS

With these words, Swank has given a giant boost to a persistent band of Chicago area men and women determined to make birth control part of public welfare policy.

The issue first came before the public in 1959, when County Commissioner Charles Chaplin pointed to spiraling costs of the Aid to Dependent Children program and asked:

"Why don't we consider birth control as a means of controlling births?"

Since that speech ADC costs have become more frightening: In July, 1960, Cook County ADC recipients got \$4,400,000; in January, 1962, the sum rose to \$7,850,000; and in June, 1962, to \$9,328,000.

But in June the Public Aid Department received permission to increase its case-work staff, and Raymond Hilliard proved a point he had long maintained: A reduced caseload per worker would mean a reduction in public aid rolls.

ADC costs decreased by \$116,134 in July and by \$188,706 in August—bringing ADDC expenditures back to the April 1962, level.

Hilliard attributes much of this decrease to better policing, which cut 700 persons from ADC rolls in July and 3,170 in August.

CHAPLIN EFFORTS GAIN SUPPORT

Chaplin's efforts were supported by State Representative William H. Robinson, Republican, of Chicago, who has protested that great numbers of his fellow Negroes are denied incentive to move upward because of the lack of birth control services to low income families.

Robinson cited these statistics:

In the decade between 1950 and 1960, the Chicago area white population increased 16 percent. The nonwhite population grew 66 percent.

"The population increase is in the lowest income groups, which represent the greatest consumers of welfare services," Robinson said.

"The political power structure of Cook County and Chicago has stubbornly resisted this essential facet of preventive medicine—birth control services—to the people who need it most, who are striving to become urbanized and self-supporting."

This denial of birth control services to low-income families has become the battlecry of the newly formed Citizens for the Extension of Birth Control Services.

Says the group's energetic chairman, Dr. Lonny Myers, mother of five:

"No one is proposing that the privilege of having a baby should be denied to low-income families. We are only proposing that they have the same opportunity to space their children and limit family size that those who can afford private medical care now enjoy."

DEVELOPMENTS ARE HEARTENING

Dr. Myers and her followers have been heartened by these recent developments: The Illinois Commission on Children, in its preliminary recommendations for revamping the State's welfare services, reported: "Services to families should

include provision of counseling on fertility and regulation of family size to an extent consistent with the creeds and mores of the family."

Mayor Richard J. Daley, after several months' silence, finally agreed to a request from Dr. Meyers to meet with her group.

The Chicago area Council of Jewish Women's Organizations has asked its 315 member groups to approve this resolution: "Family planning should be an integral part of the public health programs and included in the services of all public health institutions in the Chicago area * * * compatible with the ethics of the family involved."

But behind these developments have been others—more subtle and perhaps more significant.

When Dr. Myers assembled her delegation to call on the mayor, two prominent Chicago businessmen who belong to the Catholic church agreed to join the group.

Another Catholic layman, Cook County Hospital Warden (Superintendent) Fred Hertwig, said: "I feel birth control clinics should be integrated with our public health services. I think they will work, and I think they will do a lot of good."

These signs of support from some Catholics indicate there will not be a battle with the church, according to Dr. Myers.

"I never thought there would be," she said.

"What we are fighting is apathy and ignorance on the part of public officials. We are not fighting the Catholic church—but the fear of the Catholic church."

BIRTH CONTROL AND COUNTY'S BABY BOOM

PLANNED PARENTHOOD BACKERS ZERO IN ON HOSPITAL HERE

September 14, 1962.

In the last 4 years there has been agitation to include birth control services in city and county public health programs. Both economic and social reasons have been advanced by the proponents. Offering these services would reduce the rolls of those who receive public aid and rely on public funds for medical care, they say.

Also, they maintain that those Chicago families who can least afford to provide for children are reproducing at high rates; thus contributing to delinquency and other social ills.

But overshadowing these arguments is a moral issue. Should public funds be used for purposes considered immoral by a large number of taxpayers? Because the matter is one of deep public concern—and because recent developments may force opposing viewpoints into public debate—The Daily News presents the second of a series of stories on the birth control battle as it now stands.

Within the next 24 hours—if they are average—56 babies will be born in Cook County Hospital.

No other hospital in the Nation can make that claim.

For the most part, the 20,000 babies born at County during 1961 belong to what the hospital calls medically indigent families—ones who must rely on public funds for medical expenses.

At least a third of the 1961 babies born there were illegitimate, and many were placed on Cook County relief rolls the day they entered the world.

For such tiny beings, the County Hospital babies have received an enormous amount of attention in recent months.

They were the subject of an hour-long television documentary on CBS-TV, "Birth Control and Public Policy." They were being talked about increasingly at welfare agency luncheons, on radio panel shown, in the press.

All the talk centers around these questions:

Should anything be done to deflate the County Hospital baby boom?

Should the hospital offer birth control information and supplies to new mothers when they make post-delivery visits—a move that the Planned Parenthood Association vows would save the county almost \$800,000 a year?

In the last 4 years, hospital officials have said "yes," and then "no," and "yes" and "no" to that question. There have been so many flip-flops that even those most vitally interested have lost count.

The most recent answer—as of last week—was a qualified "yes."

Last Friday the executive secretary of the Planned Parenthood Association, Mrs. Jane C. Browne, received a telephone call from a county hospital obstetrics staff member with this request:

Would she please send 3,000 copies a month of a Planned Parenthood brochure and another 3,000 copies of the Planned Parenthood clinic directory to county hospital?

Mrs. Browne promptly forwarded as many pamphlets as we could spare, including some in Spanish, to the director of the hospital's Fantus Clinic for maternity patients.

In an accompanying letter, she said: "We are very happy to cooperate in this way, but 3,000 pamphlets and 3,000 clinic directories per month will put quite a strain on our budget. I hope that the cost for this literature can be included in the 1963 budget of Cook County Hospital."

But it isn't just the cost of the literature that is bothering Mrs. Browne. Thinking of those 3,000 pamphlets and the business they are likely to bring her agency's overloaded clinics, she said:

"We can't afford to provide birth control services to all of the medically indigent in Cook County.

"I hope before very long Cook County Hospital will include these services as part of its maternal care."

If Planned Parenthood literature is about to be distributed inside the hospital, it will mark a major breakthrough in an intensive campaign to secure official sanction of the Planned Parenthood principles of family planning in the giant institution.

The drive began in 1958, inspired by the decision of New York's Board of Hospitals to dispense birth control information and supplies in its nine municipal hospitals.

It was led by a group of 265 clergymen, representing every major Protestant faith, and supported by the Church Federation of Greater Chicago and the 18 physicians on the Planned Parenthood Medical Advisory Board.

It progressed like this:

In April 1959, the Planned Parenthood Medical Advisory Board arranged to set up a clinic within the hospital, with the blessings of the gynecology and obstetrics staffs.

In October, just before it was to open, the permission was withdrawn.

In June 1960, Dr. Arthur Bernstein, director of the hospital's Fantus Clinic, wrote to Dr. Augusta Weber, head of obstetrics, directing her to "organize a birth control clinic manned by residents."

But the clinic never appeared.

In December 1960, the social welfare director of the Church Federation announced he had the approval of Dr. Karl Meyer, medical superintendent of all county institutions, to open a clinic in the hospital. Six months later the Church Federation said the approval was withdrawn.

The hospital's two top officials—Dr. Meyer and Warden (superintendent) Fred Hertwig—pleaded lack of space and staff.

"We are an acute treatment center, established to treat the acutely ill," said Hertwig. "I think a birth control clinic should be part of the community's public health program, but not here. We don't have 5 square feet of unused space in Fantus Clinic."

Added Dr. Meyer, speaking on the CBS show: "It is manifestly impossible for us to take care of all the sick here and give that information. These patients are patients who are hard to instruct.

"If a woman has a college degree, it would be much easier to talk to her about spacing and about contraceptives and so forth."

In May 1962, Planned Parenthood opened a clinic in a store front church around the corner from county hospital. A month ago the building was condemned, and now the agency is seeking permission from a nearby YMCA to use its facilities for a clinic.

But it would rather set up the clinic inside the hospital—for a trial period.

"We can't afford to run it indefinitely," said Mrs. Browne. "But we will be glad to show hospital officials how it can operate, and how much money it can save, and then turn it over to them."

Can such a clinic actually save great sums?

Planned Parenthood has drawn up an elaborate estimate, figured down to the last pill, that concludes the clinic will save \$773,930 a year.

But the estimate appears to rest on some nebulous assumptions.

The agency admits it has "arbitrarily postulated" that 60 percent of the 20,000 women who had babies at county in 1961 will choose to use the clinic's services.

Figuring that 25 percent of them will select the Catholic-approved rhythm method and 75 percent will prefer contraceptives, Planned Parenthood draws up these annual costs: Supplies, \$144,070; staff salaries, \$42,000; total, \$186,070.

Its medical advisers estimate that 80 percent of the 12,000 will become pregnant within a year if they make no effort to prevent conception, the agency says.

Because each delivery costs county hospital about \$100, the absence of these 9,600 in the maternity wards will save \$960,000. Net savings: \$773,930.

But the assumptions seem daringly broad.

Would the 12,000 women who use the clinic fail to practice birth control without the help of the hospital?

Is there any evidence to support the claim that 80 percent of them will get pregnant within a year if they do not practice birth control? Apparently this figure is based on an educated guess from physicians, not on hospital records.

Would all of the women who enroll at the clinic follow instructions—and would the instructions prevent conception in every case?

One other question remains unanswered, the reply locked in the minds of county physicians: What, if anything, is done now for women who ask county staff members to give them birth control information?

Social workers at Planned Parenthood settlement house clinics insist they get dozens of patients who asked for such information at county—and were refused. In some cases, another pregnancy would have ruined the woman's health, the Planned Parenthood workers say.

Dr. John P. Harrod, obstetrician and chairman of Planned Parenthood's medical advisers, said he polled a "good share" of attending physicians in the obstetrics and gynecology departments at county, and reported:

"All informed us that they prescribed contraception in private practice, but we could find only one who stated that he had given any contraceptive advice at Cook County Hospital."

Yet Warden Hertwig maintains: "We do give birth control information when it is medically necessary. We have supplies, and they are distributed."

But he said he could not estimate how many women receive this service, adding that "it is not a very great amount."

The logical place for birth control services in Chicago may be the postnatal clinic system operated by the Chicago Board of Health, according to Hertwig. He adds:

"I sincerely believe such services would be beneficial to the community. All of our executive staff feel this way. We believe the services could be integrated very well into the city's public health program."

But at least one public official doesn't agree: The man who would have to run the clinics, Dr. Samuel Andelman, Chicago health commissioner.

NOTE TO CITY HALL: "POPULATION BOMB" TICKS IN CHICAGO

BIRTH RATE PROBLEM ACUTE, U. OF C. SOCIOLOGIST WARNS

SEPTEMBER 15, 1962.

Relief costs would decline, educational opportunity and quality improve, and youthful delinquency decrease—these are some social and economic reasons urged for inclusion of birth control services in city and county public health programs, services now banned by official policy. Opposed is a moral issue: Should public funds be used for purposes considered immoral by a large number of taxpayers? Recent developments have intensified public concern with the birth control battle. Here is the third of a series on the issues.

"A population bomb has been planted in city hall.

"It has a mighty short fuse. It is lighted. And when it goes off, many—if not most—of the incumbents of city hall may be casualties."

Donald J. Bogue, professor of sociology at the University of Chicago, was speaking about all big city halls in the Nation when he made that statement.

But he feels it is particularly applicable to the one in Chicago.

He doesn't mean to be a doomsday prophet, he says, but he thinks all urban-area citizens should know that the population problem is enormous and acute. His analysis:

Central cities of metropolitan areas have ceased to gain population, and a majority of the bigger ones (including Chicago) have begun to lose.

Each of these cities has a high-fertility population that is reproducing at an annual rate almost equal to that of Asia and Africa—37 per 1,000.

Chiefly, this high-fertility population is made up of Negroes, Puerto Ricans, low-income southern whites, Mexicans, and American Indians. He adds:

"Most politicians are reluctant to talk about the problem. These days no one wants to appear antiracial or antiethnic."

But the explosive growth of low-income, undereducated families, coupled with the flow of the privileged to the suburbs, leaves "only one conclusion," according to Bogue:

"The central cities of our great metropolitan areas are turning into islands of economic backwardness and underdevelopment."

Construction of "a few high-rise buildings near the river" will not alter this trend, he says, adding:

"Schools are flooded with children, while the quality of public education in our great cities falls rapidly: double shifts, overworked teachers, inadequate control of hordes of children, inadequate funds from a shrinking tax base.

"Neither parents nor the community are able to provide adequate upbringing to this overwhelmingly large new generation. Juvenile crime is rising at rapid rates.

"Within 5 years, the effects of this population growth will be felt on the labor force. It will be marrying and starting families of its own."

Few knowledgeable persons—particularly if they are in health and welfare work, education or religion—would argue with Bogue's diagnosis of the big city sickness.

But some will disagree violently with his prescription for treatment:

"What evidence we have suggests that these high fertility families are bearing children involuntarily, due to lack of information, motivation, assistance and service.

"Population trends are on the side favoring the eventual adoption of planned parenthood as a part of municipal service.

"Almost certainly, family planning services will be added to welfare programs of public hospitals and welfare agencies."

Present the professor's predictions to certain public officials and you are likely to get a stiff "No comment" or an angry outburst, as this one from a board of health employe:

"This birth control thing has gotten completely emotionally out of hand.

"Anybody who wants to know about birth control today, you don't have to set up a booth at State and Madison to tell them. I've talked to some of these people, and I've had the impression they knew since they were 7 years old."

Or you may get a see-no-evil reply, such as the one from Chicago Health Commissioner Samuel Andelman:

"From a health and welfare standpoint, we do not have a population problem in Chicago.

"We welcome all newcomers to the city. They are being taken care of in accordance with the highest standards of health and welfare."

PRESCRIBED ONLY IN CERTAIN CASES

Board of health physicians in city clinics currently prescribe birth control only when there is a "medical indication" for the need, Dr. Andelman said, adding:

"Our program is preventive medicine, to prevent disease. And, of course, pregnancy is not considered a disease."

Others, notably Raymond Hilliard, director of the Cook County Public Aid Department, won't deny we have a problem—but he is convinced the advocates of birth control are putting the cart before the horse.

It is discrimination and lack of education that keep his charges out of the middle class, he says—not lack of birth control.

Hilliard described his visit to one relief recipient, a mother of four—one of them illegitimate—who could not read or write, who sat all day in a scummy room without even a radio to bring her in contact with the world about her.

"I see this woman in a Planned Parenthood clinic," he said. "She would be docile, she would listen to everything told her—and then she would go home and forget it.

"But after she has had some education, some socialization—perhaps then family planning would be her dish.

"Why, we have trouble getting tubercular patients—whose life may depend on it—to take their pills regularly."

Some advocates of public-supported birth control clinics who have nothing but praise for every other facet of Hilliard's administration complain that his Catholic religion is behind his views on planned parenthood.

They tell you—almost conspiratorially—that he resigned this job as head of New York's Health and Welfare Council after he lost a bitter battle to keep the Planned Parenthood Association out of the group.

("It seems to be my destiny to live perpetually amid the strife of Planned Parenthood," he sighs.)

But a number of non-Catholics in welfare work share his opinion.

"Some women with no warmth or affection in their lives—our aid-to-dependent children mothers—want small babies around to fill this void," said the Protestant director of one private agency.

"When the child reaches 5 or 6 the mother may not know—or care—how to rear him. But when he is an infant she needs and wants him."

Unfortunately, neither side can prove its point with a wealth of statistics.

Birth control programs among high-fertility, low-income groups are still too new—and too small—to have produced conclusive results.

But here are some early Chicago returns:

Of 900 women on relief who have registered at one Planned Parenthood clinic since 1957, a total of 584—or almost 65 percent—are reported continuing to use the services and have not become pregnant.

In a Lawndale neighborhood where Planned Parenthood has carried on an intensive 2-month publicity campaign with the University of Chicago's Community and Family Study Center, 20 percent of the 8,000 women considered "prime targets" have enrolled at Planned Parenthood clinics.

A study of the area indicated that the 8,000 wanted to limit their families, but were not using reliable methods of birth control. Some didn't know that birth control existed.

AND HOW ABOUT ALL THE OTHERS?

What about the 80 percent who didn't respond?

Perhaps something was wrong with the communications campaign, the project directors say. But they add that if 20 percent of an extremely poor group begins to practice birth control, the community is at least partly better off.

Two projects outside Chicago offer this evidence:

In Puerto Rico, after a 10-year campaign to distribute contraceptive pills by the Island's family planning council, the birth rate has declined 20 percent.

In Mecklenburg, N.C., the county welfare department launched an experiment using contraceptive pills in November 1960. So far, 75 percent of the relief recipients who enrolled are still using them—with no pregnancies.

This figure is somewhat dampened by the size of the program: The county is tiny, and only 99 women volunteered.

But despite the scarcity of solid evidence, it is difficult to dispute these contentions of the probirth control groups:

None of the projects has been costly. Examining, explaining a method and providing supplies—even the pills at \$2.50 a month per woman—costs between \$11 and \$20 a year, far cheaper than rearing a child on ADC and providing his education.

The Mecklenburg and Planned Parenthood statistics indicate that more than half of the women on public assistance who volunteer for birth control services are able to practice what they are taught.

Concludes the Reverend Edgar W. Ward, pastor of Grace Presbyterian Church, 3600 Vincennes, and founder of a community services board to aid residents of three nearby housing projects:

"I have discovered that a great percentage of people with low incomes don't want more children, but they honestly don't know about birth control. We definitely have a population problem in Chicago. Birth control clinics are not the only answer, but they are one step toward economic and social uplift."

BIRTH CONTROL CLINICS FULL DESPITE OFFICIAL BAN
PATTERN OF SILENT REFERRAL BY PUBLIC AGENCIES SEEN

SEPTEMBER 17, 1962.

In the last 4 years there has been agitation to include birth control services in the city and county public health programs. Both economic and social reasons have been advanced by the proponents. Offering these services would reduce the rolls of those who receive public aid and rely on public funds for medical care, they say.

Also, they maintain that those Chicago families who can least afford to provide for children are reproducing at high rates, thus contributing to delinquency and other social ills.

But overshadowing these arguments is a moral issue: Should public funds be used for purposes considered immoral by a large number of taxpayers? Because the matter is one of deep public concern—and because recent developments may force opposing viewpoints into public debate—the Daily News presents the fourth of a series of stories on the birth control battle as it now stands.

How firm is the much discussed official "ban" on birth control information for low income Chicago families?

One way to find the answer is to talk to the scores of women who appear daily at birth control clinics operated by Planned Parenthood Assn. at its headquarters at 203 N. Wabash and in settlement houses and churches.

If a wall of official silence does exist, thousands of women must have used extrasensory perception to find their way to these clinics during 1962.

From January 1 to September 1, 5,472 new patients registered at the clinics—almost double the number who registered during the first 8 months of 1961.

The patient load is accelerating so rapidly that new applicants may be turned away this fall. The \$122,834 allotted by Planned Parenthood to operate its clinics during 1962 has almost disappeared.

Where are the women coming from?

Most of them hear about Planned Parenthood from neighbors, friends, relatives, ministers, settlement house workers.

But in the last year a significant pattern has emerged: Public agencies—Cook County Hospital, the Chicago Board of Health and Cook County Public Aid Department—are beginning to send women to Planned Parenthood.

Officially, board of health and public aid department policy prohibits these referrals, "but we're getting them," said Mrs. Virginia Hackmer, Planned Parenthood social worker.

If Planned Parenthood does close its doors to new patients later this year, most of the indigent women who depend on these three agencies for health and welfare services presumably will have no way of obtaining birth control services.

"A few years ago we had to beg for referrals," said Mrs. Jane C. Browne, director of Planned Parenthood. "Now they are coming in such numbers that we have to hold up our hands and say 'stop.'"

"It appears that the public agencies realize the need for the services but are passing the buck."

Of the 5,472 women who enrolled at Planned Parenthood clinics from January through August, 62 percent had family incomes of between \$50 and \$74 a week. Ten percent earned less than \$50.

Another 28 percent were receiving public assistance or unemployment compensation.

Families with incomes of \$75 a week or more were asked to obtain the services from physicians in private practice.

Women on public assistance pay nothing for the examination, instruction, and supplies they receive, unless they choose the contraceptive pill (as almost half of them do). For this, each woman pays \$2.50 a month.

Self-supporting families are charged up to \$20 on a sliding scale for planned parenthood services.

This includes an examination by one of the gynecologists who works part-time for the agency (one of them is a Roman Catholic) and a cancer smear test.

The physician prescribes after consultation with the patient. A nurse later lectures small groups on the proper use of the method they have selected.

"Most of the women have a great deal of pride," said Leontine Huff, Planned Parenthood nurse.

"Their prime motivation seems to be the welfare of their children—making a better home for them."

In their own words, here is how some of the women who registered at the Newberry House clinic one Saturday morning learned about planned parenthood:

A mother of eight, including 2-month-old twins: "When I took my babies to the welfare station on Madison this Mrs. — said, 'Do you want another baby right away?' And she told me I could come here.

"My husband thinks it's a good idea until the babies are older."

(She referred to one of the 30 infant welfare stations operated by the Chicago Board of Health for low-income families.)

A young Puerto Rican mother of four: "I heard at the city clinic. A nurse said, 'You ask your husband first if it's all right.' I pay \$5 every 2 months for the pills, and they work all right for me. My baby's almost 2 now. By now I'd have another without the pills.

"I'm doing a better job now."

(She was appearing for a checkup examination by a physician.)

Another Puerto Rican woman, 35, mother of seven, with a 3-month-old in her arms: "A nice nurse at County Hospital told me. I asked her, and she said she didn't see why she shouldn't let me know."

Other women said they had been referred by public aid caseworkers. One of them added:

"Mine gave me a hint that if I came here I could learn something—but I knew what he meant. He asked me not to tell his name."

Yet, for each woman who said she had been directed to the clinic by a city or county worker, there were several who complained:

"I asked at County Hospital when I went for my checkup, and they said there was no place to go."

Or, "I asked my ADC worker, and she said I shouldn't worry about such things."

From these interviews, it appears that whether or not a woman receives the information from County Hospital, public aid caseworkers or the board of health depends on the philosophy of the individual she asks—and not on official policy.

But, for the record, here are policy statements from the three public agencies: County Hospital apparently is the most liberal of the three toward birth control information.

Said Warden (superintendent) Fred Hertwig: "In our maternity clinic a doctor announces on a loudspeaker that those who want to can be fitted with a contraceptive device."

But he added that the response "has been small" because "many of the women probably don't know what it (the contraceptive device) is supposed to be for." There is not enough time for the doctor to give detailed explanations over the loudspeaker, Hertwig said.

(A Fantus official recently asked Planned Parenthood to send the hospital 3,000 brochures a month giving clinic addresses.)

The Chicago Board of Health, officially, at least, is firm in its refusal to give out birth control information.

Board of health physicians are permitted to prescribe birth control only if there is evidence that a woman's health will be ruined by another pregnancy.

And if a woman asks to be referred to a clinic where she can obtain such information?

"We are not disseminators of birth control information; this is not the policy of the Chicago Board of Health," said Dr. Samuel Andelman, Chicago health commissioner. He added:

"As an administrative officer, I don't set policy."

Cook County Department of Public Aid is the only one of the three with a written policy on family planning information.

The policy was in effect for many years before he arrived to head the department, according to Public Aid Director Raymond Hilliard. But on June 23, 1960, it was put in writing in bulletin No. 60.12:

"Staff members may not give information about or make referrals to, Planned Parenthood clinics."

Such referrals "would be in conflict with the department's neutral position," the bulletin states.

But there is a significant section in the bulletin that often is overlooked by advocates of public-supported birth control clinics.

If a public aid recipient asks her caseworker for information on birth control, the caseworker "may discuss this problem" and refer her to her minister, priest, or rabbi, who may then refer her to a physician.

The public aid department will accept billing for the physician's examination, but not for any supplies he may prescribe.

Hilliard said he could not estimate how many billings for birth control examinations are received annually. "No such breakdown in records is available," he said.

If new IPAC Executive Secretary Harold Swank follows through with his plan to make birth control information more readily available, the family planning bulletin would be revised to authorize referrals to Planned Parenthood clinics and to reimburse the clinics for their services.

Swank said he views such a program as a "medical service," adding:

"Both a physician and psychological evaluation would enter into this. If a woman with six children doesn't want any more, you have to consider her frame of mind."

Swank emphasized that he does not consider birth control services "the solution to all social and economic ills," but as a medical service "that may otherwise be denied" a family who desires it.

CLERGY'S VIEWS ON BIRTH CONTROL

SEPTEMBER 18, 1966.

Relief costs would decline, educational opportunity and quality improve and youthful delinquency decrease—these are some social and economic reasons urged for inclusion of birth control services in city and county public health programs, services now banned by official policy. Opposed is a moral issue: Should public funds be used for purposes considered immoral by a large number of taxpayers? Recent developments have intensified public concern with the birth control battle. Here is the last of a series on the issues.

DEEP CHASM SEPARATES TWO SIDES IN CONTROVERSY

Early in June a group of nuns who teach at Holy Family School, 1080 West Roosevelt Road, received identical packets of mail—and identical shocks when they saw the contents.

Inside the envelopes, in the words of their parish priest, the Reverend J. F. Henry, S.J., the sisters found:

"Packets from a birth control agency, with detailed instructions * * *."

A few days later an outraged Father Henry presented a lengthy statement to the Near West Side Neighborhood Committee.

"Birth prevention is considered seriously immoral by these people," he said. "Can you blame them for feeling insulted?"

Other recipients of the packet included unmarried young women in his parish whose mothers came to him to "express their indignation," Father Henry told the committee.

He also reminded them that U.S. postal laws on obscenity provide that anyone who mails information on "how or by what means conception may be prevented" is subject to a fine of up to \$5,000 or a prison term of up to 5 years.

How did such material find its way to the sisters of the Holy Family?

It was "an unfortunate error," explained Mrs. Jane C. Browne, executive director of Planned Parenthood Association.

The agency is cooperating with the Community and Family Study Center of the University of Chicago on a research project to determine if a massive "educational" campaign can cut the birth rate in an underprivileged "high fertility" neighborhood.

Father Henry's church lies in the heart of the area chosen for one phase of the project.

Using lists of registered voters, students from the University of Chicago typed the envelopes that carried the pamphlets to Holy Family parishioners.

"The nuns had registered under their original names. They didn't use 'sister,'" said Donald J. Bogue, professor of sociology at the university and director of the Family Study Center.

Both Bogue and Mrs. Browne wrote long letters of apology to Father Henry, pleading with him to extend their "sincere regrets" to the sisters.

"We recognize that the Roman Catholic faith regards the use of certain methods of fertility limitation as immoral," Bogue wrote. "At every point in our program we are advocating the rhythm method to those who feel the need for family limitation but whose religion forbids the use of contraceptive devices."

For the past several months, Planned Parenthood and Family Study Center workers have been holding their breaths.

Would this incident trigger a religious war over birth control—something that so far has been avoided in Chicago?

Apparently it will not.

POSTAL AUTHORITIES ARE CONSULTED

Planned Parenthood attorneys are conferring with postal authorities to determine what they can and cannot mail, and Bogue promises:

"We will do our very best to minimize the number of persons who receive this material but do not welcome it."

Father Henry sent his protest statement to a number of city and county officials, and still the calm prevails.

"If this had happened 3 or 4 years ago, there would have been war," said one recipient of the letter.

"But the atmosphere has changed. Nobody wants a bitter fight."

Yet, although both sides of the birth control controversy say they don't want to fight, there is a deep chasm separating their viewpoints.

The Catholic Church holds that the natural purpose of marriage is procreation of children. Any interference with the sexual act to prevent conception is a sin against nature.

The only morally acceptable method of family planning is abstinence during a woman's fertile period, the church says.

Protestant and reform Jewish denominations, in general, believe that love between man and wife is equal in importance to its procreative function. The deliberate control of procreation is permissible, even desirable, when utilized by conscientious and responsible marital partners, they say.

These conflicting views were taken into consideration in a resolution approved 2 years ago by the Chicago Board of Rabbis:

"* * * The Chicago Board of Rabbis is unanimous in its view that decisions concerning contraception must be made by individuals concerned in the light of their own religious insights and convictions. No one rule can govern the practice of all since what is deemed reprehensible by one may be considered the highest morality by another."

The Right Reverend Gerald Francis Burrill, head of the Episcopal Diocese of Chicago, wrote in the diocesan magazine *Advance*:

"The begetting of children should be intelligently planned so that the health and well-being of both parents and children are respected. To breed like animals is to deny our God-given freedom, intelligence, and responsibility."

But he added: "To deny children their birth through the use of contraceptives in order that we may avoid responsibilities or enjoy unrestricted luxury is basically wrong."

Protestant denominations did not always endorse contraceptives for family planning. In fact, it was the Puritan leaders in New England who were responsible for this country's most stringent anticontraceptive laws—not Roman Catholics.

The Reverend Walter Imborski, executive director of the Chicago area Cana Conference, the Roman Catholic organization dedicated to promoting Christian marriage, refers to this change in Protestant views in his statement on proposals to use public funds for birth control:

"The Catholic moral position on artificial birth control, which is in fact identical with the position held by the vast majority of Christians until the 1930's, is quite well known.

"But the present situation involves more than a moral question which all men must face. It concerns the right of a religious minority to promote its views in the democratic process, and it involves a complex problem of what truly constitutes good public welfare policy—not policy made under the pressure of a 'crisis situation' but policy that involves justice and dignity and the long-term well-being of Chicago's newest citizens.

"Beyond this, we are studying the situation and prefer to reserve comment at this time."

Father Imbierski summed up the Catholic moral position on birth control in these words:

"The progesterone steroids (birth control pills) may never be taken for the purpose of preventing conception.

"MAY TOLERATE SECOND EFFECT

"However, if there is a physiological malfunction or a pathological condition which they can remedy, they may be taken on sound medical advice, and the second effect, temporary sterility, may be tolerated.

"Rhythm, abstinence during a woman's fertile period, is permissible if both husband and wife agree to its use, if no moral dangers are created by its use, and if there be good and sufficient reason for its use.

"Artificial contraceptives—either chemical or mechanical—are never permitted because they destroy the nature of the act of marital love."

Proponents of the use of public funds for birth control services are hopeful that an angry exchange between religious groups can be avoided by safeguarding each family's right to select the method it prefers—or reject the program entirely.

Said the Reverend Edgar Chandler, executive vice president of the Church Federation of Greater Chicago:

"We want to make it quite clear that we are looking for what is accepted to be complete medical coverage for persons who want this coverage and are not refrained by any moral or religious scruples from accepting it.

"We feel that people who, from a point of view of their own convictions, cannot use medically accepted services in this field should be referred to clergy or authorized practitioners of their own faith."

Dr. Lonny Myers, the woman physician (and mother of five) who heads the Citizens Committee for the Extension of Birth Control Services, adds:

"Any public clinic that offers birth control services must include instruction in the rhythm method, and the entire program must be voluntary.

"Catholic physicians at County Hospital or with the board of health should not be expected to do anything to implement the program if they so choose."

Dr. Myers, the Church Federation, and other groups urging public-supported birth control clinics, are basing their hopes for an amicable program on what they term a "new viewpoint expressed by some Catholic laymen that a religious denomination sometimes must tolerate laws of the land that it feels are objectionable."

John Philbin, layman leader of the Cana Conference Family Life Education Department, explained:

"One is certain they (public agencies) will consider the matter carefully, with special attention to the serious consequences a policy change would have over the years.

"But this is a pluralistic society, and a Catholic cannot impose his moral judgment on the rest of the Nation. He cannot say, 'I feel this way, so the rest of you may not do this.'"

Other statutes are offensive to various religious groups, Philbin said. Divorce laws, in particular, give sanction to a practice considered immoral by several faiths.

Harold Swank, new executive secretary of the Illinois Public Aid Commission, who is contemplating reimbursing private agencies for birth control services to public aid recipients, said he hopes to avoid arguments over moral and economic factors.

He does not view birth control as a solution to welfare problems, he said—but as a "medical service" that should be offered to low-income families.

"I assume they will settle moral questions in their own consciences before requesting the service," he said.

"Within this framework, I am sure we can keep the peace."

FDA REPORT ON THE PILL

[EDITOR'S NOTE.—The "FDA Report on the Oral Contraceptives," published on August 1, 1966, was reviewed and evaluated by its own Advisory Committee on Obstetrics and Gynecology as well as by many members of the press. The consensus was that use of oral contraceptives should continue, but with due caution because of insufficient

data. The group of 10 physicians making up the Government-appointed Committee found "no adequate scientific data, at this time, proving these compounds unsafe for human use."¹

["Very infrequent but serious side effects" of the pill were discussed and the Committee concluded that: "In the final analysis, each physician must evaluate the risks and advantages of this method of contraception in comparison with other available methods or with no contraception at all."²

[The covering statement written and released by Dr. James L. Goddard, Commissioner of Food and Drug Administration, with his 10 recommendations, the names of his Committee on Obstetrics and Gynecology, and several excerpts from the "FDA Report on the Oral Contraceptives" are included in the printed record of this hearing at the direction of Senator Ernest Gruening, chairman of the Subcommittee on Foreign Aid Expenditures.

[The complete "FDA Report on the Oral Contraceptives" is for sale at 55 cents by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.]

(The above mentioned material follows:)

EXHIBIT 183

STATEMENT BY JAMES L. GODDARD, M.D., COMMISSIONER OF FOOD AND DRUG ADMINISTRATION

[For release Monday, a.m. papers August 15, 1966]

- Recommendation I: An original pilot retrospective study of the possible relation of oral contraceptives to thromboembolism, carried out at Johns Hopkins Hospital, has been expanded. The new contract includes Johns Hopkins Hospital, with Dr. Philip Sartwell as project director, and four hospitals in Ann Arbor Michigan, with Dr. Vergil N. Slee, of the Commission on Professional and Hospital Activities Group, as project director there.
- Recommendation II-III: The Kaiser-Permanente Group study is being expanded. The NIH-sponsored studies with D.C. Planned Parenthood, involving 20,000 patients, are all prospective studies. The Bureau of Medicine of the FDA is convening a planning conference at the latter part of September; the consideration of additional studies will be on the agenda of that conference, toward the goal of eventually having studies on a controlled sample of a half million women.
- Recommendation IV-V: Surveillance is being emphasized by the FDA. Under the reorganization of the Bureau of Medicine, which took effect July 25, all significant surveillance activities have been placed under a single director. The Bureau of Medicine and my staff are also studying the use of new automatic data retrieval procedures in order to achieve a more efficient reporting system.
- Recommendation VI: I agree that a meeting between the FDA and industry should be held as soon as possible. We anticipate calling such a meeting in order to improve the quality and uniformity of the reporting system.
- Recommendation VII: FDA has limited facilities available to it now at Georgetown University for hormonal studies. However, we will be cooperating with other Government agencies, such as NIH, which carry on such research. The FDA also has contractual funds available which may also be used for such special studies.
- Recommendation VIII-IX: We intend to propose within the next 90 days that all firms currently marketing oral contraceptives be required to use uniform labeling. We are also proposing that time restrictions be eliminated.

¹ "FDA Report on the Oral Contraceptives," Advisory Committee on Obstetrics and Gynecology, Food and Drug Administration, Aug. 1, 1966, p. 63.

² *Ibid.*

Recommendation X: The Food and Drug Administration accepts the recommendation that administrative procedures be simplified so that reduced dosages of already approved compounds may be speedily approved. I have directed that it be immediately implemented.

EXHIBIT 184

FDA REPORT ON THE ORAL CONTRACEPTIVES

(By the Advisory Committee on Obstetrics and Gynecology, Food and Drug Administration, August 1, 1966)

ADVISORY COMMITTEE ON OBSTETRICS AND GYNECOLOGY

Members

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INTRODUCTION

The oral contraceptives present society with problems unique in the history of human therapeutics. Never will so many people have taken such potent drugs voluntarily over such a protracted period for an objective other than for the control of disease. These compounds, furthermore, furnish almost completely effective contraception, for the first time available to the medically indigent as well as the socially privileged. These factors render the usual standards for safety and surveillance inadequate. Their necessary revision must be carefully planned and tested, lest the health and social benefits derived from these contraceptives be seriously reduced. Probably no substance, even common table salt, and certainly no effective drug can be taken over a long period of time without some risk, albeit minimal. There will always be a sensitive individual who may react adversely to any drug, and the oral contraceptives cannot be made free of such adverse potentials, which must be recognized and kept under continual surveillance. The potential dangers must also be carefully balanced against the health and social benefits that effective contraceptives provide for the individual woman and society.

The oral contraceptives currently in use are probably not those that will be employed 10 or even 5 years hence. Drugs with even less potentially adverse effect, utilizable in smaller dosage, will undoubtedly be developed through continuing research. At present several such promising compounds are under investigation. The research essential to the development and testing of these compounds is

carried out by the drug industry working in close cooperation with the medical profession. It would be indeed unfortunate were such research and testing to be stifled by unnecessarily complicated, unscientifically harsh, and inelastic administrative procedures. It is axiomatic that all drugs must be carefully tested on several species of laboratory animals under comparable conditions before they can be given to human volunteers. It is equally important that the results of such experimentation be appropriately interpreted in extending their application to human beings. Particularly in reproductive functions man differs from experimental animals and other primates. To deprive a population of drugs of great benefit by overattention to adverse effects based on animal data without due consideration of clinical experience is unjustifiable. Throughout this report various types of adverse experience will be discussed. Most of them, however, occur naturally, with a definite though low incidence in our population. The data necessary to demonstrate an increase in these naturally occurring phenomena among users of oral contraceptives are not available. Most adverse reactions, including deaths, have been reported as individual cases or small series. Except in carefully controlled studies, neither the total number of people exposed to the oral contraceptives nor the number of adverse reactions in any locality is known. The crucial data are the numerator (adverse reactions) and the denominator (users) and a control made up of nonusers having the same or a different number of adverse reactions. The difficulty of obtaining such data for the oral contraceptives makes unreliable any assumptions regarding a cause and effect relationship of drug and adverse reaction.

There are, however, several epidemiological approaches which can shed light on the problem. The simplest and most obvious method is a system of surveillance leading to the reporting by physicians of suspicious illness in their patients who are taking the drug. Such a system is essential because it can give the earliest warning of trouble in a situation where quick action may be imperative. It should, however, be recognized that when the physician reports a suspected adverse reaction to a drug he usually cannot know with any certainty that what he has seen is in fact an adverse reaction and not a coincidental happening. The major deficiencies of this system are:

- (a) Incomplete reporting by physicians of adverse experience for medico-legal reasons, inertia, and lack of interest or awareness of the value of such data.
- (b) Selective or biased reporting of incidents which may reflect fashions in medical interest rather than the magnitude of a possible hazard.
- (c) The lack of a denominator population to evaluate the incidence of a possible adverse reaction.
- (d) The lack of control populations not exposed to the oral contraceptive to permit comparison of the incidence of possible complications in users and nonusers, to see if, in fact, any excess risk occurs in users.
- (e) The inability to detect potential longterm effects which might first appear after discontinuation of the oral contraceptive or even in the progeny of users.

Of the more formal and reliable epidemiologic methods, the one selected should depend upon the type of suspected complication and its temporal relation to the use of the drugs. Prospective studies of users and nonusers are capable of testing for each type of complication; however, they are extremely difficult and costly to perform if the suspected complication is thought to be of rare occurrence or if it is expected to occur after a latent period of many years. The prospective method has the advantage that it permits simultaneous study of all possible complications, including those which are initially unsuspected, and that certain biases are avoided. However, it does not reduce the problem that the inferences must be based on observation rather than experiment; i.e., that differences in disease frequency between the groups of users and nonusers may result from differences in their initial composition dependent on whatever determines the employment of contraceptive methods.

Efficient approaches to the principal possible types of complications are as follows:

- (a) *Thromboembolic disease.* Here the supposed complication is serious, readily recognized in at least some of its forms, and quite rare. It may presumably occur at any time while the drug is being used, but not after termination of use. A case-control (retrospective) approach is the most efficient; a series of cases, and of suitable controls, are chosen and the number of drug users in each group is determined in order to demonstrate association or independence between drug and disease.

(b) *Cancer.* Here the suspected complication is again serious and readily recognizable. The situation differs from (a) in two respects: The disease is common and only a small proportion of cases could be expected to be attributable to the drug; and more important, the latent period would be expected to be very long, frequently extending until after the termination of drug use. A prospective study would be best but would be rendered exceedingly difficult by the length of latency and variations in contraceptive methods employed by a woman over her reproductive lifetime. The case-control approach employed at serial intervals of calendar time would also give promise, but no method is really efficient.

(c) *Diabetes or minor physiologic alterations* such as have been discussed in this report. Serial observations on adequate-sized groups of users and non-users, incorporating whatever laboratory methods are required, will be needed.

Many different compounds administered in slightly different fashions, constitute the available oral contraceptives. The basic mode of action of currently marketed compounds is similar, however, namely, the inhibition of ovulation and the initiation of periodic bleeding through withdrawal. The committee has therefore chosen to approach broadly the potential problems raised by the massive use of the whole group of effective estrogen-progesterone formulations. For this purpose, the committee has been divided into four task forces with specific assignments, each headed by a chairman, as follows:

Task Forces

1. Thromboembolic Disease

N. J. EASTMAN, M.D., *Chairman*

C. TIETZE, M.D.

P. E. SARTWELL, M.D.

A. MASI, M.D.

2. Carcinogenic Potential

R. SCOTT, M.D., *Chairman*

R. HERTZ, M.D.

3. Endocrine and Metabolic Effects

E. DELFS, M.D., *Chairman*

E. CARRINGTON, M.D.

4. Efficacy

K. ADAMSON, M.D., *Chairman*

H. FULLER, M.D.

The report of each task force has been carefully reviewed and approved by the committee as a whole. A summary of each report constitutes the body of the final report, while the complete reports are included in the appendix. In addition to the task forces, the committee appointed Schuyler G. Kohl, to visit the seven drug firms that manufacture these drugs and to review with the responsible personnel their data on adverse effects, deaths, and other pertinent material. Dr. Kohl's report, after review by the committee, was incorporated into the section on thromboembolism. It appears in its entirety in the appendix. A special pilot study to test an epidemiological approach to thromboembolic disease has been designed and completed by Dr. Sartwell's group. It is summarized in the report and appears in the appendix.

UTILIZATION

The pharmaceutical industry has estimated the numbers of women taking oral contraceptives, based on the numbers of tablets distributed in the United States. The approach is straightforward: Since each user takes 20 tablets per cycle and the average woman has 13 cycles per year, the number of tablets sold, divided by 260, gives the average numbers of users during the year. The following estimates have been prepared by this method for the period 1961-65:

1961	-----	408,000
1962	-----	1,187,000
1963	-----	2,235,000
1964	-----	3,950,000
1965	-----	5,000,000

Another estimation has been made by Westhof and Ryder¹ of Princeton University in the study to be published shortly. Using a carefully selected and

¹ Westhof, C. F. and Rydner, N. Presented at the annual meeting of the Population Association of America on Friday, April 30, 1966, New York City.

distributed sample of about 5,600 married women living with their husbands and under the age of 45, they derived the following estimates:

Ever used:

Using in late 1965.....	3,815,000
Used previously, may use again.....	1,341,000
Will not use again.....	1,232,000
	<hr/>
	6,388,000

Never used:

May use in future.....	4,676,000
Will not use.....	12,794,000
Never heard of it.....	787,000
	<hr/>
	18,257,000

These estimates are in general agreement with those of the drug industry. The discrepancies in the two sets of data are accounted for largely by the group of women that uses the drugs for purposes other than contraception, the unmarried women, and those over 45. Another approach to utilization is furnished by investigations such as those of Dr. McEvilla in Lawrence County, Pa. Through the cooperation of the physicians, the pharmacists, and the medical society of the county, every prescription for drugs of all kinds has been placed on a computer program that is capable of yielding data on utilization and adverse reactions with hitherto unavailable precision. In 1965 these data indicate that 7.4 percent of women in Lawrence County between the ages of 15 and 44 had never used oral contraceptive compounds. This figure is somewhat lower than the estimated national average, probably because of the particular population sampled.

Finally, based on the following assumptions, a rough estimate of future use of the oral contraceptives in the United States can be made. Assuming (1) Series B population projection,² (2) 46 percent of each cohort of married women starting oral contraception at the same rate as the women who were under 25 years of age in 1965, (3) no further changes to orals by older women, and (4) about 60 percent of ever-users are current users, the following table is derived:

Projected number of women in millions using oral contraceptives in 1985

Year	Total women	Ever-users	Current users
1970.....	43.3	10	6
1975.....	46.9	13	8
1980.....	51.9	16	10
1985.....	56.4	19	12

THROMBOEMBOLIC DISEASE

There are divergent reports in the literature on the effects of the oral contraceptives on blood coagulation. Unfortunately, however, hypercoagulability cannot be measured. Although many of the factors in the blood concerned with clot formations may be ascertained, their elevation is not a measure of hypercoagulability. For example, although fibrinogen and factors VII-X are elevated in pregnancy, thromboembolism occurs most commonly in the puerperium, when the levels of these factors have returned to normal. The most recent work on the response of blood coagulation factors to oral contraceptives indicated no statistically significant effect.

Of greater concern are the deaths from thromboembolic disease. The deaths from idiopathic pulmonary embolism in women aged 15 to 44 in the United States appear to be of the order of 12 per million per year. The average annual death rate for women of the same age group from cerebral embolism and thrombosis is about 5 per million. From these data one might expect that, of the 5 million women estimated to be taking the oral contraceptives in 1965, there should be about 85 deaths from idiopathic thromboembolic disease. Kohl's report

² Current Population Reports, Series P-25, No. 329, March 10, 1966.

(appendix 6) disclosed 20 such cases from all causes, only 13 of which were idiopathic. There are two possible explanations for this apparent discrepancy: (1) The oral contraceptives are protective against thromboembolic disease; (2) there has been gross underreporting. The second possibility seems to be the logical explanation, for the reported deaths fail to show the increment expected with the fivefold increase in use of the oral contraceptives from 1962 to 1965.

The present system of reporting deaths and adverse reactions relies on either the cooperation of physicians or the haphazard filtering of rumors to detail men. The latter route is patently unreliable, and the former not much better. Physicians are becoming increasingly fearful of reporting deaths or adverse drug reactions because of possible legal reprisal.

The data derived from mortality statistics are not adequate to confirm or refute the role of oral contraceptives in thromboembolic disease. They do, however, suggest that if oral contraceptives act as a cause, they do so very infrequently relative to the number of users. The Committee believes, accordingly, that the only way this important question can be answered is through large, carefully designed epidemiologic studies, such as those detailed in the appendix of this report.

CARCINOGENIC POTENTIAL

The committee directed its attention specifically to those lesions which were presumably related to the problem, but did not exclude the possibility of a relationship to other lesions.

The availability prevalence and incidence rates of cancer of the uterine cervix, cancer of the endometrium, and cancer of the breast were reviewed in order to establish the expected rates for these cancers in women. All of the published and submitted data on patients who have received any of the estrogen-progestogen combinations for contraceptive and therapeutic purposes over a period of time were reviewed. The animal and clinical studies published and some unpublished, using these hormones, or similar agents, as they relate to the production of cancer or the influence on an existing cancer, were studied. The following observations were made and conclusions drawn:

Uterine cervix

Dysplasia, carcinoma in situ, and invasive cancer were considered. The importance of the geographic, socioeconomic, and ethnic factors of the population sampled was quite evident. For example, the prevalence of carcinoma in situ and invasive cancer in Puerto Rico was almost six times that of a metropolitan New York group composed of women, for the most part, from a higher socioeconomic level. Another important factor was the average age of women showing these changes: Roughly 35 years for dysplasia, 40 years for carcinoma in situ, and 47 years for invasive cancer.

The data from the various study groups using contraceptive pills were difficult to analyze for the following reasons:

1. Patients with suspicious smears were admitted to the study or in other instances the initial cytologic status was not stated.
2. The various methods of collecting cytologic specimens and the subjective factors in reading and reporting any changes make standardization of data difficult.
3. The frequent failure to record histologic followup after suspicion has been created on cytologic examination.
4. The concentration of contraceptors in age group below 35 yields such a low incidence of malignancy that very large samples are necessary.
5. The relatively small number of patients followed regularly and thoroughly for 4 years or more.

It is to be emphasized that all known human carcinogens require a latent period of approximately one decade. Hence any valid conclusion must await accurate data on a much larger group of women studied for at least 10 years. Furthermore, there is not sufficient evidence to support the contention that contraceptive pills may protect against the development of carcinoma of the cervix.

One possibly significant study showed an appreciable increase of coccoid bacteria, trichomonads, and fungi in women using contraceptive pills. This alteration in the microorganisms of the genital tract might be related to the use of the pills and could account for some of the changes in cytologic reports.

Endometrial malignancy

Endometrial carcinoma is primarily a disease of postmenopausal women and only 5 to 8 percent of the cases of this cancer occur before the age of 40.

In the data submitted the paucity of endometrial biopsies as a routine follow-up procedure, the limited number of women more than 40 years of age, and the short duration, do not permit any conclusions relative to the effect, either adverse or beneficial, of these contraceptive pills on endometrial cancer.

There are numerous studies that suggest an effect of a preponderance of estrogen, either endogenous or exogenous, in women who subsequently develop endometrial adenocarcinoma. While a precise etiologic relationship has not been established, nevertheless, all women receiving estrogen therapy must be followed with care. Administration of a progestogen periodically to women receiving estrogen, in order to allow periodic "withdrawal" bleeding on the basis that it "prevents" endometrial cancer, is invalid both theoretically and on the basis of the very limited number of postmenopausal patients so treated. It must be remembered, furthermore, that carcinolytic agents may also be potentially carcinogenic. Recent reports indicate that progestational compounds may exert a palliative effect on cancer, and adenomatous hyperplasia of the endometrium. While this matter is under study at several centers, there is no evidence, at present, that these compounds are curative. It must be remembered, furthermore, that cancer-suppressing agents may also be carcinogenic.

Breast cancer

The relationship of the oral contraceptives to breast cancer in the human being is unknown. The solution to this problem is made difficult for several reasons as follows:

(a) Contraceptors are predominantly in the lower age groups in which breast carcinoma is sufficiently infrequent as to necessitate very large samples for studies of early effects.

(b) There are few long-term followup studies and none of sufficient duration to overcome the long latent period necessary to produce cancer in the human being.

(c) Many studies simply do not state whether the breasts have been routinely examined.

There are data that give contributory, although not very strong evidence to both sides of the question.

For

There is experimental and clinical evidence that indicate a relationship between both endogenous and exogenous estrogen.

There is experimental evidence that estrogens closely related to those used in the oral contraceptives currently marketed will, when continuously given to dogs and other animals, produce breast carcinoma. In many, but not all experiments the dosage was large on the basis of human therapy.

Against

Although estrogens have been increasingly employed for a long time and there has been increasing use of oral contraceptives for 6 years, there has been no increase in mortality from breast carcinoma.

The FDA files contain only one case of breast carcinoma occurring in a patient taking oral contraceptives.

Carcinoma of the breast is less prevalent in multiparous than in nulliparous women, although each pregnancy induces an elevation in endogenous estrogen.

All this evidence has been carefully considered by the committee.

At the present writing, it seems that if the oral contraceptives are at all carcinogenic for the human breast, they cannot be very potent and the occurrence of breast carcinoma from this cause must be extremely rare. Nevertheless, caution and prolonged surveillance are in order. Whenever the oral contraceptives are employed, not only the pelvic organs, but the breasts as well must be examined at periodic followup.

Other cancers

Malignant lesions in the pituitary, kidneys, ovaries and bone marrow have been found in animals after treatment with certain sex hormones, but at present there are no human corollaries.

Animal studies

Sex steroids, particularly estrogens, have been shown to produce malignant lesions and to affect adversely the existing tumors in the mouse, rat, rabbit, hamster, and dog. These neoplasms have occurred in various organs, such as the cervix, endometrium, ovary, breast, testicle, pituitary, kidney, and bone marrow. The observations in animals given progesterone and the newer progestogens have been contradictory; however, these agents alone and in combination with other sex steroids have promoted neoplasia or metastatic growth in a few instances. A recent example is a 52-week study of six dogs that received massive doses of a combination of mestranol and ethyneron (MK-665, an experimental progestogen). Four of the dogs developed mammary lesions; one was a carcinoma *in situ* with early invasion; the second was a carcinoma *in situ*; the third represented atypical hyperplasia; and the fourth was a benign intraductal papilloma. Animal studies in which certain susceptible strains and species are used and in which the dosage is excessive and continuous, cannot be directly transferred to human beings. There is, nevertheless, a warning that an altered endocrine environment in human tissues might result in an abnormal expression or potentiation of growth, as in experimental animals. In fact, there has always been the suspicion that experimental animal and human tissues follow the same biological laws in this regard, but conclusive data are not available. A great difficulty in obtaining a reliable answer involves the prolonged period of latency in human beings exposed to known carcinogens. Future epidemiologic studies must take full recognition of this fact.

Statistical considerations

A substantial change in the incidence of certain diseases such as cancer may be difficult to detect even with very large samples. For example, in a study of the incidence of breast cancer with 4-year followup of women aged 20 to 39 years, a sample of about 15,000 to 20,000 women, or 60,000 to 80,000 person-years, would be required to have a reasonable (that is, 90 percent) chance of detecting (at the 95-percent probability level) a twofold increase in risk. Naturally a control group of almost similar size would have to be studied in order to detect this change. Changes in the incidence of cervical cancer could be detected with samples of about the same size; changes in the incidence of endometrial cancer would require samples about six to eight times as large as those for breast cancer. No studies approaching this magnitude have been reported. Since duration of exposure is a critical factor, only those women exposed for prolonged periods provide pertinent information. There are no scientific data to justify the imposition of a time limitation for the oral contraceptives.

ENDOCRINE AND METABOLIC EFFECTS

Pituitary-ovarian function

A considerable number of studies indicate that the oral contraceptives inhibit ovulation by a block at the pituitary level, specifically by inhibition of synthesis or release of LH. During such inhibition, the ovaries tend to become smaller, and changes suggestive of cortical stromal fibrosis have been described. After cessation of the medication recovery is usually prompt, with ovulation resuming in 4 to 8 weeks in most cases. Occasionally, the reappearance of cyclic ovulation may be delayed for several months. Fertility appears to be normal immediately after cessation of the oral contraceptives although a small but unknown number of patients remain amenorrheic. The outcome of pregnancy has been reported to be about the same as in the untreated population with regard to abortion, prematurity, abnormality, and anomaly. There are, however, no prolonged followup studies to ascertain the growth and development of infants born after cessation of therapy. There is no evidence that prolonged suppression of ovulation in nulliparas or multiparas will impair future fertility. The effects of prolonged suppression of ovulation, however, are unknown and require further investigation.

Pituitary-adrenal function

Increased cortisol binding by serum proteins under the influence of oral contraceptives tends to obscure the block of the pituitary ACTH that occurs. Prolonged use of oral contraceptives reduces the response of metopirone but not to ACTH, indicating an inhibition of pituitary ACTH rather than of adrenocortical activity. Recovery of responsiveness occurs in 2 months after cessation of medication. Impaired reaction to stress has not been noted in women

on oral contraceptives. There are insufficient data to ascertain the effect of these compounds on women with adrenal insufficiency.

Thyroid function

Increased thyroxin-binding globulin has been noted in the majority of women on oral contraceptives. Most, but not all, investigators report a rise in PBI and a decreased T_4 -RBC uptake. These changes occur rapidly and are maintained for the duration of medication, returning to normal pretreatment levels in about 2 months. The alterations are secondary to the increase in binding proteins produced by estrogens and are similar to those occurring in normal pregnancy. The level of PBI may be in the hyperthyroid range but there is no clinical evidence of hyperthyroidism. If TSH is blocked at the pituitary level, it may be masked by increased protein binding. No precise data are available on this point.

Carbohydrate metabolism

Data regarding effects on carbohydrate metabolism in experimental animals and in women are contradictory. Recent studies in women taking oral contraceptives suggest a possible diabetogenic effect of these medications. Abnormal glucose tolerance tests have been observed in as many as 40 percent of women taking oral contraceptives; in women with diabetic family histories, abnormal tests were even more frequent. Plasma insulin levels are above normal in supposedly normal women on oral contraceptives. Some known diabetic women require larger amounts of insulin while on medication. All of these changes tend to regress after discontinuation, and are similar to those seen in normal pregnancy. Whether pregnancy itself is diabetogenic is by no means certain, although diabetes seems to be more prevalent in women of high parity. Whether oral contraceptives can induce diabetes in normal women or even in those predisposed is not known, nor is it clear to what extent the induced changes in carbohydrate tolerance are reversible.

Liver function

Many women on oral contraceptives show abnormalities of some liver function tests, especially the BSP and transaminase. A few develop clinical jaundice and evidence of mild hepatic damage, demonstrated by biopsy. These lesions resemble cholestasis of pregnancy. In several women with previous history of cholestasis, these changes have been induced by the oral contraceptives. The abnormal liver function tests revert to normal after cessation of medication.

Effect on lactation

Oral contraceptives in high doses (5 and 10 mg. of progestogen) tend to decrease or stop lactation in many women in the first or second cycle of use. These compounds appear in breast milk but in minimal amounts (0.004-0.1 percent of the administered dose). Despite the small quantities of the steroids appearing in breast milk, mammary enlargement may occur in nursing infants. Administration of the androgenic steroids to newborn experimental animals at crucial periods can affect sex differentiation and behavior and result in sterility. No data on human beings are available.

Masculinization

Oral contraceptives have not produced serious masculinization in women taking these agents although all large series have reported some individuals with mild masculinizing symptoms. The 19-nor-compounds appear to have somewhat more masculinizing effect than other synthetic progestogens. These effects are mild, including acne and hirsutism. These changes regress with cessation of medication. The effect on the fetus is of greater importance. Synthetic progestogens, in doses used in the treatment of threatened or habitual abortion, may produce superficial masculinization of the genitals of the female fetus. These anatomic abnormalities are correctable, but the effect upon subsequent reproductive functions and psychosexual development is unknown.

MISCELLANEOUS ADVERSE EXPERIENCES

Ophthalmologic complications

There have been reports of blurring of vision and even blindness in patients taking the oral contraceptives. The majority of these effects are thought to be of vascular origin, although some may be on a neurological basis. Most of the

reports are of single cases or small series in which the etiologic relation is uncertain, but in some cases vision improved when the drugs were discontinued. In several large series of patients on oral contraceptives "eye complaints" and abnormalities have occurred but not with an increased incidence. The question of possible adverse effects on vision is by no means completely solved, but there appears to be no reason for undue concern at this time. Long-range and carefully controlled studies should be undertaken.

Migraine

There are instances reported of migraine occurring for the first time as well as some with exacerbation of preexisting migraine in patients taking oral contraceptives. Studies show that women who have preexisting encephalographic changes characteristic of migraine tend to have these abnormalities brought out but not initiated by the oral contraceptives.

Psychological and emotional factors

Studies are in progress regarding the effects of oral contraceptives on human and animal behavior. At present no precise data are available.

EFFICACY

The following uses for which therapeutic efficacy has been claimed were reviewed:

- A. Control of Fertility.
- B. Amenorrhoea.
- C. Dysmenorrhoea.
- D. Endometriosis.
- E. Functional Uterine Bleeding.
- F. Habitual Abortion.
- G. Miscellaneous Uses.

A. Fertility control

The efficacy of the combined agents is exceptionally high. The more recently introduced sequential regimens are also highly effective in controlling fertility, although to a slightly lesser degree. Present evidence indicates that the frequency of pregnancies occurring with the patients on sequential medication remained unchanged over the 2½-year period, thus supporting the contention that tolerance to or escape from the medication probably does not occur.

B. Treatment of amenorrhoea

The efficacy of oral contraceptives in the treatment of amenorrhoea could not be readily ascertained from the material available to the Committee because of the endpoint used. Treatment was considered successful when uterine bleeding followed cyclic withdrawal of the medication. Such an endpoint does not specifically measure the efficacy in treating amenorrhoea, since cyclic withdrawal bleeding and menstrual periods are different biologic phenomena. If efficacy in the treatment of amenorrhoea is claimed, it must be based on evidence that menstrual cycles are maintained following discontinuation of drug therapy. Such information was not contained in the submitted material. If, however, the objective of the therapeutic effort is to produce cyclic withdrawal bleeding in the amenorrhoeic patient, the oral contraceptive drugs can be considered efficacious, since this result was achieved in 80 to 90 percent of treated patients.

C. Treatment of dysmenorrhoea

The comments pertaining to efficacy of the drugs in the management of patients with dysmenorrhoea were similar to those cited in the previous paragraph. The situation was even more complicated because of the difficulty in quantitation of the principal variable. Dysmenorrhoea is known to disappear spontaneously, and relatively high "cure rates" have been obtained with placebos. No followup data were available in the submitted material; the reports thus pertained to the evaluation of pain during cyclic withdrawal bleeding rather than during a menstrual period. Although the data suggest that in certain patients the progestational agent might be of value in the treatment of dysmenorrhoea, additional information is required before the therapeutic efficacy can be proved. Statistically, the submitted material was considered unsatisfactory because of the small number of patients in the individual series. It was surprising to find that a very small sample had been utilized in the study of such a common phenomenon. The members were aware of the difficulties in designing controlled studies, since

placebos do not provide contraception, a fact that cannot remain undisclosed to the patient.

D. Treatment of endometriosis

In evaluating the material in which the diagnosis of endometriosis was established by histologic examination, the Committee finds continued and prolonged (6 to 12 months) progestational therapy valuable to conservative management of the affected patient. In the well-documented cases it is reasonable to expect a favorable response in 75 to 90 percent. It must, however, be pointed out that recurrence might be expected in an appreciable proportion of patients after cessation of medication. In contrast, the therapeutic efficacy in subjects in which the diagnosis of endometriosis had been made by physical examination or history alone, was uncertain. This population undoubtedly comprises a variety of diseases that should not be expected to improve during therapy with progestational agents.

E. Treatment of functional uterine bleeding

The claims for therapeutic efficacy in treatment of functional uterine bleeding were met with criticism similar to that applied to treatment of dysmenorrhea and amenorrhea. The Committee considers the joining of a variety of conditions under the heading "Functional Uterine Bleeding" inappropriate because the individual diseases have specific and different causes. The index of general efficacy might not therefore reflect the favorable results achieved in certain categories, or conversely might create the impression of therapeutic merit in diseases that are not susceptible to therapy. Irregular menstrual periods will respond in a high percentage of cases to therapy if cyclic withdrawal bleeding is considered synonymous with menses, whereas menorrhagia might be and appears to be considerably more resistant to the advocated therapy. Patients with hypermenorrhea appear to have shorter periods and less loss of blood when placed on cyclic therapy with these compounds. Difficulty in constructing a meaningful endpoint for the various categories was evident since most of the conditions causing functional bleeding are known to be self-limiting.

F. Habitual abortion

The Committee found no data to indicate that any of the oral contraceptives are effective in altering the natural history of patients with habitual abortion. Although the reasons for habitual abortion are not known, it often results from a cytogenetic defect in the embryo. These cases would, therefore, not benefit from steriod therapy. Clearly those synthetic progestogens that are known to have androgenic properties should be avoided in the therapy of threatened abortion or habitual abortion.

G. Miscellaneous uses

The value of oral contraceptives in the treatment of conditions such as "menopausal syndrome", acne, chronic vulvar infections, and psychiatric disorders could not be ascertained because of the preliminary nature of the available reports.

RECOMMENDATIONS

In making the following recommendations, the Committee has given careful consideration to this problem, which is unique because of the large number of healthy women taking the oral contraceptives over very long periods of time, the low incidence of serious side effects, the metabolic changes induced, the paucity of requisite statistical and scientific data, and finally, the health and social benefits to be derived. These factors have imposed the requirement for unprecedented standards of safety; they have demanded the detection of sequelae that are often remote and infrequent; they have opened to question the existing methods of surveillance and retrieval of data; and they have required the design of highly refined epidemiological experiments.

As our case is new and unique in the history of therapeutics, so have we had to think anew in framing these recommendations.

I. A large case-control (retrospective) study of the possible relation of oral contraceptives to thromboembolism

This study should follow the methods developed in a pilot trial described in appendix 7 (p. 71) to this report. In view of the results of the pilot trial, such a study becomes mandatory. This study must include a considerable number of hospitals, which should be of large size and high clinical standards and quality of medical records. The potential contributions of operations already existing in the Food and Drug Administration to maintain systematic, unified collaboration with such hospitals should be explored. Most important, the investigation should be under competent epidemiologic supervision.

II. Continuation and support of studies such as the ones being carried out by the Kaiser Permanente group in California and the University of Pittsburgh group in Lawrence County, Pa.

III. Support of additional controlled population-based prospective studies utilizing groups of subjects that are especially amenable to long-term followup, such as married female employees of certain large industries, and graduate nurses

Although such prospective studies are difficult and require large populations, they may provide the only feasible method to answer the question of a relationship between the oral contraceptives and carcinoma, as well as the effect of these compounds on the growth and development of subsequent offspring.

IV. Continuation and strengthening of the present surveillance system of the FDA

V. Review of the mechanism of storage, retrieval, and analysis of surveillance data

If this system is to serve its prime purpose; namely, that of early warning, a much more efficient system of "feedback" will have to be instituted.

VI. A conference be held between FDA and the respective drug firms concerning uniformity and increased efficiency of reporting

There is every evidence that the drug firms are willing and anxious to cooperate with FDA and with each other to achieve more efficient surveillance and more meaningful data.

VII. Priority be given to support laboratory investigations concerning all aspects of the hormonal contraceptive compounds

VIII. Uniformity in labeling of contraceptive drugs

IX. Discontinuance of time limitation of administration of contraceptive drugs

There is no scientific justification for the present restrictions. They are often circumvented and serve only to penalize the large indigent populations.

X. Simplification of administrative procedures to allow reduction in dosage of already approved compounds

Once safety has been established, reduction in dosage should require only minimal proof of efficacy, say 3,000-4,000 cycles without a pregnancy.

CONCLUSION

The foregoing considerations have been brought together to direct the attention of the medical profession and the Food and Drug Administration to those aspects of our knowledge, as well as our ignorance, that seem pertinent to our evaluation of the safety and risks involved in the use of these compounds.

The committee finds no adequate scientific data, at this time, proving these compounds unsafe for human use. It has nevertheless taken full cognizance of certain very infrequent but serious side effects and of possible theoretic risks suggested by animal experimental data and by some of the metabolic changes in human beings.

In the final analysis, each physician must evaluate the advantages and the risks of this method of contraception in comparison with other available methods or with no contraception at all. He can do this wisely only when there is presented to him dispassionate scientific knowledge of the available data.

APPENDIX 1

REPORT OF THE TASK FORCE ON THROMBOEMBOLIC DISEASE

N. J. Eastman, M.D., *Chairman*

The activities of the Task Force on Thromboembolic Disease have been as follows:

1. To ascertain the effect, if any, of oral contraceptives on the factors responsible for blood coagulation.
2. To ascertain the incidence of fatal thromboembolic disease in the total female population of the United States of reproductive age, exclusive of cases associated with pregnancy or a surgical operation.
3. To ascertain the approximate number of women in the United States who have taken oral contraceptives, year by year, from 1961 through 1965.
4. To ascertain the incidence of fatal thromboembolic disease in women who had been users of oral contraceptives prior to death.
5. To specify and recommend for immediate development certain epidemiological studies which promise to establish the risks associated with the use of oral contraceptives, or the absence of such risks, much more effectively than is possible on the basis of the data now available.

1. Blood coagulation in women taking oral contraceptives has been the subject of many studies by competent investigators. Although the data on the behavior of individual coagulation factors are somewhat conflicting, no clear evidence has been advanced that these preparations significantly alter the coagulation behavior of the blood. Thus, in a recent and most meticulous investigation, Beller and Porges summarize their findings as follows: "Two different commercially available agents and a placebo were taken by a group of volunteers in a double blind study. There was no statistical difference in blood coagulation factors among the different groups." (In press, *Am. J. Obstet. & Gynec.*) But even if some of the blood coagulation factors had shown differences between users and nonusers, no blood-coagulation assay at the present time is considered a test for prediction or confirmation of the clinical diagnosis of thromboembolic disease. (Alexander, B.: Blood coagulation and thrombotic disease; *Circulation*, 25: 872, 1962. Wesseler, S.: Stasis, hypercoagulability and thrombosis; *Federation Proceedings*, 22: 1366-1370, 1963.)

2. Estimates of the incidence of fatal pulmonary embolism among women, 15-44 years of age, not pregnant nor in the puerperal state, in the United States in 1963 are shown below:

Age (years):	Deaths per million
15-19.....	2
20-24.....	6
25-29.....	10
30-34.....	12
35-39.....	18
40-44.....	22
15-44.....	12

These estimates were obtained by including in the numerator deaths attributed to pulmonary embolism and infarction (ICD 465) plus the deaths assigned to antecedent causes which rarely lead to death except by pulmonary embolism (ICD 463, 464, 466) and including in the denominator only women who are neither pregnant nor in the puerperium.

The estimates shown above are necessarily rough because the total number of pregnancies is not known.¹ It is believed, however, that they represent the level and trend of mortality with sufficient accuracy for the purpose at hand.

Age-specific death rates from cerebral embolism and thrombosis (ICD 332) among women, 15-44 years of age, in the United States in 1963 were as follows.

¹ It was assumed that one-sixth of all pregnancies in the United States or approximately 1 million were terminated by spontaneous fetal wastage, and the same number by illegal abortion.

Age (years) :	Deaths per million
15-19.....	1
20-24.....	2
25-29.....	2
30-34.....	4
35-39.....	9
40-44.....	15
15-44.....	5

It should be realized that mortality statistics for this group of conditions are probably unreliable. This is in part because the classification of causes of death is based upon what is considered the underlying cause. The certifying physician's judgment and the care which he takes in recording these underlying causes are variables which cannot at present be assessed. Thus, for example, we do not know how often he fails to record on the death certificate such underlying causes as surgery, the puerperium, trauma, heart disease, and hypertension when these are present.

In spite of the limitations of statistics based on death certification, it is pertinent to compare the reported number of deaths from thromboembolic disease among women taking oral contraceptives with the number that might be expected from the above statistics. If, among women taking steroid compounds, the reported number of deaths is significantly greater, a causal relationship is suggested.

3. The number of deaths attributed to diseases of the veins (ICD 460-468), most of which are deaths from pulmonary embolism, and the corresponding death rates among women of reproductive age in the United States increased substantially from 1950 to 1964. However, parallel increases of equal magnitude have occurred among males, suggesting that the upward trend reflects changes in diagnostic practice, death certification, or causes applicable to both sexes.

Death rates from cerebrovascular accidents (ICD 330-334) have increased among nonwhite women (fewer of whom use oral contraceptives than white women), but have not changed among white women.

4. The pharmaceutical industry has estimated the numbers of women taking oral contraceptives, based on the numbers of tablets distributed in the United States. The approach is straightforward: Since each user takes 20 tablets per cycle and the average woman has 13 cycles per year, the number of tablets sold, divided by 260, gives the average number of users during the year. The following estimates have been prepared by this method for the period 1961-65:

1961.....	408,000
1962.....	1,187,000
1963.....	2,235,000
1964.....	3,950,000
1965.....	5,000,000

5. Another estimate of the number of women taking oral contraceptives is based on the responses of a nationwide sample of about 5,600 married women, interviewed in late 1965 (Westof and Ryder, 1966). According to this survey, about 3,800,000 women were using oral contraceptives at the time of the interview and an additional 2,600,000 had been taking them previously but had stopped medication, with or without the intention to resume use at a later date.

The difference between the industry estimate (5 million in 1965) and the survey estimate (3,800,000) may be explained, at least in part, by the inclusion of several categories of women in the former but not in the latter. These are: (1) Married women over 45; (2) unmarried women; and (3) women for whom steroid compounds have been prescribed for therapeutic reasons but who do not know the nature of the medication. In addition, it is possible that the industry estimate is inflated by the growth of inventories in the hands of distributors and/or retailers. On the other hand, some of the women interviewed in the survey may have withheld the relevant information.

6. Oral contraceptives are much more widely used among younger than among older women. According to the 1965 survey, 26 percent of married women under 30 years of age were current users, compared with 8 percent of those over 30. Among the current users, two out of three were less than 30 years old and two out of five were less than 25 years old.

7. In August 1962, some 275,000 letters were sent by the G. D. Searle Co., makers of Enovid, to physicians, druggists, and other pertinent persons throughout the United States requesting that "any thromboembolic occurrence in women receiving Enovid be reported to us and to the Food and Drug Administration."² In the fall of 1965, a survey of the deaths so reported to the FDA indicated gross underreporting. Accordingly, in January 1966, arrangements were made for Dr. Schuyler Kohl, professor of obstetrics and gynecology at the Downstate Medical Center of the State University of New York, to visit all pharmaceutical firms marketing oral contraceptives and make a thorough investigation of the deaths reported and other pertinent facts.

Dr. Kohl's report, which is included in appendix 6 (p. 1322) confirmed the earlier impression of the Committee in respect to underreporting of deaths. In fact, he found the magnitude of underreporting to be so great as to preclude drawing any conclusions from these data. The evidence was clear that the pharmaceutical firms concerned reported promptly any adverse reactions of which they were notified; the breakdown of this voluntary system of reporting was caused rather by the inadequate information about deaths on the part of physicians and other persons who were relied upon to report adverse reactions.

8. Taking into account the preponderance of young women among those using oral contraceptives, one would expect for each million users about 14 fatal cases of thromboembolic disease per year, including 10 deaths from pulmonary embolism and 4 deaths from cerebral embolism and thrombosis. Hence, the numbers of deaths expected in 1962 on the basis of the industry estimate of users (1,187,000) would be on the order of 12 and 5, respectively. It would seem prudent, however, to reduce these figures to, say, 10 and 4, respectively, to allow for a possible inflation of the estimated number of users.

According to the information obtained by Dr. Kohl, 20 deaths from all causes were reported to the manufacturers (and subsequently to the FDA) as having occurred among users of oral contraceptives in 1962. Of these, only 13 were due to "idiopathic pulmonary embolus"; that is, to an embolus without any demonstrable predisposing factor. This figure (13) is larger than the expected number of deaths from pulmonary embolism alone (10), but the difference is not statistically significant. This relationship of reported to expected deaths in 1962 is virtually the same as found by the Wright Committee which used the same or very similar basic data and a comparable procedure. (Report by the ad hoc Committee for the Evaluation of a Possible Etiologic Relation With Thromboembolic Conditions, submitted to the Commissioner of FDA, HEW).

9. It would appear, then, that the intense effort of 1962 produced about as many reports of fatal cases of pulmonary embolism among users of oral contraceptives as would be expected on the basis of the experience of the general female population of reproductive age. It will be noted, further, that the number of women taking oral contraceptives increased more than fourfold from 1962 to 1965. The survey estimate for the latter year (3,800,000 users) implies 38 expected deaths from pulmonary embolism. Acceptance of the industry estimate (5 million users) would raise this figure to 50 deaths.

Even without any causal relationship whatsoever it would be expected that the numbers of reported deaths among women taking oral contraceptives would augment proportionally with the increasing numbers of users. This, however, was not the case. The number of reported deaths due to unexplained pulmonary embolism in 1962 and 1965 were the same (13).

The data derived from mortality statistics are not adequate to confirm or refute the role of oral contraceptives in thromboembolic disease. They do, however, suggest that if oral contraceptives act as a cause they do so very infrequently relative to the number of users. The task force believes, nevertheless, that the only way in which this question can be answered definitively is through well-controlled epidemiological studies.

COPY OF LETTER FROM G. D. SEARLE & CO.

AUGUST 7, 1962.

IMPORTANT—DRUG CAUTION.

DEAR DOCTOR: We are addressing this letter to you in keeping with our policy of bringing to you all of the pertinent facts concerning our products and as a response to recent publicity dealing with the occurrence of thromboembolic phenomena coincident with women receiving Enovid.

² "Drug Caution" letter appended.

Since its introduction there have been reported to us as of this date 28 cases of thromboembolic disease in the more than 1 million users of Enovid in the United States. Among these were 10 cases of pulmonary embolism, 5 of which were fatal. In addition, there are press reports of four cases, including one death from the United Kingdom.

In some of these one or more of the usually accepted inciting causes of thrombophlebitis were evident; in some they were not.

Reports to the manufacturer do not reflect the accurate incidence of reactions and the available statistics are not adequate to determine whether or not there is a causal relationship, but caution requires consideration of this possibility.

It must be remembered that pulmonary embolism can occur without discernible inciting cause and without preceding peripheral thrombophlebitis. Nevertheless, careful studies by investigators experienced in the measurement of the extremely complex factors involved in the clotting mechanism are continuing, including an evaluation of the role of fluid accumulation sometimes seen after Enovid administration. This will be reported in a technical bulletin at an early date. At the present time the available laboratory data neither prove nor disprove a causal relationship between Enovid administration and the occurrence of thrombophlebitis.

The cases of thrombophlebitis reported to us have usually occurred early in the course of Enovid administration and at the lower dosage level. Experience based on patients taking Enovid at higher doses has not demonstrated any dose response relationship.

Physicians should be as alert to the possible occurrence of thrombophlebitis in patients to whom Enovid is prescribed as they are in patients taking other medication.

The above facts should be given particular attention if Enovid is considered for administration to patients with thrombotic disease or a history of thrombophlebitis.

We request that any thromboembolic occurrence in women receiving Enovid be reported to us and to the Food and Drug Administration.

Sincerely yours,

(S) Irwin C. Winter,
IRWIN C. WINTER, Ph. D., M.D.,
Vice President, Medical Affairs.

APPENDIX 2

REPORT OF THE TASK FORCE ON CARCINOGENIC POTENTIAL

R. B. Scott, M.D., *Chairman*

The available prevalence and incidence rates of cancer of the uterine cervix, cancer of the endometrium, and cancer of the breast were reviewed in order to establish, as near as possible, the expected normal rates for these cancers in the human female.

All of the published and submitted data on patients who have received any of the estrogen-progestogen combinations for contraceptive purposes over a period of time were reviewed.

The animal experiments, published and some unpublished, using these hormonal agents, or similar agents, as they relate to the production of malignancy or the influence on an existing malignancy, were studied.

The following observations and conclusions were made:

CANCER OF THE UTERINE CERVIX

Dysplasia, carcinoma in situ, and invasive cancer were considered. The importance of the geographic location and of the socioeconomic level of the population sample were very evident: for example, the prevalence of carcinoma in situ and invasive cancer in Puerto Rico was almost six times that of a Metropolitan New York group composed of women, for the most part, from a higher socioeconomic level. Another important factor was the average age of women showing these changes; roughly 35 years for dysplasia, 40 years for carcinoma in situ, and 47 years for invasive cancer.

The data from the various study groups using contraceptive pills were difficult to analyze for the following reasons.

1. Initial cytological status was not given in many instances and in others patients with suspicious or positive Papanicolaou cytology were admitted to the study.

2. The various methods of collecting cytological specimens and the personal equation in reading and reporting any changes make standardization of data difficult.

3. The frequent absence of histopathology after cytologic suspicion was found.

4. The preponderance of patients in the age group before 35.

5. The relatively small number of patients followed regularly and thoroughly for 4 years or more.

In the data submitted there is no evidence of any increased incidence of premalignant or malignant changes in the uterine cervix which could be attributed to the use of the contraceptive pills in this relatively short time interval. Any valid conclusion must await accurate data on a much larger group of women studies for at least 10 years. Also, in the data, there is no evidence to support the statement which has been made—that the use of the contraceptive pills may have a protective effect against the development of malignancy of the uterine cervix.

One study, in need of supporting evidence from other investigators, may be significant. This study showed an appreciable increase of coccoid bacteria, Trichomonads, and fungi in women using contraceptive pills for a year or more compared to a matched control group. This alteration in the microbiological content of the genital tract might be related to the use of the pills and could account for some increase in such cytological reports as atypical cells or class 2 Papanicolaou.

UTERINE ENDOMETRIAL MALIGNANCY

Endometrial carcinoma is primarily a disease of the postmenopausal years and only 5 to 8 percent of these occur before the age of 40.

In the data submitted the paucity of endometrial biopsies as a routine followup procedure, the limited number of women more than 40 years of age, and the short duration do not permit drawing any conclusions relative to the effect, either adverse or beneficial, of these contraceptive pills on endometrial malignancy.

There are numerous studies which suggest a preponderance of estrogenic influence, either endogenous or exogenous, in women who subsequently develop endometrial adenocarcinoma. A cause-and-effect relationship has by no means been established. All women receiving estrogen therapy must be followed with the utmost care and thoroughly investigated at the slightest suspicion; the advice to administer a progestogen periodically to women receiving estrogen, in order to allow periodic "withdrawal" bleeding on the basis that it "prevents" endometrial cancer, is not valid either on a theoretical basis or on the basis of the very limited number of postmenopausal patients so treated.

The use of progestogens in the treatment of adenomatous hyperplasia and carcinoma in situ of the endometrium is under investigation in several centers. At the present time no conclusions can be drawn. There is clinical evidence of some palliative benefit, but not cure, from the administration of large doses of progestogens in about one-third of the patients with metastatic endometrial cancer.

BREAST CANCER

The mortality rate of cancer of the female breast in the United States has remained remarkably stable since 1930. The incidence of cancer of the breast rises with age. Inasmuch as contraceptors are in the younger age groups, very large samples will be necessary to detect an association if one exists.

In the published reports of women receiving contraceptive pills for variable periods of time there are no observed cases of breast cancer. The FDA files contain one recent instance of a woman, age 44, with a history of previous cystic disease of the breast, who was shown to have a scirrhous carcinoma of the breast after 7 months of cyclic estrogen-progestogen. In the limited data available, with the preponderance of relatively young women and the uncertainty as to the completeness of followup breast examinations, no conclusions can be drawn as to the relationship between the use of the contraceptive pills and cancer of the breast.

The animal studies, to be mentioned later, and certain clinical observations indicate the need for a high index of suspicion and continuing alert observation and studies. The acceleration of growth of certain existing breast cancers by the administration of estrogens has been noted. Many instances of breast cancer have been reported in males receiving large doses of estrogens for prostatic cancer; although this is not proof of the inciting of breast cancer by estrogens, it is strongly suspicious. Any relationship of progesterone or the progestogens to breast cancer is not clear. One recent clinical study of breast biopsies in a limited number of women on the contraceptive pills revealed an increase in the amount of intralobular and perilobular fibrosis as compared to controls. The significance of this is not certain and the finding needs confirmation to accept.

OTHER MALIGNANCIES

Malignant lesions in the pituitary, kidneys, ovaries, and bone marrow have been found in animal studies after treatment with certain of the sex hormones, but at the present time there are no human corollaries. The FDA files contain one instance of malignant melanoma found during the administration of contraceptive pills; this is favorably coincidental, but the alterations of melanin distribution during pregnancy and in some patients receiving contraceptive pills are well known and therefore a relationship cannot be entirely dismissed.

ANIMAL STUDIES

Sex steroids, particularly estrogens, have been shown to produce malignant lesions and to adversely affect existing ones in the mouse, rat, rabbit, hamster, and dog. These neoplasms have been in various organs and organ systems such as the cervix, endometrium, ovary, breast, testicle, pituitary, kidney, and bone marrow. The observations in animals using progesterone and the newer progestogens have been contradictory; however, these agents alone and in combination with other sex steroids have promoted tumor formation or not prevented it in a few instances. A recent example is a 52-week study of six dogs which received massive doses of a combination of mestranol and ethynone (MK-665—an experimental progestogen)—four of the dogs developed mammary lesions; one, a carcinoma in situ with early invasion; one, a carcinoma in situ; one, an atypical hyperplasia; and one, a benign intraductile papilloma. The decision of the FDA to discontinue clinical trials of this agent and advise farther animal studies was a correct one.

Animal studies in which certain susceptible strains and species are used and the dosage, excessive and continuous, cannot be transferred exactly to human expectancy. Nevertheless, a warning is there and a so-altered endocrine environment in human tissues might result in an abnormal expression or potentiation of growth.

RECOMMENDATIONS

1. The more extensive use of dogs and nonhuman primates in the animal testing of these drugs.
2. To test the presently approved contraceptive pills, if this has not been done, for mammary effects in dogs.
3. Encourage research in long-term administration of estrogens and other sex hormones in low and intermediate doses to nonhuman primates.
4. Continue the study groups on contraceptive pills in order to obtain more long-term data. Assure that the patients in those study groups are regularly and adequately examined and tested and that abnormal findings are immediately reported.
5. Continue the warning that the contraceptive pills are contraindicated in the presence of genital or breast malignancy and to extend this contraindication to any suspicion of genital or breast malignancy.
6. To establish at least two long-term study groups: one on the contraceptive pills and at least one control group. The minimum number in each group should be 20,000 women and the term of study for each group no less than 10 years. These studies must be within a reasonably stable population and geographic area. These are the minimum number required to ascertain a 2x change of genital and breast cancer incidence rates with 5 percent acceptable risk rate.

TABLE I.—Cervical carcinoma—Initial screening¹

	Number of women	Number of cancers	Rate per thousand	In situ	Invasive cancers
2 Mayo Clinic, Rochester, Minn.	139,503	987	7.1	897 (6.4)	90 (0.7)
3 Ohio State University, Columbus, Ohio	113,758	388	3.4	213 (1.9)	175 (1.5)
4 Memphis, Tenn.	108,136	724	6.7	393 (3.6)	331 (3.1)
5 Wisconsin State Laboratory, Madison	65,163	548	8.4	195 (3.0)	353 (5.4)
6 Mecklenburg County, N.C.	48,697	412	8.5	290 (6.0)	122 (2.5)
7 San Diego, Calif.	33,746	336	10.0	259 (7.7)	77 (2.3)
9 Honolulu, Hawaii	24,182	134	5.5	51 (2.1)	83 (3.4)
10 Strang Clinic	19,462	48	2.5	46 (2.4)	2 (0.1)
12 Floyd County, Ga.	17,761	84	4.8	56 (3.2)	28 (1.6)
11 Los Angeles, Calif.	19,192	145	7.6	97 (5.1)	48 (2.5)
14 Puerto Rico	8,435	119	14.1	67 (7.9)	52 (6.2)
8 Metropolitan Hospital, N.Y.—Sedlis	27,226	123	4.5	71 (2.6)	52 (1.9)
15 Tijuana, Mexico	2,161	51	23.6	25 (11.6)	26 (12.0)
13 Kansas—Hellwig	10,197	96	9.4	52 (5.1)	44 (4.3)
1 Vancouver, British Columbia	322,352	2,156	6.7	1,228 (3.8)	928 (2.9)
Total	959,071	6,351	6.6	3,940 (4.0)	2,411 (2.6)

¹ Adapted from Day, E, table 4, p. 1193, *Clin. Obst. and Gynec.*, 4: 1183-1198, 1961, with additions.

APPENDIX 3

REPORT OF THE TASK FORCE ON METABOLIC EFFECTS

E. M. Delfs, M.D., *Chairman*

PITUITARY-OVARIAN FUNCTION

The controversy as to whether oral contraceptives inhibit at the pituitary or at the ovarian level appears now to be resolved. Diczfalussy (1965) and his group present convincing evidence that these compounds inhibit at the pituitary level and that they interfere predominantly with the synthesis and/or release of LH rather than FSH. Similar results have been obtained by Lin (1964), Martin (1961), Taymor (1964 and 1965), and Ryan et al. (1966). The differences in these results and those obtained by Loraine and others are probably related to differences in methodology. Diczfalussy's group employed techniques for estimation of LH and FSH individually whereas Loraine's conclusions that progestational compounds inhibit ovulation without affecting HPG excretion were based on a method for determination of total gonadotrophic activity. Furthermore, in Diczfalussy's study, oral contraceptive steroid combinations were administered simultaneously with courses of HMG or HHG followed by HGG. Results showed that administration of these compounds in dosages three times higher than those used for ovulation inhibition did not interfere with the ovarian reaction to exogenous gonadotrophins.

Available evidence indicates that resumption of ovulation after cessation of oral contraceptives is prompt, occurring in 4 to 8 weeks in most cases. In a few women, amenorrhea persists for 6 months or more. This is not unlike the occasional protracted anovulation following pregnancy or lactation. Fertility is the best indicator of adequate pituitary-ovarian function. Goldzieher (1962) reported 62 percent success in the first cycle in women discontinuing medication with intent of becoming pregnant, which compares favorably with the 34 percent conception in the first cycle after stopping mechanical or chemical contraceptives noted by Tietze (1959). Pincus (1964) found a pregnancy rate of 233 per 100 years of exposure after oral contraceptives were discontinued as compared with a rate of 17 before use in the same women. Pregnancy outcome was satisfactory with no significant increase in abortion, prematurity, abnormality, or developmental anomaly—Pincus (1964), Rice-Wray (1965).

TABLE I.—Comparison of ACTH response during and after therapy

Patient	During therapy		After therapy		Difference (mg.)	
	Control	ACTH	Control	ACTH	Before	After
E. J.	4.6	19.6	9.3	27.3	15.1	18.0
H. L.	5.9	9.1	4.4	14.5	3.2	10.1
A. D.	3.6	5.7	5.3	14.4	2.1	9.1
G. E.	2.0	8.6	8.8	28.6	6.6	19.8
H. L.	6.4	10.1	6.0	14.0	3.7	8.0
P. S.	5.9	9.3	7.5	23.0	3.4	15.5
J. W.	3.7	11.6	7.0	18.4	7.9	11.4
A. B.	8.1	10.2	6.1	31.4	2.1	25.3
C. H.	1.1	9.6	13.6	17.1	8.5	3.5
G. R.	3.0	17.5	7.7	19.7	14.5	12.0
A. K.	3.6	6.5	12.8	16.3	2.9	3.5
N. H.	2.6	10.5	5.6	17.9	7.9	12.3
Mean	4.2	10.69	7.8	20.2	6.4	12.38

From Leach and Margulis.

Long-term effect (beyond 6 to 8 years) of oral contraceptives on the pituitary-ovarian interrelation, on normality and duration of ovarian function, and on fertility throughout the reproductive span is not known. Answers will require long-term physiological study and complex statistical control.

PITUITARY-ADRENAL FUNCTION

Oral contraceptives have been observed to produce increased cortisol-binding by serum proteins but urinary excretion data for 17 hydroxysteroids and 17 ketosteroids have been equivocal. Recent work seems to clarify the effect on pituitary-adrenal function. ACTH activity was studied during progestin treatment by Leach and Margulis (1965). Patients had been on oral contraceptives for 2 years or more. The 17 hydroxysteroid excretion was determined during therapy and after metopirone, then after ACTH. A reduced responsiveness to metopirone was found during prolonged OC therapy but the response to administered ACTH was not affected. The authors inferred that the changes are related to inhibition of pituitary ACTH rather than altered adrenocortical activity. Responsiveness to metopirone increased significantly 2 months after medication was discontinued.

No reports were found in which suppression of adrenal activity resulted in impaired response to stress.

THYROID FUNCTION

In women taking oral contraceptives there is some variability in response to thyroid function tests. The majority show increase in the blood of thyroxine-binding globulin (TBG) and PBI and decrease in T_4 -RBC uptake test. The PBI is usually elevated 25-40 percent above pretreatment level but may rise into the hyperthyroid range. Hollander et al. (1963) showed that the PBI rises rapidly in the first 7 days after medication is started, reaches a plateau at about 20 days and remains stationary for the duration of medication. After medication is discontinued the tests return to normal levels in about 2 months. (Florsheim and Faircloth—1964). Radioiodine studies are variable and inconclusive.

These thyroid effects are secondary to estrogen increase of the binding proteins. The changes seem to be comparable to those occurring in normal pregnancy and no clinical evidences of hyperthyroidism have been reported.

If TSH secretion is altered by oral contraceptives, this may be masked by the increased thyroxine binding. No data are available on this point.

CARBOHYDRATE METABOLISM

Data available for examination suggests that the effect of oral contraceptive agents on carbohydrate metabolism may be unpredictable. Mechanisms of actions described are contradictory and complex. On the one hand evidence indicates

that estrogens hinder the genesis of experimental diabetes, reduce glycosuria and in humans, may reduce insulin requirement. The proposed mechanisms of action include (a) action on the pituitary causing reduction in growth hormone and (b) action on the pancreas causing islet cell hypertrophy and increased beta cell activity. Several reports indicate that estrogen lowers fasting blood sugar by approximately 20 percent in humans and the higher the initial value for blood glucose the greater the decrease with estrogen. Some diabetics, mostly maturity onset type, show lower insulin needs when estrogens are given.

On the other hand diabetogenic effects have been described with respect to estrogens. This may be an anabolic effect, the increased appetite, increased dietary intake being the causative factors. However, an increase in protein binding of insulin with a reduction in the percentage of biologically active circulating insulin has not been excluded. The relationship of estrogens to elaboration of binding proteins is well recognized. This is of course dependent upon an intact liver function. Estrogens may stimulate production of anterior pituitary ACTH and indirectly increase the production of adrenal diabetogenic steroids but again, increased cortisol binding could offset this effect. Kitay found that after gonadectomy female rats responded with an increase in body and pituitary weight and a decrease in adrenal weight. Treatment with estradiol caused an increased secretion of pituitary ACTH and an increase in adrenal weight.

In view of these opposing actions a case could be made for either a favorable or an unfavorable effect of drugs containing estrogens upon patients with a diabetic disthesis. It seems important to determine whether the balance of the sum of these biologic effects is deleterious or favorable in women predisposed to diabetes.

Adverse effect of the progestins upon carbohydrate metabolism reported in several recent communications indicate a potentially serious problem, if valid. In contrast to less prevalent conditions in which cause and effect relationship to treatment is difficult to assess, diabetes is a common health hazard. Furthermore, the estimated prevalence rate in the United States for 1959 (Remein) was 16.9 per 1,000 with cases about equally divided between cases of known diabetes and cases previously unsuspected. The unrecognized group deserves particular attention. If the current concept of the genesis of diabetes is accepted, i.e., that a genetic predisposition is present from conception and that stress situations can precipitate its appearance or aggravate the existing condition, then individuals with a family history of diabetes, an obstetric record suggestive of this disorder or laboratory evidence of reduced carbohydrate tolerance warrant special study.

Investigations to date reveal the following:

Javier found reduced glucose tolerance in 40 percent of women on ovulatory suppressants.

Gershberg and coworkers performed glucose tolerance tests in women taking Norethynodrel with mestranol, 47 of whom had no family history of diabetes and 12 had a positive family history for diabetes. The instance of abnormal glucose tolerance in each group was as follows:

TABLE II

[In percent]

History	Fasting	1 hour	2 hours
Negative.....	8	17	43
Positive.....	17	33	58

Spellacy is studying the plasma insulin levels and response to intravenously administered glucose loads. In a preliminary report on 25 normal women, the mean values were as follows:

TABLE III

Control			Drug Rxd				
F	$\frac{1}{4}$	$\frac{1}{2}$	2	F	$\frac{1}{4}$	$\frac{1}{2}$	2
Mean Glucose mg. %							
79	196	125	75	81	215	147	76
Mean Insulin uU/ml.							
18	52	39	16	25	76	52	23

The difference between the control and the treated groups show higher values for both glucose and circulating insulin at each time interval of the test but the differences are slight and the top normal values are not stated in the report. Diabetic suspects were not included.

Individual case reports (Paros) of patients with known diabetes have shown increased insulin demand while on oral contraceptives with return to previous insulin dosages after withdrawal.

There is urgent need for a detailed study of carbohydrate metabolism in a much larger group of normal women and in a group of genetically predisposed women before, during and after the use of oral contraceptives. The following questions need to be answered:

Are oral contraceptive agents capable of inducing diabetes in normal subjects or do the few instances in which a significant abnormality was found in the glucose tolerance of control subjects indicate a genetic predisposition about which the patient has no knowledge?

What is the incidence and the magnitude of reduced carbohydrate tolerance in genetically predisposed individuals after prolonged use of oral contraceptive agents as compared with the responses in genetically predisposed individuals during the same period of time if no oral contraceptives are administered?

If an abnormality is found in carbohydrate tolerance or in insulin activity in either the control or the treated predisposed group, is it of a temporary nature or can permanent diabetes be induced by prolonged use of these agents?

These areas have been studied with respect to the diabetogenic effects of pregnancy and similar techniques should be applied to the diabetogenic effects of oral contraceptive agents.

The following study is proposed:

Subjects.—Study patients will include women with a family history of diabetes, an obstetric record of large or stillborn infants, an abnormal glucose tolerance test during pregnancy which returns to normal postpartum and those with a normal glucose tolerance test but abnormal cortisone glucose tolerance test in the nonpregnant state. These will be matched with a group of normal women in whom family histories and obstetric records are negative for diabetes and the standard glucose tolerance test during pregnancy or the cortisone glucose tolerance test in the nonpregnant state is normal.

Methods.—Pretreatment values for blood glucose and for circulating insulin will be determined in the fasting state and at 1, 2 and 3 hours after a 100 gm. glucose load. The Somogyi-Nelson method for blood glucose and the Grodsky and Forsham immunochemical assay for total extractable insulin will be used. The study patients will be divided into two groups. Oral contraceptive agents will be administered to one half the total number of study patients. An intra-uterine device or, if they choose, no contraceptives will be used in the other half of the study group. Glucose tolerance tests and insulin assays will be performed

during the course of treatment at intervals corresponding to 3 months, 6 months, and 12 months. Tests will be repeated at 1 week and at 3 months posttreatment. All subjects in the control group will receive oral contraceptive agents.

Pretreatment, interval and posttreatment tests will be identical with those performed in the study groups.

Comment.—Based on experiences with the study of carbohydrate metabolism during pregnancy it is evident the study group requires a group oriented control. Some of the diabetic suspects with relatively minor derangements of the glucose tolerance curve during pregnancy have progressed to an overt diabetic state spontaneously. It is now known how important an influence pregnancy exerts in hastening the clinical appearance of the disease or whether it does so at all. It is quite possible that stress hyperglycemia may develop in either of the two groups of study patients. If permanent hyperglycemia or abnormal insulinogenesis should be induced in normal patients by the use of these agents, current concepts of "prediabetes" may need to be revised.

LIVER FUNCTION

The question of oral contraceptives and the liver has been reemphasized by reports of Eisalo et al. on postmenopausal women who develop deranged function tests and (occasionally) jaundice on medication. Subsequently, Eisalo has made similar observations on younger women. A number of other workers in the past 2 years have reported altered liver function tests, especially the B.S.P. and serum transaminase. A few investigators have not corroborated these observations. Thirteen cases of jaundice have been reported in women taking oral contraceptives in which the relationship to the medication seems clear. The clinical courses and laboratory findings were similar to cholestasis of pregnancy. Liver biopsy of several showed changes of cholestasis and some hepatocellular damage. A quarter of the jaundiced women had previously had cholestasis of pregnancy, which suggests an inborn metabolic error or sensitivity reaction.

In summary, there have been no hepatic deaths reported, but an occasional woman develops clinical jaundice associated with definite though mild liver damage. It seems likely that such cases are more frequent than have been reported. Some degree of liver stress is present in many women on oral contraceptives, as evidenced by deranged function tests. These derangements are an exaggeration of mild alterations seen in some pregnant women. They regress when medication is stopped. Women who have had cholestasis of pregnancy or who have familial, congenital, or acquired defects of biliary secretion are most vulnerable. This may be an acceptable degree of abnormality but would seem to warrant further sequential study and reporting of cases of clinical jaundice and a continuation of caution in labeling.

LACTATION

Oral contraceptives in the higher doses (5 and 10 mg. of progestogen) tend to decrease or stop lactation in many women in the first or second cycle of use. (Satterthwaite & Gamble 1962; Rice-Wray 1963.)

Breast enlargement may occur in the nursing infants when the mother takes oral contraceptives. (Curtis, 1964.)

In experimental animals, administration of sex steroids to the newborn may affect the "female pattern" or "male pattern" of the development and result in sterility in the adult animal. The human infant appears to have better protective mechanisms and there is no evidence of such a sterility effect in the human at the present time.

MASCULINIZATION

There is clear evidence that the oral contraceptive agents can cause congenital malformations of the female genital tract when the fetus in utero is exposed to these drugs during the first 16 to 18 weeks of gestation. Anatomic effects have been demonstrated in the experimental animal and in the human.

Experimental production of genital lesions in the rhesus monkey (Wharton & Scott—1964) was unequivocal. Norethindrone was given in relatively large doses (25 mg. per day for 5 days per week) from approximately 30 days to term (160 days). Eight of the ten fetuses were stillborn. All five females were virilized; males showed a greater degree of cryptorchidism than expected. Six rhesus mothers treated with 50 mg. progesterone I.M. daily during the same period of pregnancy suffered no deleterious effects. All infants were delivered alive at term (three males and three females) and none showed genital malformations.

In the human, there is no evidence that progestins increase the risk of intrauterine death. There is considerable evidence for masculinization. Wilkins (1960-61) collected cases with masculinization, as follows:

Ethisterone	34
Norethindrone	35
Norethinodrel	1
Testosterone	15
Progesterone	2
Stilbestrol	4
No hormone therapy.....	10
Total	101

Jacobson (1962) treated 385 consecutive pregnant women with norethindrone and observed maternal masculinization effects in 5.5 percent and fetal virilization in 23.7 percent.

In summary:

Progestins exhibit potentiality for masculinization of the female fetus. Anatomic abnormalities are easily corrected surgically. Subsequent effect on reproduction in the human is unknown. If any synthetic progestin is to be used in treatment of threatened or habitual abortion, consideration must be given to its androgenicity for the fetus. The 19 noncompounds are contraindicated for such use.

TABLE IV.—Incidence of abnormal results of liver-function tests

Test (normal values)	Number of subjects	Number with abnormal results (percent)
SGOT (35 units).....	243	14 (5.8)
SGPT (35 units).....	243	18 (7.4)
Bilirubin (1 mg./100 ml.).....	202	0
Thymol turbidity test (4 units).....	202	22 (10.9)
Alkaline phosphatase (8 units).....	199	4 (2)
B.S.P. retention test (<5 percent at 45 mins.).....	12	5 (41.6)

From Larson-Cohn.

TABLE V.—*Reports of altered liver function*

Author	Medication	Time used	Cases	Elevated B.S.P.	Elevated	
					SGOT	SGPT
Elsalo, et al.	Lynestrenol Voldian Lyndiol	40 to 420 days. 20 days. 20 days.	100	19% to 48%.	4% to 18%	
Larsson-Cohn	Norethindrone-mestranol	6 to 8 months.	243	(12) 42%.	5%	7%
Berglin	Lynestrenol, Lyndiol	Months.	36	---	10%	10%
Knutsson	Lyndiol	1 to 2 months.	10	---	20%	50%
Tyler	7 compounds	To 8 years.	125	32%.	---	Some abnormal.

TABLE VI.—*Reports of normal liver function*

Author	Medication	Time used	Cases	Tests	Abnormalities
Swyer & Littell	Orthonovin, Enovid + (9 preparations)	3 to 6 years.	12	Ceph. Chol., T. T., PGOT, bilirubin.	0
Linthorst	Lynestrenol, Lyndiol	14 to 43 months	52	Alk. Phos., T. T., SGOT, SGPT	0
Swaab	Lyndiol, Conovid	6 months	60	SGOT (342 tests)	0
Rhee-Wray	Lyndiol	3 to 12 months	56	SGPT (1 test each)	0

APPENDIX 4

REPORT OF THE TASK FORCE ON EFFICACY

K. Adamsons, M.D., *Chairman*

The following uses for which therapeutic efficacy has been claimed were reviewed:

- A. fertility control
- B. treatment of amenorrhea
- C. treatment of dysmenorrhea
- D. treatment of endometriosis
- E. treatment of functional uterine bleeding
- F. habitual abortion
- G. miscellaneous uses

(NOTE.—With the exception of subject A the comments pertain only to combination preparations containing a progestational agent and an estrogen.)

A. FERTILITY CONTROL

The efficacy of the older oral progestational agents in fertility control was considered exceptional when compared with that of other therapeutic agents used in medical practice, such as antibiotics, analgesics and tranquilizers. Even when all contraception failures are considered to represent drug failure rather than patient failure in proper administration of the drug, these compounds are almost invariably effective. The more recently introduced sequential preparations were also found highly effective in controlling fertility, although to a slightly lesser degree than the progestational agents. The frequency of pregnancies occurring while patients were receiving sequential preparations averaged approximately 1.2 per 100 women years. It was considered that a sufficient number of patients have been studied up to 2½ years to justify statistically valid conclusions. On the other hand, the group sizes representing patients that had been followed for up to 54 cycles were too small to offer anything more than general impressions. It is noteworthy that the frequency of pregnancies occurring while on medication remained unchanged over the 2½ year period, thus supporting the contention that tolerance to or escape from the medication probably does not occur. The Committee commented on the terms "unwanted" and "unplanned" pregnancies used in the submitted material. Since the individual circumstances under which the pregnancies occurred did not appear to be known to the investigator, the use of these terms did not seem to be warranted. From the statistical point of view, difficulties were encountered in the interpretation of "woman years" since the value of large numbers observed for a short period is not comparable to long term observations on a small sample. It was also pointed out that the high efficacy of oral contraceptives may not be entirely due to suppression of ovulation but may result from other mechanisms such as changes in cervical mucus and endometrium.

B. TREATMENT OF AMENORRHEA

The efficacy of oral contraceptives in the treatment of amenorrhea could not be readily ascertained by the material available to the Committee because of the endpoint used. Successful treatment was considered one in which uterine bleeding was accomplished following cyclic withdrawal of the medication. It was the opinion of the Committee that such an endpoint does not specifically measure the efficacy in treating amenorrhea, since cyclic withdrawal bleeding and menstrual periods are different biologic phenomena. If efficacy in the treatment of amenorrhea is being claimed it could be based only on evidence that menstrual cycles are established following discontinuation of drug therapy. Such information was not contained in the submitted material. However, it was pointed out that if the objective of the therapeutic effort is to produce cyclic withdrawal bleeding in the amenorrheic patient, the oral contraceptive drugs can be considered as efficacious since this endpoint was achieved in 80 to 90 percent of treated patients.

Additional information desired:

1. Followup data on amenorrheic patients after discontinuation of the cyclic therapy with oral contraceptives.
2. Comparison with the frequency of spontaneous resumption of menstrual periods in similar patient material.

C. TREATMENT OF DYSMENORRHEA

The comments pertaining to drug efficacy in the management of patients with dysmenorrhea were similar to those alluded to in the previous paragraph. The situation was even more complicated because of the difficulty to quantitate the principal variable. Dysmenorrhea is known to disappear spontaneously and relatively "high cure" rates have been obtained with placebo preparations. No followup data were available in the submitted material, and thus, in reality, the reports pertained to the evaluation of pain during cyclic withdrawal bleeding rather than during a menstrual period. The data suggests that in certain patients the progestational agent might be of value in the treatment of dysmenorrhea. However, additional information is required before the therapeutic efficacy can be considered as demonstrated.

From the statistical point of view the submitted material was considered unsatisfactory because of the small number of patients in the individual series. It was surprising to find that a very small sample had been utilized in the study of such a common phenomenon. The members were cognizant of the difficulties in designing controlled studies, since placebo preparations do not provide contraception, a fact that cannot be left undisclosed to the patient.

D. TREATMENT OF ENDOMETRIOSIS

In evaluating the material in which the diagnosis of endometriosis was established by histologic examination, the Committee finds a high therapeutic value of continued and prolonged (6 to 12 months) progestational therapy in conservative management of the affected patient. In the well documented cases it is reasonable to anticipate a favorable response in 75 to 90 percent. It must be, however, pointed out that recurrence might be expected in an appreciable proportion of patients after succession of medication.

In contrast, the therapeutic efficacy in subjects in which the diagnosis of endometriosis had been made on grounds of physical examination or history only, was uncertain. Undoubtedly, this population contains a variety of disease entities such as residual pelvic inflammatory disease, adnexal pathology of non-inflammatory nature, etc., which are not expected to improve during therapy with progestational agents.

E. TREATMENT OF FUNCTIONAL UTERINE BLEEDING

The claims for therapeutic efficacy in treatment of functional uterine bleeding were met with similar criticism that applied to dysmenorrhea and amenorrhea. The Committee finds the pooling of a variety of conditions summarized under the heading of "Functional Uterine Bleeding" inappropriate because the individual disease entities have specific and different etiologies. Thus, an overall efficacy index might not reflect the favorable results achieved in certain categories or vice versa, and create the impression of therapeutic merit for disease entities which are not susceptible to therapy.

Irregular menstrual periods are expected to respond in a high percentage of cases to therapy if cyclic withdrawal bleeding is made synonymous to a menstrual period, whereas metrorrhagia might be and appears to be considerably more resistant to the advocated therapy. Patients with hypermenorrhea appear to have shorter periods and less blood loss when placed on cyclic therapy with these compounds. Difficulty in constructing a meaningful endpoint for the various categories was apparent since most of the functional bleeding abnormalities are known to be self-limiting.

F. HABITUAL ABORTION

The Committee found no data to indicate that any of the oral contraceptives are effective in altering the natural history of patients with habitual abortion. Although the reasons for habitual abortion are not known, it appears that in a considerable percentage of cases it is due to a genetic defect in the embryo. These cases, in all certainty, would not benefit from steroid therapy. It was pointed out that clear distinction should be made between synthetic progestins, some of which have known androgenic properties, and the native product progesterone when their use in the therapy of threatened abortion or habitual abortion is considered.

G. MISCELLANEOUS USES

The value of oral contraceptives in the treatment of conditions such as menopausal syndrome, acne, chronic vulvar infections, psychotic and emotional disorders could not be ascertained at present because of the preliminary nature of the available reports.

SUMMARY

The efficacy of the older progestational agents in fertility control is exceptional and approaches unity. The more recently introduced sequential preparations are also highly effective in reducing the incidence of pregnancies although with not quite the same degree of certainty as the progestational compounds. Regarding other uses, the efficacy is less certain. Most studies lack control and followup data and, consequently, it is difficult to determine whether drug treatment resulted in a significant departure from the course expected from the natural history of these frequently self-limiting disorders. Consistently the phenomenon "Cyclic withdrawal bleeding" is confused with menstrual period which is unwarranted.

Pelvic endometriosis and hypermenorrhea, however, represent notable exceptions. In these disorders, prolonged therapy appears to offer excellent palliation and an occasional cure.

APPENDIX 5

AN APPRAISAL OF CERTAIN PROBLEMS INVOLVED IN THE USE OF STEROID COMPOUNDS FOR CONTRACEPTION

Roy Hertz, M.D.*

The growing acceptance of various steroid compounds as contraceptive agents has been attended by extensive controversy.

Such controversy has been mainly concerned with the nature of the immediate and delayed effects of these preparations. This communication aims to identify certain questions which merit consideration and to appraise the currently available data bearing on these problems.

Such a discussion becomes all the more imperative because of piece-meal and inadequate treatment of these matters in the lay and scientific press and in official statements of responsible governmental agencies. Meanwhile, the distribution of steroid compounds as contraceptives has become an accepted function of numerous public health agencies despite the lack of appropriately designed epidemiologic studies concerning many of their important potential effects.

The following are selected for discussion:

1. Will the prolonged use of steroid contraceptives affect the incidence or the pathogenesis of such malignant tumors as cancer of the breast, endometrium, or cervix?

2. Do these substances increase the frequency or predispose to the occurrence of thrombophlebitis or thromboembolism?

3. Does the prolonged exposure of the ovarian ova to steroids alter their reproductive or genetic potential?

Three types of steroid contraceptive regimens are currently employed: (a) Estrogen-progestogen combinations given cyclically; (b) estrogen and progestogen given in sequence on a cyclic basis, (c) progestogens given continuously. Accordingly, it is imperative that we consider the properties of each of these classes of compounds when administered both singly and in combination.

For example, certain effects of the estrogen-progestogen combinations constitute characteristic responses to estrogen. These include: (a) A rise in thyroxin-binding and cortisol-binding protein in the plasma, (b) a tendency to fluid retention as manifested by varying degrees of weight gain and edema, (c) alteration in bromsulphthalein clearance by the liver, and (d) the subjective symptoms of nausea and malaise and fullness of the breasts. These effects are not produced by even massive doses of progestogens and are readily reproducible with all varieties of natural as well as synthetic estrogens. Such effects clearly indicate that the estrogen administered exceeds normal endo-

*The author is greatly indebted to Dr. John C. Ballar III for many of the statistical calculations presented here; however, he accepts sole responsibility for the interpretations offered.

genous estrogen production despite the presumed drug-induced suppression of endogenous estrogen formation. Moreover, available data concerning normal estrogen secretion rates in women show that the total endogenous estrogen would not equal in *biological activity* for man the estrogenic doses contained in currently employed contraceptive mixtures. Hence the net biochemical and biological effect of such combinations is characteristic of hyperestrinism.

It is therefore highly pertinent to consider what is known about the relationship between the levels of endogenous and exogenous estrogen and various neoplastic processes both in man and in animals.

First, however, certain salient features of the carcinogenic response in man must be described. Of major importance is the fact that all known human carcinogens exhibit a prolonged latent period. Table I lists most of the agents which can be considered with some certainty to be capable of producing malignancies in man. It is especially noteworthy that most of these effects involve a latent period of about a decade. In most instances no detectable objective basis for anticipating the ultimate carcinogenic response is apparent during the period of latency.

It is also noteworthy that all known carcinogenic agents for man have been shown to be also carcinogenic in animals. Hence common pathogenetic factors are clearly involved in the development of cancer in man and in animals. Consequently, we cannot ignore the regularly observed length of latency and the known parallelisms in the genesis of cancer in man and animals in evaluating what is known to date about the carcinogenic potential of the steroid substances under discussion.

ESTROGENS AND BREAST CANCER

Ovariectomy induces remissions in 30 to 50 percent of young women with breast cancer. It is generally agreed that this ablative procedure exerts its favorable effects through a reduction of estrogen formation in the body. Moreover, urinary excretion studies show that the amounts of estrogen involved must be measured in microgram quantities. Less direct evidence indicates that in some women estrogen administration in doses comparable to those contained in the currently marketed oral contraceptives will transiently stimulate the metabolic activity of metastatic breast cancer, but such stimulation is not always related to an impairment in the clinical course. Accordingly, it is universal clinical practice to prohibit the use of such materials by young women with a known breast cancer. Paradoxically, this restriction is not applicable to older women with breast cancer since a substantial proportion of such older women, and less commonly certain younger women, experience regression to a preexisting breast cancer when given estrogens. It is therefore clear that both endogenous and exogenous estrogen will modify the activity of established cancer in women.

The proponents of the use of these agents state that these considerations pertain only to "preexisting" breast cancer. Such an inference is untenable in view of the fact that other malignancies in women, such as cancer of the cervix and endometrium, have a prolonged pathogenetic phase involving many years. Unfortunately, we have no direct knowledge of the preclinical or pathogenetic phase of breast cancer in young women, nor do we know the effects of exogenous estrogens upon this process. Indirect evidence from mammography studies indicates however, that the pathogenetic phase can occupy several years. Hence it seems reasonable to consider whether or not the repeated induction of a hyperestrogenic state implies any risk of exacerbation of this occult phase of breast cancer since such agents can significantly alter the established disease process in some women.

It is frequently stated that although estrogens have been employed clinically for 25 years, the incidence of breast cancer in women has not materially changed and that only an extremely limited number of cases of breast cancer in women have been reported to be specifically associated with estrogen therapy. These generalizations ignore some serious limitations in our epidemiological knowledge over the past 25 years.

Firstly, past clinical experience relates almost entirely to the use of estrogens for the control of symptoms in women of menopausal or postmenopausal age. In addition, a very limited number of younger women suffering from artificially induced menopause, ovarian insufficiency, menstrual disorders, and other gynecological problems have also been treated. We know, however, from differences in response of established breast cancer to estrogen therapy in older women as

contrasted with that seen in menstruating women, that it is not valid to equate a past experience in predominantly older patients with what should be anticipated in younger women, especially with respect to breast cancer. This difference in response is clearly reflected in the remarkable increase in estrogen-induced regressions in breast cancer with increasing age.

The study of Kennedy on the dual effects of estrogen on breast cancer in women aged 35 to 54 also emphasizes the critical role of both age and dosage in determining whether the response of breast cancer to estrogen administration will be exacerbation or regression. Thus, Kennedy states: "In premenopausal women with breast cancer or in patients in whom castration produced a regression of tumor, there is no doubt that small physiological doses of estrogenic hormone may stimulate the growth of cancer," and further: "It might, therefore, be postulated that the estrogenic hormone has a dual action: stimulation of cancer cell growth by small doses, and a more potent inhibitory effect on cell growth in large doses."

Secondly, because of the absence of specific data as to the duration of estrogen exposure of most of the women treated during the past 25 years, and because the relatively small number of younger women have with few exceptions received comparatively short courses of therapy, we have no basis for a direct evaluation of the current approval for continued medication for 4 years or more. Thus, we were able to find only four studies in the world literature in which the actual incidence of breast and genital tract malignancies during prolonged estrogen therapy is recorded. These studies respectively include 120, 292, and 304 and 206 women. Two of these studies included respectively 58 and 27 women under 40 years of age and in the remaining study all women studied were over 40 years of age. Thus the published data on cancer incidence available for the age group presently under consideration is limited to 85 patients. Such limited data fail to provide an adequate epidemiologic basis for the promulgation of a new public health practice affecting millions of women.

Of course, additional data reside in the individual clinical records of numerous institutions and private offices. However, offhand generalization from such uncontrolled clinical experience without appropriate followup is notoriously misleading. Even every extensive uncontrolled clinical accounts are not the equivalent of soundly developed epidemiological data. Our inadequate knowledge concerning the relationship of estrogens to cancer in women is comparable with what was known about the association between lung cancer and cigarette smoking before extensive epidemiologic studies delineated this overwhelming significant statistical relationship. In the absence of similarly extensive studies regarding the effect of exogenous estrogens on the incidence of breast cancer in women we are ill-advised to ignore the mass of observations clearly relating both endogenous and exogenous estrogen to the pathogenesis of this disease in both man and animals.

ENDOMETRIAL CANCER

Endometrial cancer should also be considered in evaluating the consequences of steroid therapy. Thus, the observations of Hertig and Somers and of Gusberg clearly define the pathogenetic relationship between adenomatous hyperplasia resulting from excessive endogenous or exogenous estrogen and the ultimate development of adenocarcinoma. It is also clear from retrospective studies of successive endometrial biopsies that endometrial cancer may require many years for full development.

In addition, a number of cases of endometrial cancer are reported to have been closely related to protracted estrogen administration. This may stem in part from the frequent natural setting in which estrogens have been often utilized and in which endometrial carcinoma is uncovered, namely, in the older women with excessive menstrual bleeding of undetermined origin. The chance association of these two clinical features is to be anticipated in patients recently initiating treatment. However, when endometrial cancer arises following long-term estrogen therapy, the potential pathogenetic effect of the administered hormone should be considered. For example, Wallach and Henneman in presenting a statistical analysis of the long-term effects of estrogen administration for the treatment of osteoporosis in 290 women state: "The incidence of endometrial carcinoma in this group of patients is many times the normal incidence" (table II). Similarly, Mustacchi and Gordan found two cases of endometrial hyperplasia among 120 estrogen-treated osteoporotic women, and such hyperplasia is regarded by Gusberg and by others as premalignant. Ostergaard similarly describes 18 cases of corpus cancer following prolonged estrogen therapy among a

series of 123 patients with this disease. To attribute any statistical significance to such scattered reports would be highly fallacious, but such observations do clearly indicate the necessity for more epidemiological study of this complex problem.

Moreover, such clinical data as we have are not directly applicable to what is to be expected in younger women. Marked age differences in endometrial response are readily noted. For example, the relative infrequency of estrogen-withdrawal bleeding in older women, namely 40 percent as opposed to more than 98 percent in normal younger women clearly reflects this notable age difference. Hence one may anticipate such differences in the immediate and long-term endometrial response of the great numbers of menopausal women treated in the past, as compared with that of the normal younger women now being treated with contraceptive agents.

Kelly and Baker have reported that metastatic endometrial carcinoma will undergo regression under intensive treatment with progesterone. In addition, Kistner has described the marked regression of the glandular elements of the endometrium in patients with endometrial hyperplasia or "carcinoma *in situ*" treated with various forms of progestationally active preparations. In evaluating the relationship of this finding to our immediate problems, we must recall that practically all known carcinolytic agents, such as X-ray and certain alkylating agents, are also carcinogenic. Hence, these findings further implicate the steroid hormones in the pathogenesis of endometrial cancer and underline the serious limitations of our knowledge of the actual role of these factors in the pathogenesis of these disease processes. One may therefore reasonably question the advisability of unnecessary derangement of such endocrinological relationships in completely normal young women.

These considerations become even more pertinent when one reviews the highly distinctive histological effects of the estrogen-progesterone mixtures on the endometrium. Notable among these effects is glandular atrophy. This appears to be a progressive or cumulative effect attaining its maximal degree after several months of cyclic medication. This change is reflected in progressively decreased menstrual flow during the initial months of therapy and in the failure of bleeding on withdrawal in 1 to 2 percent of the cycles during therapy. Such atrophic changes represent drug-induced pathology since no such phenomena are observed in the endometria of normal young women.

This glandular atrophy is accompanied by varying degrees of stromal modification and in some instances by active decidua formation, a phenomenon not normally observed in the absence of a recently fertilized ovum. Nor are such stromal changes an expected response to the naturally occurring progesterone, progesterone, unless accompanied by the stimulus of nidation. The degree of such decidualization varies substantially with the various dosage and temporal regimens more recently developed. Nevertheless, such tissue is not found in the uterus of a healthy, young (regularly menstruating) woman. Its presence in the nonpregnant uterus is a distinct drug-induced abnormality.

Although the endometrium reverts to an entirely normal-appearing structure after cessation of therapy, this provides little assurance as to the future behavior of the previously altered endometrial elements which persist *in situ*—namely the epithelium and the stroma of the basal layers of the endometrium from which the more superficial layers are to be subsequently regenerated throughout the remaining life span. During the prolonged latent period of the action of substances known to be carcinogens in man, such as radioactive ores, X-rays, or aniline dyes, there are frequently no histological changes detectable.

An instructive lesson regarding the importance of this silent, prolonged, latent period can be learned from studies of the effect of 19-norprogesterone on the ovaries of the mouse. Lipschutz and Iglesias described completely normal fertility after removal of pellets of 19-norprogesterone from Balb A mice after the pellets had been in place for 108 days. However, in a subsequent report these authors described ovarian tumors in 8 of 14 animals which had previously been reported to have had entirely normal ovarian function.

We have already emphasized that a prolonged latent period of many years characterizes the behavior of most known carcinogens in man. Since the longest exposure of any individual to oral contraceptives is 9 years and the greatest bulk of observations is for very much shorter periods of time and only a few years have elapsed since the close of treatment, no data concerning potential delayed effects are as yet available.

ESTROGENS AND CERVICAL CANCER

The relationship of steroid hormones to the pathogenesis and progression of cancer of the cervix in man is poorly understood. However, the secretory and mitotic activity of the cervical epithelium is clearly responsive to the cyclic changes in ovarian hormone output as well as to exogenous steroid administration. Hence, alterations in these cellular functions are readily induced by the oral contraceptive agents. It is, therefore, universally considered essential that the status of the cervical tissue with respect to the presence of malignant and premalignant change be initially evaluated and closely followed.

In this connection, it is to be emphasized that when initial screening by Papanicolaou smear of a given population is subsequently repeated, the number of positive smears found on rescreening will be a small fraction of the number found initially. Thus, Christopherson *et al.* working in Louisville showed that for carcinoma *in situ* a yield of 3.7 per 1,000 on initial screening fell to 0.63 per 1,000 on the second annual screening of the same women. For invasive carcinoma the corresponding figures were 2.8 and 0.52. This spontaneous reduction on rescreening reflects the expected difference between prevalence and incidence figures and should not be confused with a presumed favorable effect of any intervening medication in such studies. It would, of course, be expected that all women started on oral contraceptives would have been given the benefit of a prior pelvic examination and Papanicolaou smear. Hence, the findings in such a population of prescreened women cannot be compared with the findings in the population group from which they are initially selected.

The prolonged pathogenetic period for cancer of the cervix is estimated to be from 7 to 10 years on the basis of the difference in the age distribution of carcinoma *in situ* versus invasive carcinoma. Hence studies of the effect of any medication on this prolonged pathogenetic process should certainly exceed in duration this phase of the development of cervical cancer. Observations of this duration in significant numbers are not at hand.

Pincus and Garcia have recently summarized their available data on the occurrence of invasive cervical cancer and certain associated cytological phenomena in a limited sample of women using either oral contraceptives, vaginal spermicides or intrauterine devices. They state: "The data give practically identical figures for the presence of carcinoma, anaplasia or negative tissues in the Enovid and vaginal contraceptive users." Also: "Obviously far more extensive data are required for definitive determination, but with an enlarged population for study we hope to have adequate information on carcinoma incidence." We agree that the data reported provide no sound statistical basis for assurance on this vital point.

More recently, Wied *et al.*, among others, have offered data indicating no significant effect of certain preparations on the course of initial cervical dysplasia over a 1 to 2 year period. Such data provide some assurance as to immediate effects on the initial phases of the pathogenetic process, but have only an indirect bearing on the ultimate response to chronic exposure to medication which may become apparent some years hence. Studies for much more sustained periods of time and after more prolonged exposure are clearly needed.

STATISTICAL CONSIDERATIONS

A substantial change in the incidence of certain diseases such as cancer, may be difficult to detect even with very large samples. For example, in a study of breast cancer incidence with 4-year followup of women aged 20 to 39 years, a sample of about 15,000 to 20,000 women, or 60,000 to 80,000 person-years, would be required to have a reasonable (i.e., 90 percent) chance of detecting (at the 95 percent probability level) a two-fold increase in risk.

Changes in the incidence of cervical cancer could be detected with samples of about the same size; changes in the incidence of endometrial cancer would require samples about six to eight times as large as those for breast cancer. No studies approaching this magnitude have been reported. On the contrary, the initial approval of the administration of oral contraceptive agents for 4 years to young women was initially based on a 4-year experience in 400 cases properly documented with laboratory studies. Since duration of exposure is so critical a factor, only those women exposed for the actually approved period of 4 years provide any experience pertinent to this evaluation. Certainly, it is to be reasonably expected that a new public health practice would be predicated on a more soundly developed epidemiological basis.

THROMBOPHLEBITIS

Thrombophlebitis and thromboembolic phenomena following the use of oral contraceptive agents have been reported. Accordingly, in January of 1963 an "ad hoc" committee was established by the Commissioner of the Food and Drug Administration to determine if the use of one of the oral contraceptive preparations (Enovid) resulted in an increase in incidence of deaths from thromboembolic conditions.

This committee concluded that: "on the basis of the available data * * * no significant increase in the risk of thromboembolic death from the use of Enovid in this population group has been demonstrated."

In concluding their report this Committee added: "Any firm reliance on the risks as calculated is tempered by the assumptions made. This Committee recommends that a carefully planned and controlled prospective study be initiated with the objective of obtaining more conclusive data regarding the incidence of thromboembolism and death from such conditions in both untreated females and those under treatment of this type among the pertinent age groups." Meanwhile, a statistically inadequate mass of scattered observations continues to direct our attention to this as yet unresolved problem.

Final evaluation of this aspect of the study of oral contraceptive preparations must therefore be deferred pending the outcome of such studies.

STUDIES OF CARCINOGENESIS IN LABORATORY ANIMALS

The initiation and current development of oral contraceptive agents are almost entirely based on initial findings in experimental animals. It is therefore pertinent to consider the results of extensive animal studies concerning the role of these and similar agents, in experimental carcinogenesis and in relation to other endocrinological functions.

The major significance of animal data has been recently emphasized by the finding of neoplastic changes in the breasts of dogs following the prolonged ingestion of Ethynorone, and this finding led to the officially approved cessation of clinical trials with this estrogen-progestogen mixture. The estrogenic component, mestranol, is chemically identical with that contained in most marketed mixtures. The progestogen content of this preparation differs from the marketed mixtures in specific chemical structure. However, all prior studies in this family of progestogens indicate that such structural variations provide only quantitative biological differences, unlike the qualitative changes induced by such structural changes in the corticoid series. Hence it is clearly inconsistent to consider the animal data with the new mixture to be of more significance than the huge body of preexisting animal findings with a wide variety of synthetic estrogenic compounds in numerous species of animals, including the dog. Either the presently marketed preparations are also to be condemned on the basis of almost certainly expectable animal findings or Ethynorone should not have been condemned.

The essential consideration is whether or not demonstrable carcinogenicity in animals is pertinent to the clinical problem. From a comparative physiological standpoint there is no validity in considering the recent results in dogs to be any more significant than comparable data in mice, rats, rabbits, and hamsters.

The vast amount of experimental data concerning the vital role of estrogens in the pathogenesis and progression of cancer of the breast, uterus, and cervix in numerous species is considered by some to have little or no pertinence to comparable processes in man. This view stems largely from the superficial interpretation of the clinical and epidemiological observations of the past 25 years already discussed. Also, disproportionate emphasis is placed on a few negative experiments, in which no malignancies were observed in monkeys treated for prolonged periods with estrogens or, in the case of one monkey, with estrogen and progesterone. These primate studies, which ranged in duration from 3 months to 10 years, involved a total of 25 *Macacus rhesus* monkeys in all, with only 4 of the monkeys treated for 4 years or more. Although no actual malignancies were described, these monkeys almost uniformly did exhibit profound metaplastic changes in the cervix and endometrium and one of them showed a marked endometrial hyperplasia and polyposis.

Estrogen administration readily leads to a wide variety of neoplasms under varying experimental conditions in several species. These include tumors of the breast, cervix, endometrium, ovary, pituitary, testicle, kidney, and bone marrow produced in either rats, mice, rabbits, hamsters, and dogs. These

experimental effects are easily and uniformly reproducible and, in view of their multiplicity, do not represent bizarre or rare biological effects. Rather, they are the readily reproducible responses seen in practically all sufficiently tested species of appropriate genetic constitution. However, the human population is so genetically heterogeneous, that the role of the genetic factor in man's response to such agents is thus far unknown. From what is known experimentally, however, wide variation in the frequency of response in different genetic groups throughout the world is not improbable.

A considerable part of what has been stated above relates to estrogens when applied alone. However, we have also already considered the unique histological effects on the endometrium of the estrogen-progestogen combinations presently employed as contraceptives. The question naturally arises as to whether or not the combined use of these two hormonally active agents does not alter what is to be expected from either agent alone. Extensive experimental observations indicate certain interactions between estrogen and progestogens. These phenomena include synergistic as well as antagonistic effects of these two agents on the endometrium, on decidual formation, on premalignant metaplastic changes in the cervical glands, on fibroid tumor formation in the uterus, on carcinogen-induced endometrial carcinoma, and on many other biological end-points. The complexity of these interactions, varying as they do with different dosage ratios and with the critical effects of the timing of the administration of each agent creates many as yet poorly understood features of the tissue responses obtained.

Moreover, the naturally occurring substance, progesterone, as already noted, when given either following estrogenization of the endometrium or when given simultaneously with estrogen only rarely induces the degree of stromal change observed in the uteri of women given estrogen-progestogen mixtures. Such tissue effects in women are supplemented by extensive observations concerning the unique and anomalous qualitative effects of these compounds in animals as compared with progesterone. Hence, it seems inadvisable to presume that the interaction of estrogen with these newer progestogens will necessarily parallel that which has been previously observed for progesterone itself, and the potentiality for substantially different long-term effects must be more completely analyzed by clinical as well as experimental observation.

EFFECTS ON GERM CELLS

An unequivocal abnormality produced by estrogen-progestogen combinations is the suppression of ovulation itself. It is only reasonable to consider the ultimate fate of the ovum that would have been normally released from the ovary. We do not know whether this ovum dies or survives. If it survives, is it altered in any way? The only information we now have in this regard is that subsequent fertilization of some ova from the same ovaries readily occurs and that a limited number of newborn derived from such pregnancies appear normal at birth. The number of such infants thus far described in the literature is a minute fraction of that required to determine the relative frequency of congenital defects or related abnormalities of the newborn and no significant pediatric followup of these children is yet available. Statistical and clinical considerations indicate that for an adequate analysis of this problem a population of 100,000 children would be required. Moreover, the delayed clinical manifestations of many congenital abnormalities requires that these children be followed for 6 to 9 years in order to completely appraise any possible effect upon them. It seems unjustified to assume that the suppression of the normal ovulatory mechanism of the ovary for a 4-year period may not be reflected in the quality of the ova subsequently released even from an ovary in which the histological findings appear to be normal. Interpretation of such findings after years of deferral of pregnancy would, of course, have to include a full appreciation of the spontaneous increment in the frequency of congenital abnormalities with advancing maternal age.

The foregoing considerations have been brought together to direct the attention of the medical profession to these aspects of our knowledge as well as of our ignorance which seem pertinent to an evaluation of some of the risks involved in the use of estrogen-progestogen combination for purposes of contraception in the completely normal, healthy, young woman over a 4-year period.

Each physician must evaluate these risks with an appreciation of the many undetermined factors involved and with due regard for the merits of alternative methods available to him and to his patients.

In view of the serious limitations in our knowledge of the potential long-term effects of estrogen-progestogen combinations, it is mandatory that further clinical experience be gained under properly controlled conditions of observation and followup.

TABLE I.—*Latent period of some known carcinogens in man*

Carcinogen	Site of cancer	Range of latency (years)
X-rays	Skin	10-30
Radioactive paints	Bone	10-30
Radioactive ores	Lung	5-20
Thorium dioxide	Liver	10-25
Ultraviolet exposure	Skin	10-40
Aromatic amines	Bladder	2-20
Coal tar (shale oil)	Skin	10-25
Soot (chimney sweeps)	Scrotum	11-17

Drawn from data of Husper, W. C., chapter 24 in Homburger-Fishman "Physiopathology of Cancer," Hoeber-Harper, New York, 1959.

TABLE II.—*Estrogens and breast cancer*

Authors	Number of patients	Number of menopausal patients	Number of patients 20-40 years old	Duration of treatment	Breast cancers	Genital tract cancers	Expected cancers ¹
Geist et al.	206	Most	Few	1½ to 5½ years	Not observed	None	Not stated.
Mustaechi et al.	† 120	94	26	5	0	1	or 6.
Wallach et al.	292	234	58	5.1	0	17	Not stated.
Wilson et al.	304	304	0	7.8	0	0	20.

¹ As stated by authors.

† 5 with carcinoma eliminated from study; others with osteoporosis.

² Endometrial hyperplasia in 2.

† 94 had had genital organ removal.

APPENDIX 6

REVIEW OF THE PROCEDURES AND REPORTS OF THE PHARMACEUTICAL COMPANIES
CONCERNED WITH THE MANUFACTURE AND SALE OF THE ORAL CONTRACEPTIVES

S. G. Kohl, M.D.

During February and March of 1966 the seven pharmaceutical manufacturers marketing oral contraceptives were visited at the request of the Advisory Committee of the Food and Drug Administration. The charge was to collect and analyze the deaths in patients taking oral contraceptives which had been reported to the manufacturers and investigated by them. A further charge was to "look into how they keep records and conduct investigations of adverse reactions." This combination of a specific and general charge made the visits easy to arrange and instructive to carry out.

All visits were arranged through the medical directors of the manufacturers. In almost all instances the chief medical officer of each manufacturer was interviewed. Some of the detail work was carried out with his subordinates who were directly responsible for the activities in question. An observation concerning these physicians and medical scientists is unavoidable. I believe these men, almost without exception, to be competent and interested in their work. I am impressed that they are truly concerned about the safety of the medications their firms produce and/or market. They wish to "do a good job." They are aware of the potential dangers of prolonged usage of potent medications and they wish to discharge this responsibility in an intelligent and scientific manner. They appreciate the shortcomings of their present methods of surveillance.

The "medical departments" of the manufacturers are quite variable. Some are very sophisticated in approach and personnel and one occupies a "basement office" and is quite restricted in personnel and outlook. These characteristics are detailed in the attached reports which describe the procedures followed by each manufacturer.

STANDARDIZATION OF RECORDS

It was anticipated, prior to the visits, that there would be a degree of uniformity in the records and investigations of reported deaths. This was not the case. The variability was marked and so was the feeling of responsibility and involvement. Some of the investigations of deaths were associated with repeated visits and telephone calls to physicians whose patients had died. Other investigations were quite cursory and reflected considerable concern over the company's image with the physician. "He cannot be irritated—it's bad for our business relationships." I was surprised that there are no standard forms in use. This is true for the reporting of both deaths and adverse reactions which do not result in death. Thus compilations, tabulations, and analyses are made unnecessarily difficult and awkward.

Some physicians and hospitals hesitate to release patient information to a commercial organization. In fact some refuse to do so. It is of more than passing interest to note that the U.S. Naval Hospital at Bethesda replied that they had filed a report with FDA and would release no information to the manufacturer. This action is in spite of the fact that FDA charges the manufacturer with responsibility for carrying out an investigation. FDA has supplied no report to the manufacturer on this death. My own hospital has refused to release data to the manufacturer without the consent of the Corporation Counsel of the city of New York. I am not anxious to undertake the chore of pushing this request through the Department of Hospitals and the Corporation Counsel's Office.

In this general area, I submit the following recommendations:

1. Adverse reactions should be reported on a standard form, rather than in memoranda, to a *single office* in FDA. These should be in the form of an initial alert on a postal card perhaps, and followed by the completed form when the investigation has been completed or carried on as far as possible by the manufacturer.

2. If copies of these reports are to be distributed to several branches of FDA this distribution should be by FDA and not by the manufacturer.

3. The present FD 1639 form is not adequate for the analysis of oral contraceptive adverse reactions.

4. The initial request for information in the investigations of an adverse reaction should be from FDA on official stationery and signed by a responsible medical officer. If followup and collection of data is to be the responsibility of

the medical department of the manufacturer, the initial request should so inform the recipient.

5. The medical officers of the FDA responsible for monitoring adverse reactions, the medical personnel of the pharmaceutical manufacturer having similar responsibility and the appropriate members of the Advisory Committee should evolve adequate forms, requests, and standard procedures to be followed. At present each unit acts independently and with varying interpretations of what is required.

6. Such an organization would make pooling and exchange of information an easy and rewarding experience. An instrumentality for "feedback" would be in existence. Such activity is imperative if reliable and continuous scientific data are to be "fed-in".

7. The pharmaceutical manufacturers' medical departments are enthusiastic about the possibility of working with the Advisory Committee, for whom they have great respect. Perhaps some of the "police activities" required by statute, can be efficiently carried out through the Committee's scientific and consultative activities.

INVESTIGATIONAL PATIENTS

Each manufacturer has a number of "investigational patients" who have been under observation for a known period of time or are continuing under observation. These groups include several thousand patients, perhaps as many as 15,000-20,000. The records of adverse reactions are, in general, quite complete. These patients might give more adequate known numerators and denominators for study. The medical people at the manufacturers have indicated to me that they would consider pooling these data for analysis on an anterospective basis. At present, this is awkward because each drug has a different form for the registration of the patient and the collection of followup data. These records are quite variable. Some are very detailed and some are "skimpy." The followup procedures are variable in the rigor demanded in the collection of data. A basic uniform record which was precoded for easy machine handling might be of advantage to both the investigators and FDA. Additions might be made to such a base record to satisfy the individuality of manufacturers and/or investigators.

1. A working group similar to the one suggested in the previous section, could be established to create a basic investigational registration and followup record. These basic forms would be utilized for all oral contraceptive drugs under study. Additions might be made to the basic records to satisfy individual desires of manufacturer and/or investigators.

2. A manual should be prepared containing "guidelines" for the selection of investigators and patients in future studies to be undertaken. This manual should contain standard terms and definitions as well as instructions for completing the various forms. Again single copies should be transmitted to FDA and duplicated by the Agency for internal distribution.

3. There is no uniformity in the procedures to be followed in "closing a case." These should be developed. A decision is needed on the effort to be expended upon patients who "stop coming to the clinic." At present the efforts to follow such patients vary from "nothing" to rather extensive, time consuming, and expensive effort to keep the patient under followup. An important oversight is the lack of followup of patients who are dropped because of pregnancy. This group presents an opportunity for the collection of considerable data. These data might be of importance in both medical and epidemiological areas of interest. Almost without exception, there is a dearth of data on pregnancy outcome in patients who become pregnant while on oral contraceptive therapy. No single investigator has many such patients but the "pool" would make several hundred available for analysis.

4. A computer program, perhaps patterned after the one in use by Eli Lilly & Co., should be established for the recording, storing, and analysis of these data. A program should also be evolved for analysis of "adverse reactions," if this activity is to be continued. In as much as each of these manufacturers has computer facilities available, their medical and computer people might be able to add to the program development. The programs evolved could be implemented in their own organizations and perhaps replace some of the naive statistical analysis now carried out.

SURVEILLANCE OF PATIENTS UNDER ORAL CONTRACEPTIVE THERAPY

Conversations with Advisory Committee members, medical personnel of the manufacturers and FDA personnel revealed considerable concern over the long-

range effect of these medications. A woman with three children who begins oral contraception therapy at age 28, may use the drug for 20 years. Modern epidemiological and biostatistical methodology make possible the surveillance of such patients so that adverse chronic reactions may be detected at the earliest possible point in time. Such surveillance is rarely necessary because rarely have so many patients taken so potent a drug, for so long a period of time. Whether true or not, one gets the impression that certain adverse reactions may be time related. It seems imperative that the answers to this type of question be available. I believe that the costs involved in this type of surveillance are peculiar to the drug and its mode of use. Therefore, it seems to me that the cost of such surveillance is an integral part of the total cost of production and distribution of the medication. At the present time these medications cost the private patient about \$25 per year. Because of the large number of patients under therapy, a fractional increase in the cost would supply ample funds to carry out the indicated epidemiologic surveillance.

As suggested by Dr. Louis M. Hellman, certain "captive groups" might be enlisted for study. Examples are: Wives of armed service personnel; clients of the Indian Service; patients of the Kaiser Medical Group; H.I.P. and the Family Union Medical Plan of the Hotel Industry of New York.

In order to have a representative sample of the population at risk, patients in Family Planning Clinics of various kinds and private patients should be included.

The FDA, its Advisory Committee, and the industry should set up a conference with capable epidemiologists and biostatisticians to investigate the feasibility of such a program and the planning thereof. An organization may need to be established, an existing agency may be able to take on the responsibility or the activity may be contracted to one or more of the Schools of Public Health for maintenance of the surveillance. Such an organization could serve as a model for future similar projects or for the maintenance of investigational studies in the drug industry.

THE FOOD AND DRUG ADMINISTRATION

I have carried out no investigation of the Food and Drug Administration. My only contact with FDA or its personnel was at the committee meeting on April 7, 1966. Therefore any observations about FDA are hearsay or are related to what I have seen at the pharmaceutical manufacturers.

1. There appears to be little feedback to the manufacturers of the data which they are required to collect and transmit to FDA. Some pooled data might be very helpful and useful in maintaining a high level of scientific and epidemiologic interest. It might stimulate such awareness where it does not now exist.

2. One is struck by the lack of "guidelines" as to how investigational activities are to be carried out. The FD 1649 form is a cogent example. One manufacturer did not know of its existence. The form had been required for about 6 months and they had never filed a single one. The responsible FDA branch should have corrected this shortcoming. The FD 1639 form is completed by manufacturers' personnel in some cases, by treating physicians in other cases and in still other cases is not filed at all. The manufacturer, in each case, quote conversations with FDA personnel as authority for their routine. Who is responsible for this situation is unimportant. The need for instructions and guidelines is clear. Some of the memorandums filed are voluminous and burdensome to handle because the manufacturer is "afraid" to leave anything out. Others use their own judgment and inasmuch as they hear no complaints, it is assumed that their procedure is acceptable. One manufacturer files a list of adverse reactions and elaborates only on those cases which his representative believes merit elaboration. Another manufacturer files copies (triplicate) of every piece of paper including notes on telephone conversations with "detail men."

3. Intra-agency communications seems to be faulty. The 110 deaths examined and tabulated in this report were taken solely from the duplication of material already submitted to FDA. This total, I am told, is at considerable variance with the number of deaths presented to the Advisory Committee by FDA.

4. The expressed desire of cooperation in carrying out the provisions of statutes and regulations should be accepted. It may be that enforcement will be easiest and most complete when the industry participates in policing itself. The medical personnel, recruitable by FDA and the medical departments of the manufacturers, will be improved by cooperation. This will permit the insinuation of scientific activity into the usual expending or receiving effects of the required "police activity."

REPORT OF DEATHS IN PATIENTS TAKING ORAL CONTRACEPTIVES

A series of tables is appended to the report which lists the 110 deaths found in files of the manufacturers. The tables also show a second listing of 65 deaths judged to be due to "idiopathic pulmonary embolus." These 65 deaths were from the total of 75 deaths caused by pulmonary embolization. For the following reasons 10 deaths were deleted:

- Rheumatic heart disease with valvulitis.
- Pancreatitis, hypertension, and renal disease.
- Thrombophlebitis in a previous pregnancy (three patients).
- Thrombophlebitis 3 months before therapy.
- Postoperative cholecystectomy.
- Postoperative hysterectomy (two patients).
- Postoperative radical mastectomy.

The collected data were abstracted onto 80-column punchcards which have been turned over to the Committee. The coding was performed in accordance with the attached code sheet. The IBM facilities of the Downstate Medical Center were employed to prepare the punchcards and to sort them for the preparation of the tabulations.

It is not possible to draw statistically valid conclusions regarding deaths in association with the taking of oral contraceptives. There is no reason to believe that these reported deaths are either a complete or an incomplete recording. They are more likely to be incomplete. The fact that most of the deaths occurred within the first 4 months of administration may reflect the larger number of patients taking the drug for this period of time as opposed to any later time period. It may reflect the fact that if a patient dies after taking a drug for a short period of time, it is more likely to be associated as a possible causative factor and reported. It may reflect the impression of the physician that the drug taken for a long period of time is not likely to have an etiologic relationship with a death. It may even be that a drug taken for a long period of time is ignored in getting a medical history.

Another unusual finding is that over 80 percent of the deaths were known to have been submitted to autopsy. This suggests that the association with the oral contraceptives may be an after-thought suggested by the pathologic findings.

I surely agree with the position taken by the Committee members who feel that the present study has added little to our knowledge of the relationship of oral contraceptives to death in the population at risk. I have detailed the type of data needed to cast light on the presence or absence of such relationship.

I wish to thank the Advisory Committee for having given me the opportunity to carry out the investigation. The medical departments of the pharmaceutical manufacturers were forthright and cooperative and they made copies of reports available and in some cases prepared special tabulations and listings. The study could not have been completed or even begun without the approval and support of the Commissioner and his staff. It was a rewarding experience for your reporter.

Respectfully submitted,

SCHUYLER G. KOHL, M.D.

APPENDIX 7

PILOT STUDY TO TEST FEASIBILITY OF OBTAINING VALID CASE AND CONTROL DATA IN IDIOPATHIC THROMBOEMBOLIC DISEASE

P. E. Sartwell, M.D., A. T. Masi, M.D., and J. W. Long, M.D.

An epidemiologic pilot study was designed and conducted under contract with the Food and Drug Administration at the Johns Hopkins School of Hygiene and Public Health, Department of Epidemiology. A report of the completed pilot study and specific recommendations for the major study follows.

The primary objectives of the pilot study were:

- (a) To define the problems inherent in testing the hypothesis that oral contraceptives serve as a causative factor in thromboembolic disease in women not otherwise predisposed to these diseases.
- (b) To develop the methods and procedures that could best meet the needs of the study performance.
- (c) To test the validity and practicality of these methods, and to coordinate them for maximum yield of pertinent data.

(d) To evaluate the feasibility of the study design in its entirety.

(e) To interpret the results of the pilot phase and form conclusions upon which appropriate recommendations can be based for a definitive study if indicated.

Copies of the clinical record abstraction form and interview questionnaire which were developed during the pilot study and tabulations of the results follow.

DESIGN OF THE STUDY

A. Final diagnosis of all patients discharged alive from the Johns Hopkins Hospital from 1963-65 were obtained.

B. After careful review, cases of idiopathic thromboembolism in married women were selected.

C. These were controlled with twice the number of carefully matched patients selected from a group whose discharge diagnoses would not remotely be related to thromboembolic disease.

D. Each of the selected patients was extensively interviewed with the objective to obtain in a casual but accurate fashion data regarding oral contraceptives.

SUMMARY AND CONCLUSIONS

This pilot study has demonstrated that the study design is feasible and can be expected to furnish valid case and control data necessary to achieve an acceptable answer to the hypothesis stated in the study proposal, and to do so within practicable limits of time and cost. It was possible to obtain satisfactory completion of interview questionnaires on all cases and controls selected.

It is desirable that the initial case selection for analysis be somewhat broader than the limited few that would be designated restrictively as "purely idiopathic"; the final case selection should be the result of deliberate and searching appraisal under supervision of the principal investigators. It is desirable to consider the opinions of an advisory group regarding the criteria to be used to define "idiopathic." Such a group should include experts in the fields of cardiovascular disease, peripheral vascular disease, hematology, endocrinology, and metabolic disease.

It is presently considered that if a main study is to be done it should draw cases and controls from approximately 20 large hospitals (the size of Johns Hopkins Hospital or larger), which it is estimated should yield about 200 cases and an equal number of controls. Such a study could possibly be completed in 2 years. The basis for this estimate is that the Johns Hopkins Hospital yielded 10 idiopathic cases, constituting about 1 case per 10,000 discharges for all cases, or 10 percent of the total discharges that were medically reviewed.

The scope of the main study can and should include the opportunity for the use of epidemiologic methods to add to the knowledge of the natural history of thromboembolic disease, especially its "idiopathic" varieties; and, in so doing, to suggest direction for potentially fruitful research into some of the many clouded aspects of this problem. The experience gained in a study so oriented can serve to good advantage not only the immediate problem but future investigations involving other drugs and the application of similar epidemiologic methods to other possible instances of drug reactions.

(JUNE 15, 1966, HEARINGS CONTINUE IN PART 5-B)



